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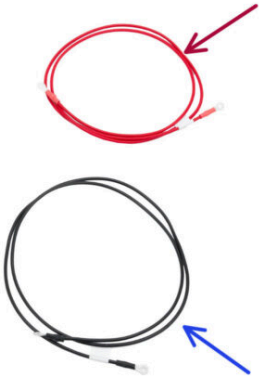
How to replace the Heatbed Power Cables (CORE One)



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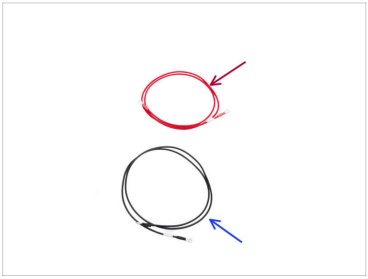
STEP 1 Introduction

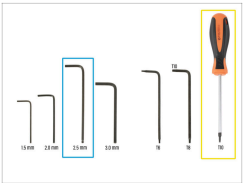


- This guide will take you through the **heatbed power cables replacement** on the **Prusa CORE One**.
- All necessary parts are available in our eshop prusa3d.com.

  Note that you have to be logged in to have access to the spare parts section.

Warning: This procedure involves handling metal sheets, which may have sharp edges. **Use caution** to avoid cuts. Wear protective gloves if necessary.

STEP 2 Tools Required



- **Please prepare tools for this guide:**
  - 2mm Allen key
  - 2.5mm Allen key
  - T10 Torx key / screwdriver
  - Needle-nose pliers
  - Phillips Screwdriver
  - Flush cutters are recommended as an optional tool.

STEP 3 Printer Preparation 1

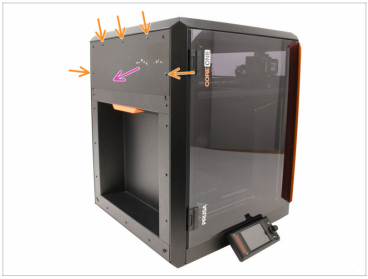
⚠ Before you begin, make sure the **printer has cooled down** to ambient temperature.

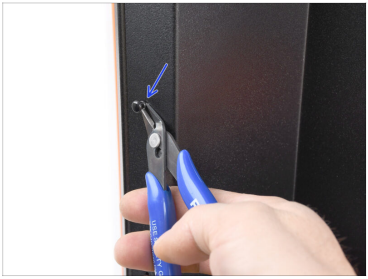
- On the printer, visit the menu **Control** and trigger the **Auto Home**.
- Go to **Control > Move Axis > Move Z** and enter a value around 200mm
- The goal is to move the heatbed low enough so that it's easily reachable from top, while still leaving some room below.

STEP 4 Printer Preparation 2

- Turn the printer off using the switch on the back.
- Disconnect the printer from power.
- Remove the steel sheet, in case it's still in place.

STEP 5 Side Cover Removal





- Remove the five Nylon rivets holding the plastic side cover.
  - We recommend using flush cutters to gently lift the top part of the rivet, unlocking it. Then, remove the bottom part of the rivet.
- Remove the plastic side cover.

STEP 6 Side Panel Removal

- Remove the marked Nylon rivets holding the Side Sheet Metal Panel.
- Remove the panel.

STEP 7 Back Cover Removal 1

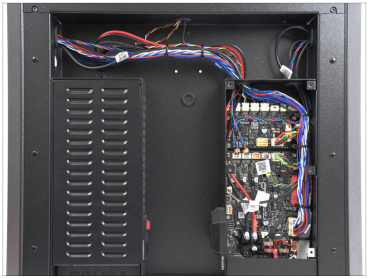
- On the inside of the printer, remove the two screws holding the back cover.
- On the back of the printer, slide the center cover downwards.

  If it's difficult to move, use a screwdriver as a lever through the opening to assist.
- Ensure the four hooks on top of the cover are disengaged from the metal chassis.

STEP 8 Back Cover Removal 2

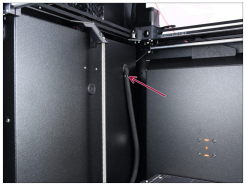
- Move the cover slightly towards the back.
- Pull the bottom part of the cover outward while tilting the top toward the printer. This will unhook it from the cable bundle behind.

STEP 9 xBuddy Cover Removal



- Remove the six screws holding the xBuddy cover.
- Remove the cover by sliding it out.

STEP 10 Cable Unmounting



- Carefully cut the zip-tie holding the heatbed cable bundle.
- Remove the rest of the zip-tie on the back of the printer.
- Carefully remove all the zip-ties holding the cables from the heatbed assembly (the heatbed power, thermistor and RGBW LED cables).

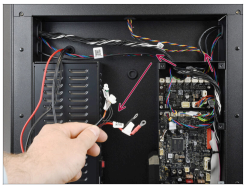
STEP 11 Cable Disconnection

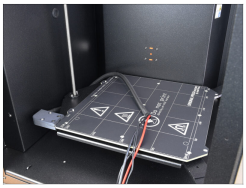
- Disconnect the **RGBW LED Cable** from the right top corner of the xBuddy Extension board.

  ⚠ Note that there is a safety latch on the connector, which must be pressed in order to remove the plug.

- Disconnect the **heatbed thermistor** from the xBuddy board.
- Using the Phillips screwdriver, undo the two terminal screws and disconnect the **heatbed power cables**.

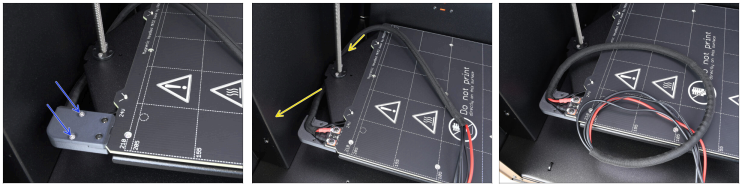
STEP 12 Cable Removal





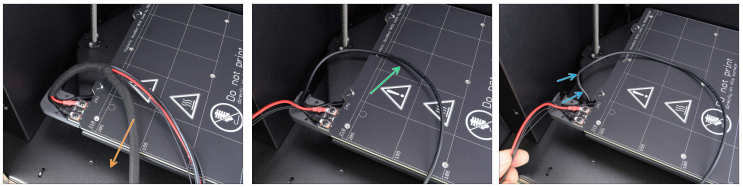
- Remove the heatbed cable bundle from the xBuddy box.
- Guide the cable bundle through the opening, to the inside of the printer.

STEP 13 Cable Uncovering



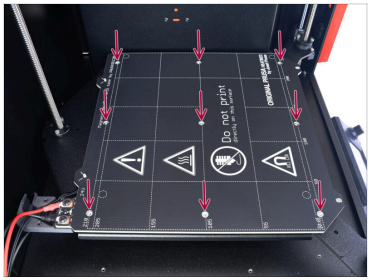
- Remove the two M3x10 screws holding the cable cover. Then, remove the cover.
- Guide the cable bundle out, from behind the heatbed assembly

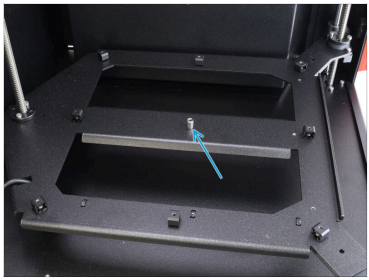
STEP 14 Cable bundle Separation



- Remove the textile sleeve from the cable bundle.
- Separate the RGBW LED cable from the bundle.
  - Release it from the bottom of the cable cover, and set it aside.

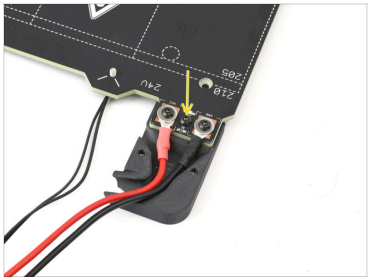
STEP 15 Heatbed Removal

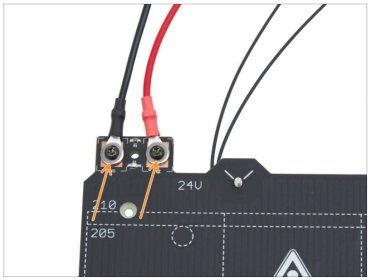




- Remove all 9 screws holding the heatbed in place. Then, remove the heatbed.
- In the center of the heatbed carriage, there should be a metal spacer standing freely. It might have fallen off, while removing the heatbed. In that case, search below the carriage. **Save the spacer for later use.**

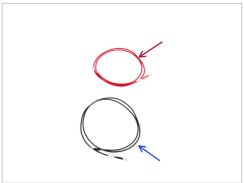
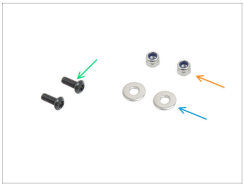
STEP 16 Heatbed Disassembly





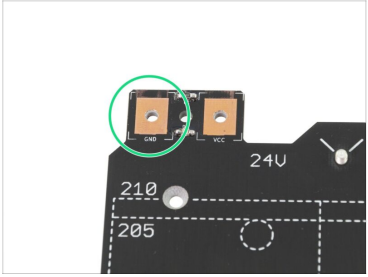
- On the heatbed assembly, remove the screw holding the bottom of the cable cover to the heatbed.
- Remove the two screws holding the power connectors, while holding the nuts underneath using the Unikey.
- Set the old heatbed aside, as we are going to replace it with the new one.

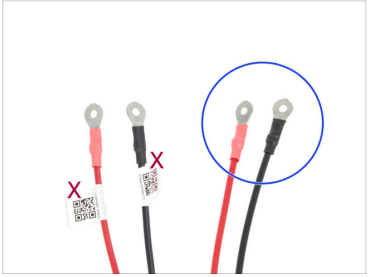
STEP 17 Power Cables Preparation


- **For the following steps, prepare:**
  - Positive Heatbed Power Cable (1x)
  - Negative Heatbed Power Cable (1x)
  - M3x10rT screw (2x)
  - M3nN nut (2x)
  - M3w washer (2x)
  - Zip-tie (5x)

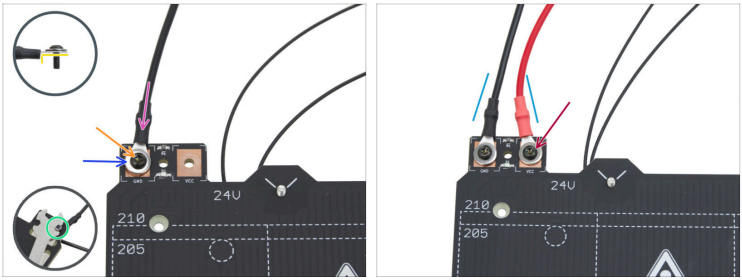
STEP 18 Heatbed Cable Assembly 1





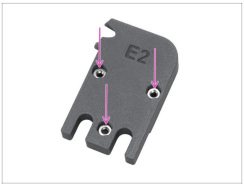
- Follow the polarity markings on the heatbed: The pad labeled **GND** should be coupled with the **BLACK WIRE**.
- Take both heatbed power cables. Note the labels on each. Use the unlabeled ends for the heatbed connection.

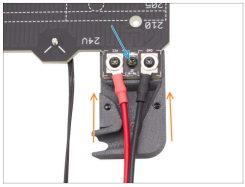
STEP 19 Heatbed Cable Assembly 2

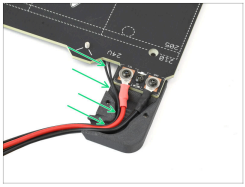


- Place the black cable onto the "GND" pad.
  - Orient the lug connector with the thicker part facing downward.
- Place the M3w washer on top of the connector.
- Insert the M3x10rT screw through all the components.
- Screw the M3nN nut onto the M3x10rT screw from below and tighten it gently.
- Using the same technique, attach the red cable to the "VCC" pad.
- Guide the heatbed cables slightly inward in a “V” shape, **then fully tighten the nuts from below.**

STEP 20 Cable Cover Attachment

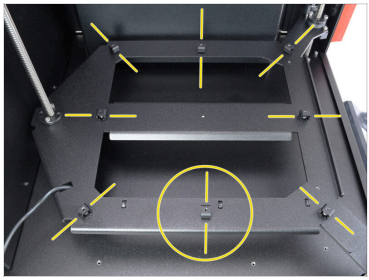
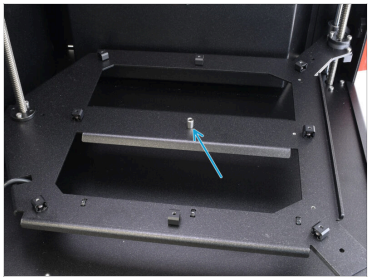






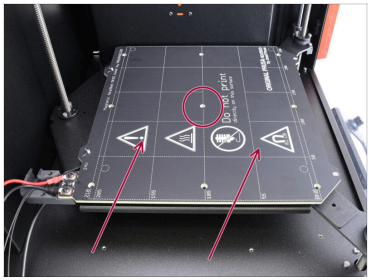
- Verify the three M3n nuts are held securely in the bottom cable cover part.
- Slide the cover under the cable joint on the heatbed.
- Fix the cover bottom in place using the M3x10rT screw.
- Add the heatbed thermistor cable into the groove in the bottom cable cover.

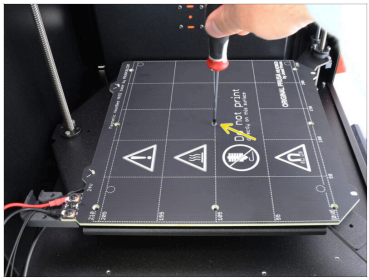
STEP 21 Expansion Joint Inspection

- On the inside of the printer, inspect the expansion joints on the heatbed carriage. All must be pointed towards the center and tightened securely in place.
- Place the heatbed spacer onto the center threaded opening. Align it precisely with the opening.

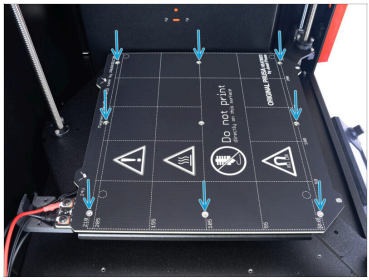
STEP 22 Heatbed Attachment 1





- Place the heatbed onto the carriage. Make sure the center spacer is still in place. Align the center opening in the heatbed with the spacer.
- Fix the heatbed to the carriage using the M3x14bT screw. Tighten it just lightly for now. Do not tighten it fully yet!

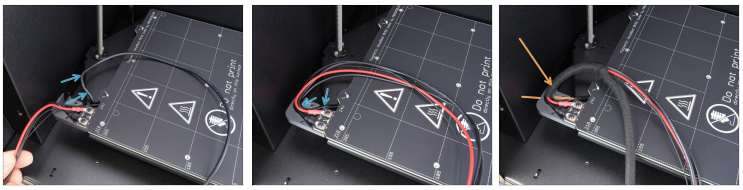
STEP 23 Heatbed Attachment 2



- Fix the heatbed in place using the M3x4bT screws around the perimeter, tighten them just lightly for now.
- After all screws are in place, fully tighten them in the following sequence:
  - Center screw
  - First four screws (edges)
  - Last four screws (corners)

⚠ Tighten the screws gently, but firmly.

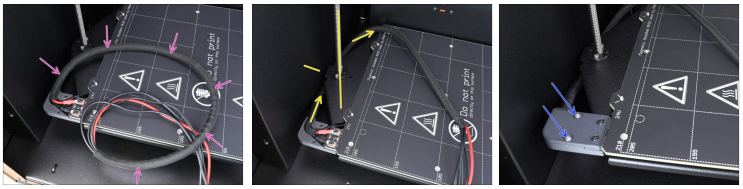
STEP 24 Cable Guidance



- Route the RGBW LED cable from the heatbed carriage into the groove in the cover. Guide it along the rest of the heatbed cables.
- Take the textile wrap and start wrapping the cable bundle. Note that the start of the textile wrap should be above the bottom cable cover.

  Note that the start of the textile wrap should be above the bottom cable cover.

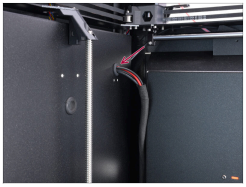
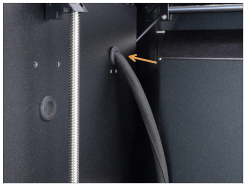
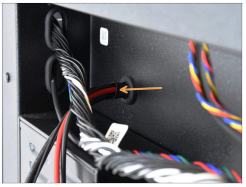
STEP 25 Cable Covering



- Wrap the whole bundle with the textile sleeve.
- Guide the cable bundle below the heatbed carriage and behind the trapezoid rod.

  Verify the cable bundle is guided as specified; otherwise, it might interfere with the components later on.
- Add the top part of the cable cover and fix it in place using two M3x10 screws.

STEP 26 Cable Guidance 2

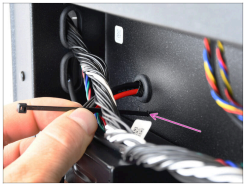
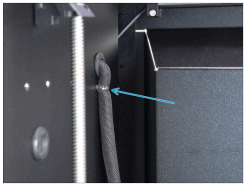




- Push the cables one by one through the opening on the rear of the printer.

  Make sure the rubber grommet stays in place.

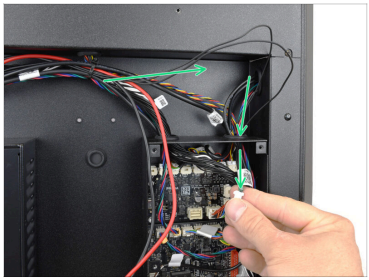
- Push the cable until the textile sleeve reaches the opening. Leave just the tip of the textile sleeve pushed through.

STEP 27 Cable Mounting

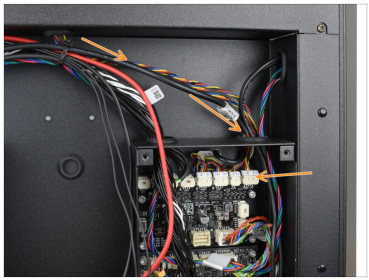

- From the back of the printer, insert the tip of a zip-tie through the opening just below the cable bundle.
- Wrap the zip-tie around the bundle and guide it back through the neighboring opening.
- Tighten the zip-tie securely to hold the cables in place, then trim off the excess length.

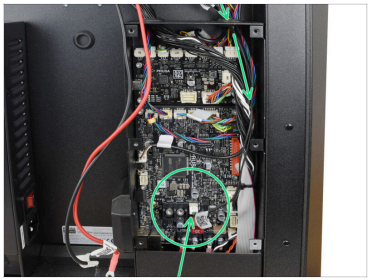
STEP 28 Cable Guidance 3



- Guide cables along the rest of the cable bundle, towards the electronics.
- Fix the whole cable bundle in place using a zip-tie. Pull the bundle upwards, as high as possible, to make space for the rear sheet metal cover, later on.
- Guide the **RGBW LED** and the **heatbed thermistor** cables through the right opening, to the inside of the xBuddy box.

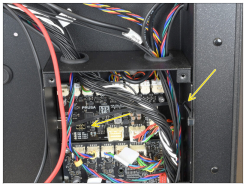
STEP 29 Cable Connection





- Connect the RGBW LED Cable to the connector all the way on the right of the xBuddy Extension board.
- Connect the Heatbed Thermistor cable into the dedicated connector on the xBuddy board.

STEP 30 Zip-Tie Installation

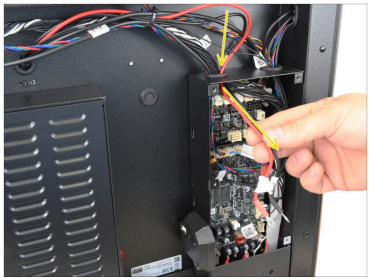


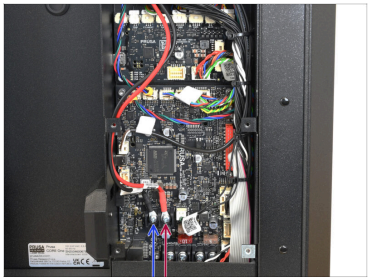
- Install a zip-tie into the hook on the right inner side of the xBuddy box. Guide the zip-tie behind the cables, just above the electronics boards.
- Using this technique, prepare three zip-ties on the inside of the box.
- Tuck the cables on the right side of the box towards the side. Then, fix them in place using the zip-ties.

  ⓘ Tighten the zip-ties just around the cables on the right side of the box. You can leave the power cables and the other cables on the left, hanging freely.

  ⚠ Gently tighten the zip ties, just until snug. Tightening them fully is not necessary. Cut the excess part of the zip-ties. Proceed extremely carefully to prevent any damage to the cables!!

STEP 31 Power Cable Connection





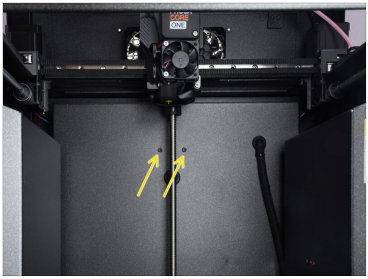
- Guide the heatbed power cables through the left opening, to the inside of the xBuddy box.
- Using the 6-32 terminal screw, connect the **black power cable** to the left terminal on the xBuddy board. Tighten firmly.
- Using the 6-32 terminal screw, connect the **red power cable** to the right terminal. Tighten firmly.

⚠ Ensure the power cables are properly connected and firmly secured. Loose or incorrect connections can lead to printer malfunction or pose a serious fire hazard.

STEP 32 xBuddy Cover Installation

- Reinstall the xBuddy box cover and fix it in place using the six M3x4bT screws. Make sure none of the cables is getting pinched behind the cover!

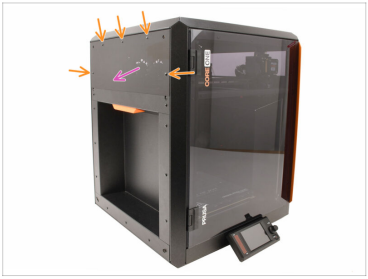
STEP 33 Rear Cover Installation



- Reinstall the rear sheet metal cover onto the printer.

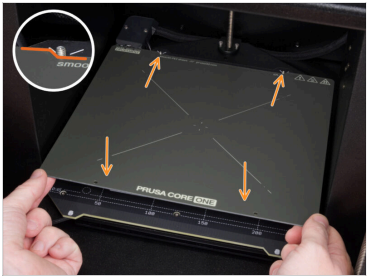
  Make sure none of the cables is getting pinched behind it.
- Push the cover upwards until the four metal tabs engage into the slots on the rear part of the printer.
  - While pushing the cover on the back upwards, reach to the inside of the printer and fix the cover in place using the two M3x4bT screws.

STEP 34 Side Cover Installation



- Add the side sheet metal panel to the printer and align it with the opening.
- Secure the panel in place with 11 Nylon rivets in the marked spots.
- Add the plastic cover onto the top part and align it with the opening.
- Fix it in place using 5 Nylon rivets.

STEP 35 Final Preparation



- Connect the printer to power.
- Turn the printer on using the switch on the back.
- Install the steel sheet.

STEP 36 Selftest

- Visit the menu **Control > Calibrations & Tests** and run the Selftest.

  To save time, you may start from the **Z Alignment Calibration** item.

- Follow the on-screen instructions. The important section starts with the Heatbed Heater check.

  If all tests complete successfully, your printer is ready for use and you may continue printing as normal.

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