

HOW TO Install an LGX Lite PRO and X-axis Motion Upgrade on a Creality K1

Difficulty **Medium**

Steps **95**

Time Required **50 min**

Sections **1**

Require **1.5mm hex key**

2mm hex key

2.5mm hex key

3mm hex key

Sidecutters

Utility Knife



TOP BENEFITS OF DOING THIS UPGRADE SETUP:

- | **Faster prints** with increased volumetric flow.
- | **Use multiple filament types** with our Pre-Tension flexibility.
- | **Extend your KI's lifetime** with more robust components.
- | **Achieve sharper prints** with a smaller smoothing radius.
- | **Improve surface quality** with better resonance control & less ringing artifacts.

INSTRUCTIONS GUIDE

This guide is designed to be a reference manual for the installation of an LGX Lite PRO and X-axis Motion Upgrade on a Creality K1, K1C and K1 Max. Follow the instructions below or, if you prefer to watch a YouTube video with the same instructions, use the provided link or the YouTube icon to the right:

<https://www.youtube.com/watch?v=v9GtwXONeXs&t=1212s>



01 Disconnect PTFE tube.



02 Cut filament a couple of centimeters above the toolhead. This can later be used as a guide for the new extruder.



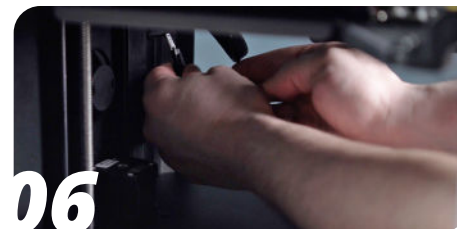
03 Remove the two front screws of the printer door using a 2mm hex key.



04 Remove the printer door.



05 Unscrew and remove the enclosure panels using a 2mm hex key.



06 Disconnect the auxiliary part cooling fan.



07

Unscrew the enclosure panels using a 2mm hex key.



08

Remove the webcam cable from the wire management channel on the enclosure panel.



09

Cut the zip tie holding the toolhead wiring to the frame.



10

Unscrew the two screws holding the cable chain to the frame using a 2mm hex key.



11

Unscrew the screw holding the cable chain to the toolhead using a 3mm hex key.



12

For K1C and K1 Max, you need to unscrew two additional screws in the top corners behind the panel to remove the top frame.

Unscrew the top three screws in the back using a 2mm hex key.



13

Unscrew the top two screws on both sides as well as the second one right below using a 2mm hex key.



14

Peel back the strip with a magnet on the right side.

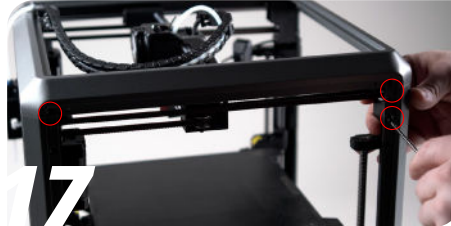


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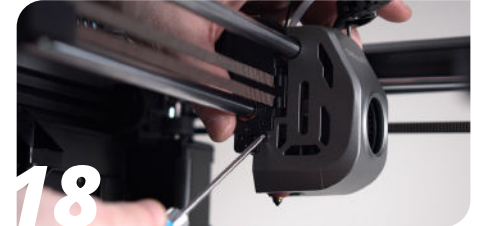
Unscrew the two screws.



16 Peel back the acrylic on the left side and unscrew the two top screws using a 2mm hex key.



17 Unscrew the front top two screws and the back top screw on both sides using a 2mm hex key.



18 Unscrew the bottom screw holding the front cover/fan cowling using a 2mm hex key.



19 Unscrew the bottom screw holding the front cover/fan cowling using a 2mm hex key.



20 Remove the front cover/fan cowling.



21 Disconnect the part cooling fan from the toolhead board.



22 Unscrew the two screws holding the toolhead wiring strain relief bracket using a 2mm hex key.



23 Disconnect the toolhead wiring from the toolhead board.



24 Remove the upper collet clip from the filament sensor and disconnect the PTFE tube.



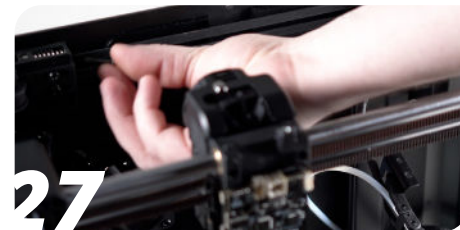
25

Remove the top frame.



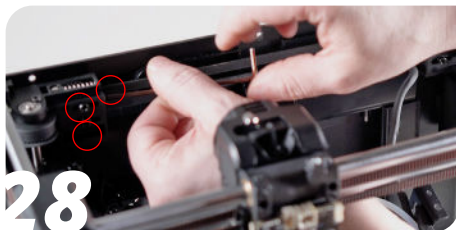
26

Disconnect the LED wire.



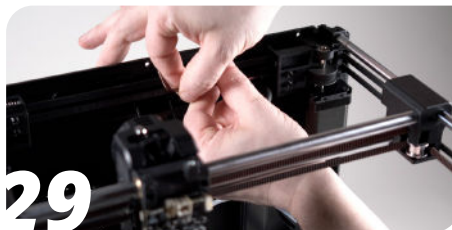
27

Insert screws for belt tension relaxing in both motor mounts.



28

Screw them in until you encounter resistance using a 2.5mm hex key.



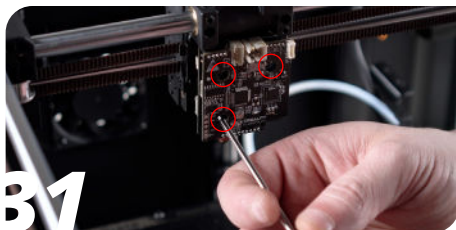
29

Undo the belt tension fixing screws.



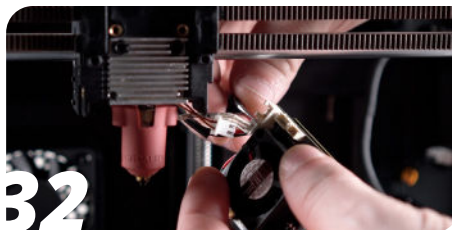
30

Screw the belt tension relaxing screws in a bit to relax the belts.



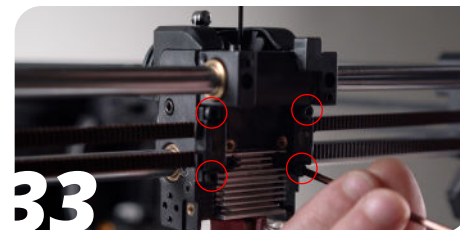
31

Unscrew the three screws holding the toolhead board to the x-carriage using a 2mm hex key.



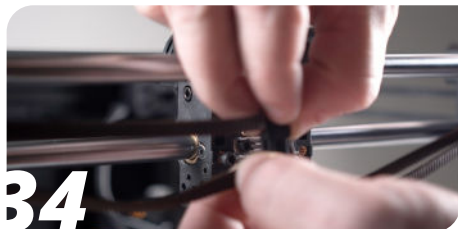
32

Disconnect all connectors from the toolhead board.



33

Unscrew the four screws holding the two belt retention clips using a 2.5mm hex key.

**34**

Remove the belts from the belt retention clips.

**35**

Remove the belts from the X-Rods Holders and be mindful of where each belt goes in the X-Rods Holders.

**36**

They must be routed in the same fashion in the new holders.

**37**

Remove the front idlers.

**38**

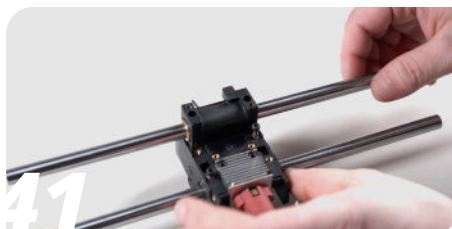
Pull one X-Rods Holder away from the 10mm rods.

**39**

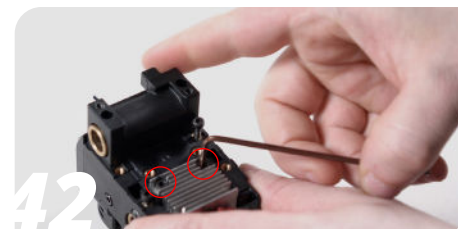
Slide one X-Rods Holder off.

**40**

Pull the 10mm rods from the other X-Rods Holder and slide it off too.

**41**

Slide the rods off.

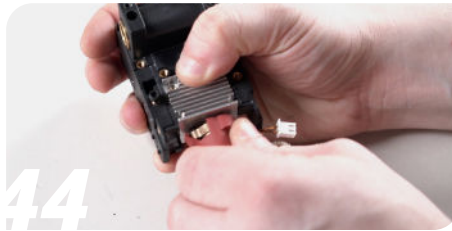
**42**

Unscrew the two screws holding the hotend from the front using a 2.5mm hex key.



43

Unscrew the two screws holding the hotend from the sides using a 2mm hex key.



44

Rotate the silicone sock to have access to the bottom screws.



45

Unscrew the two screws holding the hotend from the bottom using a 1.5mm hex key.



46

Pull the hotend out.



47

Unscrew the linear bearing retaining screw from the X-Rods Holder.



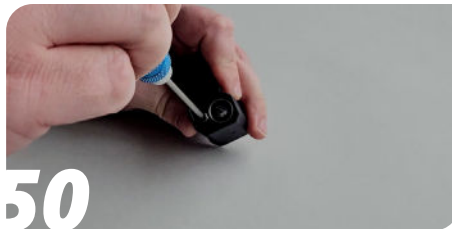
48

Push the linear bearings out using one of the 10mm rods from the x-axis and repeat for the other holder.



49

Push the linear bearing into your Bondtech X-Rods Holder.



50

Add the linear bearing retaining screw and repeat the entire process for the other X-Rod Holder.



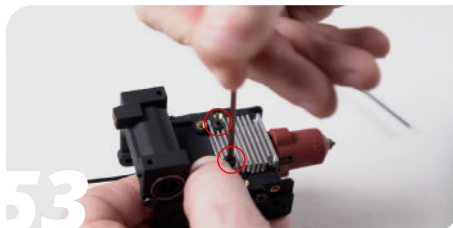
51

Push the hotend up into the new x-carriage.



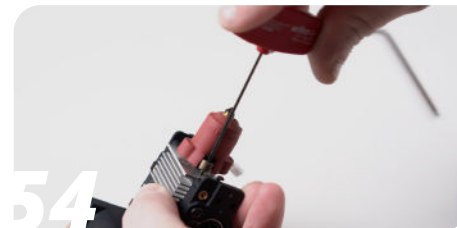
52

Reuse and fasten the two side screws for the hotend using a 2mm hex key.



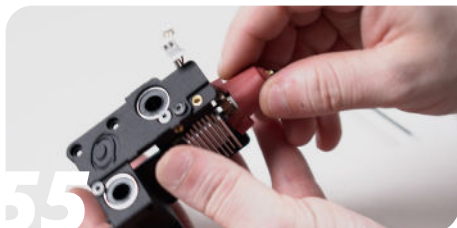
53

Reuse and fasten the two screws from the front using a 2.5mm hex key.



54

Replace the two bottom screws for the hotend with the supplied M2x20 and fasten them with a 1.5mm hex key.



55

Rotate the silicone sock back into place.



56

Push the LGX Lite PRO down from the top.



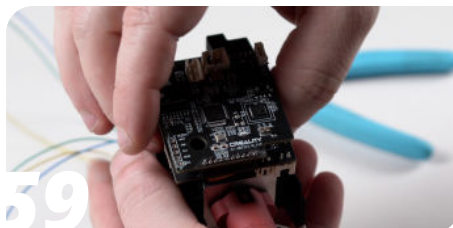
57

Fasten it from one side with one of the three included M3x8 low profile screws using a 2mm hex key.



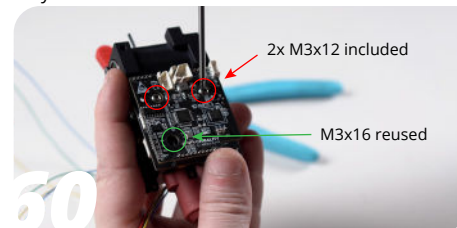
58

Fasten it from the other side with the other two included M3x8 low profile screws using a 2mm hex key.



59

Place the toolhead board on the toolhead assembly.

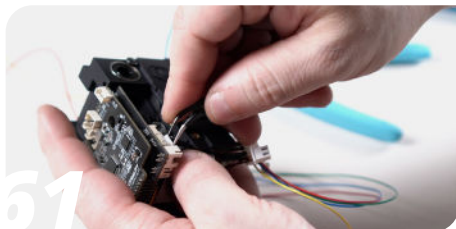


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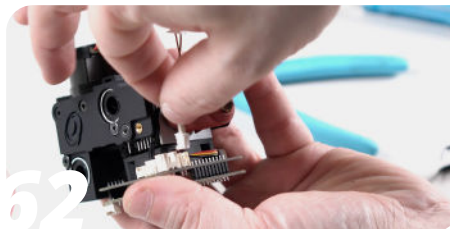
Fasten it using the two included M3x12 at the top, using a 2mm hex key, and reuse the bottom screw from the stock assembly.

2x M3x12 included

M3x16 reused



61 Add the included stepper motor wire adapter and connect it to the toolhead board.



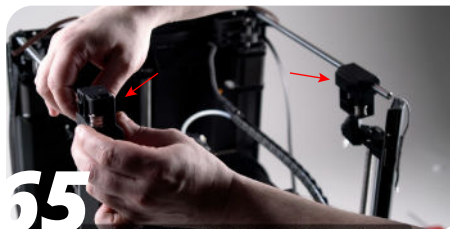
62 Connect the thermistor and heater to the toolhead board.



63 Bundle up the extruder motor wires and fasten them to the x-carriage using two included zip ties.



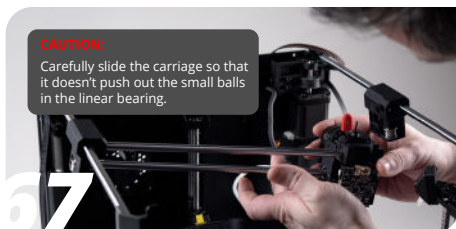
64 Cut the zip ties.



65 Add the X-Rods Holders to the Y rods, and be sure to take notice of the L and R markings.



66 Insert the supplied 8mm rods into one X-Rods Holder.

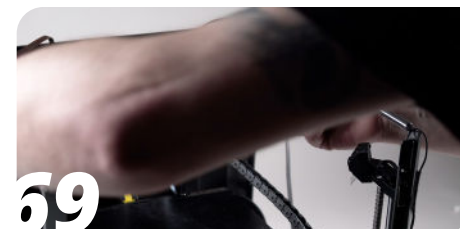


CAUTION
Carefully slide the carriage so that it doesn't push out the small balls in the linear bearing.

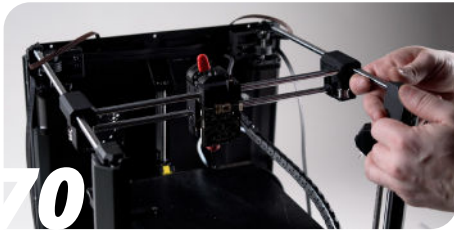
67 Slide the toolhead assembly onto the rods.



68 Push the rods into the other X-Rods Holder.

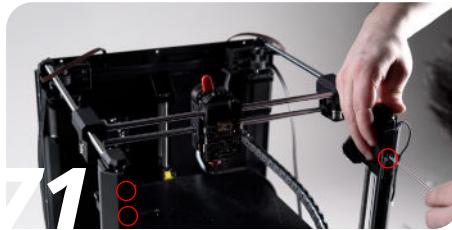


69 Push the X-Rods holders together from the sides to make sure the 8mm rods are fully seated.



70

Add the front idlers to the Y rods.



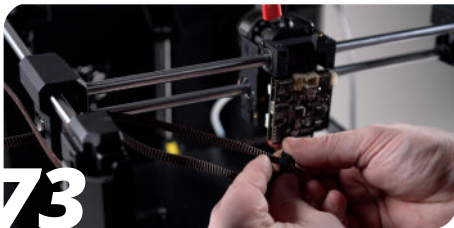
71

Add the four screws to the front back, tighten them using a 2mm hex key.



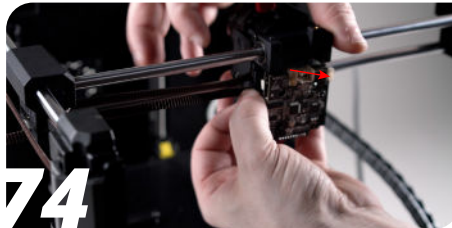
72

Route the belts to the toolhead, in the same way as they were routed before.



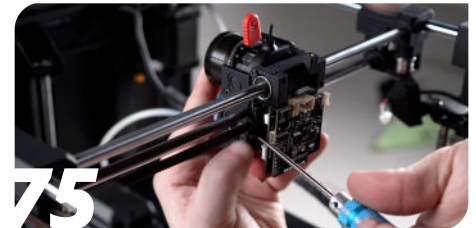
73

Add the belts to the Belt Retainers, being mindful of the orientation and using the left one for the left side.



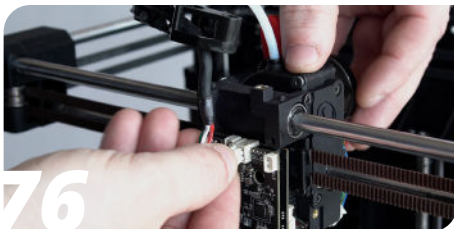
74

The belts should loop in from the back, before going into the belt slot.



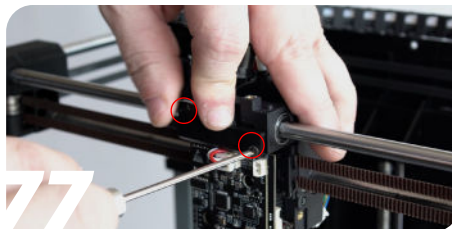
75

Fasten the Belt Retainers with the two included M3x6 low profile screws using a 2mm hex key.



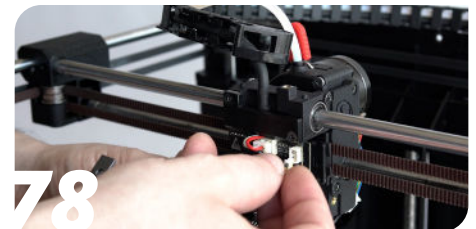
76

Connect the toolhead cable connector to the toolhead board.



77

Add the toolhead cable strain relief bracket and fasten it with the screws from before using a 2mm hex key.



78

Take the fan cowling/front cover and connect the part cooling fan to the toolhead board.



79

Fasten it using on both sides with the screws from before and a 2mm hex key.



80

Take the top frame, connect the LED strip again and place it on the printer.



81

Reinsert the screws from the sides previously removed and tighten them with a 2mm hex key.



82

Reinsert the screws from the back previously removed and tighten them with a 2mm hex key.



83

Reconnect the auxiliary part cooling fan.



84

Take the panel and put it in place.



85

Add any webcam cable present to the cable maintenance.



86

Reattach panels using the screws previously used.



87

Reinsert the screws from the front previously removed and tighten them with a 2mm hex key.



88

Add the door back by inserting it from the top down.



89

Fasten the two door screws previously removed using a 2mm hex key.



90

Add the cable chain back to the toolhead side using the screw from before and a 3mm hex key.



91

Add the screws back to the cable chain on the frame side, using the screws from before and a 2mm hex key.



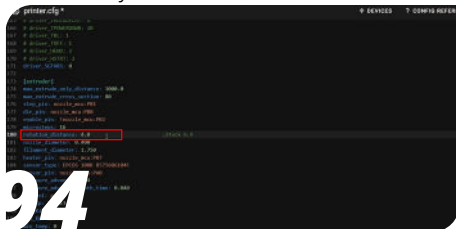
92

Add the toolhead cable back to the frame. Add the PTFE tube back to the filament sensor.



93

Add the PTFE back to the toolhead. If you choose to keep the filament in the hotend, you might want to unload this piece of filament before this is done.



94

Set the rotation_distance to 4.0 in your printer.cfg [extruder] section and save.



95

And you're done with the hardware upgrade!

IT'S DONE! TAKE GOOD CARE OF IT

Every 6 months, or sooner if you have a higher than 15h per week average usage, perform the following maintenance operations:

1. With a tooth brush and alcohol:
 - a. Clean the IDGA & secondary drive gear
 - b. Clean the needle bearings
 - c. Clean the secondary shaft
2. With a fine brush and lubricant:
 - a. Apply a moderate amount of lubricant to the spur gear teeth of the drive gears, ensuring that excess lubricant does not spill over and cause any other parts to become greasy
 - b. Lubricate the needle bearings
3. With compressed air:
 - a. Blow the housing plastic parts to remove dust & dirt particles

HOW TO GET HELP

We are available to help you with any questions or issues you may have. Simply go to our website where you can access our customer support and send us your questions or follow the provided link:

https://www.bondtech.se/contact/#tab_technical-support-requests

RELATED GUIDES

If you need a guide to uninstall or reinstall the IFS extruder in your printer, follow the link below:

<https://www.bondtech.se/product/ifs-extruder-for-prusa-mini/>

