



# RAISE3D

## Filament Run-Out Sensor

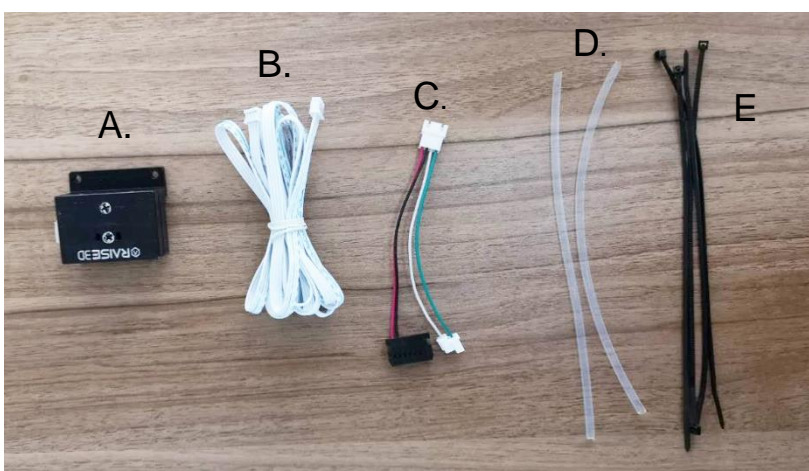
Installation Guide - **N1**



## Contents

List of contents:

- A. Filament Run-out Sensor.
- B. Filament Run-out Sensor Cable.
- C. Adapter.
- D. Bowden Tube with 4mm-OD \*2.
- E. Cable Tie \*4.



### STEP 1: Disconnect Power

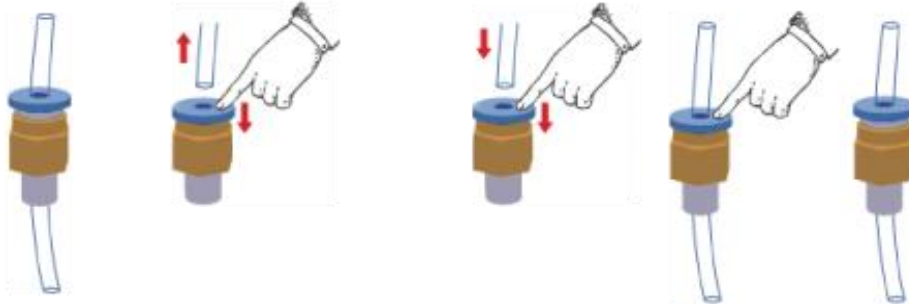
Turn power switch to the "0" or "Off" state. Once the printer has fully shut down, unplug the power cable.



## STEP 2: Replace the Bowden Tube

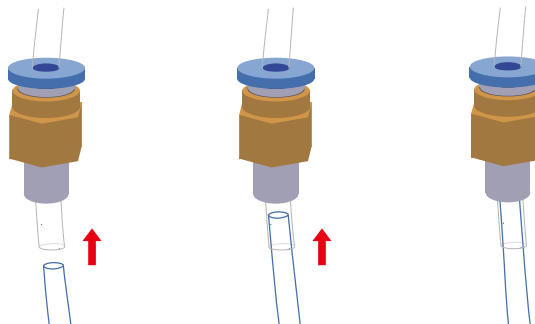
2.1 If the original Bowden Tubes on your printer are with **4mm-OD**:

- Remove the original Bowden tubes completely and replace them with the included Bowden tubes from the Run-Out Kit (D). To release the tubes, press and hold the blue ring on the coupling.



2.1 If the original Bowden Tubes on your printer are with **6mm-OD**:

- keep the origin tubes and directly insert the new 4mm-OD tubes to pass through.



## STEP 3: Assemble the Filament Run-Out Sensor



Connect the white Filament Run-Out Sensor cable (B) to the Filament Run-Out Sensor (A). Remove the tape covering.



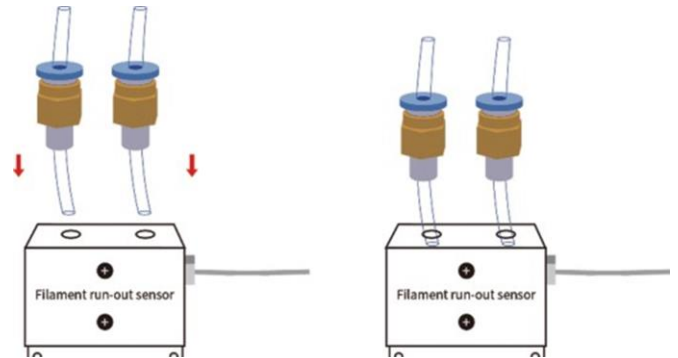
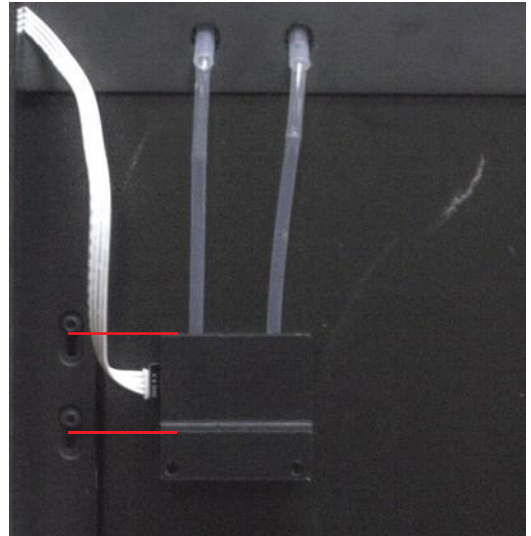
## STEP 4: Install the Filament Run-Out Sensor

4.1 Attach the assembled Filament Run-Out Sensor to the Bowden tubes underneath the couplings.

*\*It is recommended to mount a spool of filament prior to installation. This will ensure that there is no interference between the spool and the Filament Run-Out Sensor.*

4.2 Move the sensor up until it is parallel with the motor mounting screws.

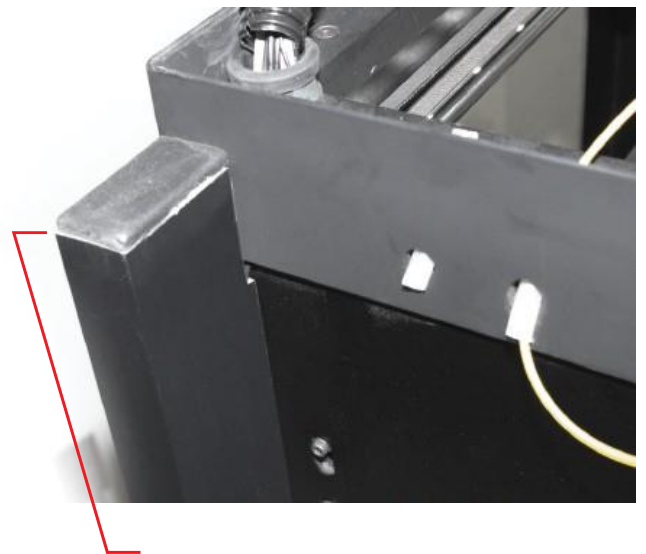
Press and hold the blue buttons on the couplings to release the tubes and adjust the position of the filament out sensor.



## STEP 5: Remove the Wire Path Covering

Locate the plastic wire path covering. Remove the covering by pinching and pulling the cover away.

If your printer version has a metal covering, do not attempt to remove it. Wires will be routed along the outside of the machine.



## STEP 6: Wire Routing

Feed the filament sensor cable through the frame and into the base of the printer through the wire path channel.



If the wire cover is metal, run the cable outside the printer underneath the printer.



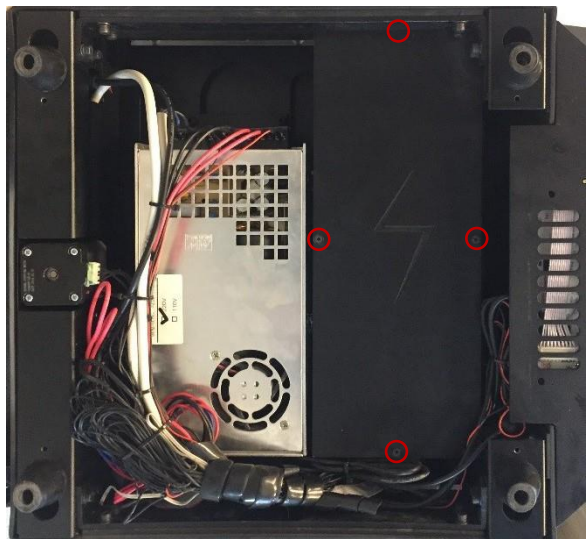
## STEP 7: Detach the Baseplate cover



Lie your printer on it's left side (Your right when facing the door). And remove the 4 marked screws with a 4mm hex wrench.

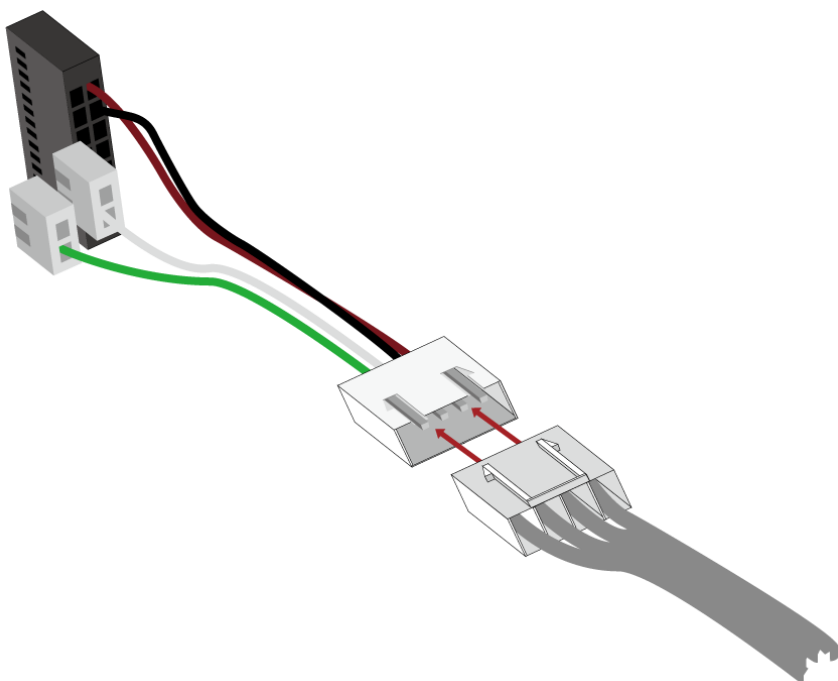


### STEP 8: Open the Electronics Cover



Unscrew the four 2mm hex screws to open the Motion Controller Box.

Use the included adapter (C) to connect the Filament Run-Out Sensor to the motion controller board with the 4-pin end.



## Filament Run-out Sensor Installation Guide

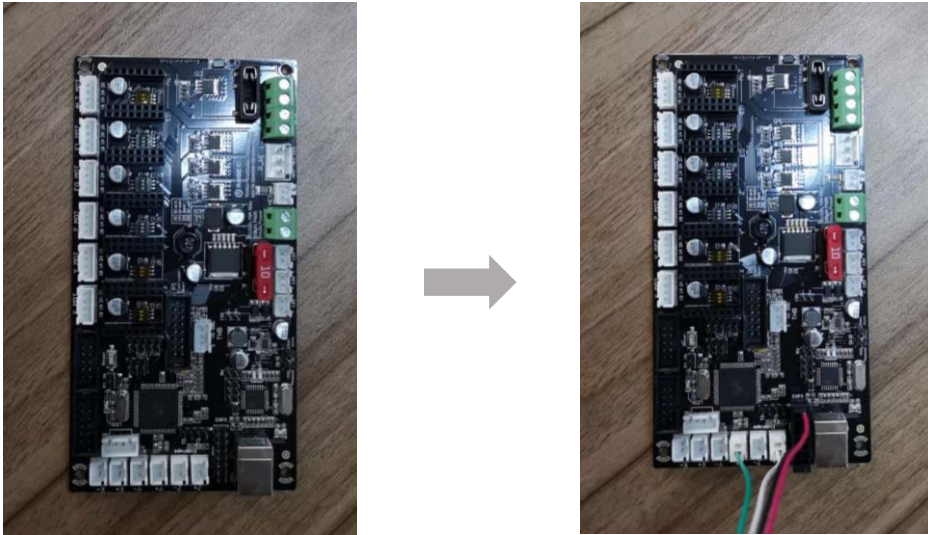
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Attach the other three ends of the adapter onto the Motion Controller Board as shown in the following pictures:

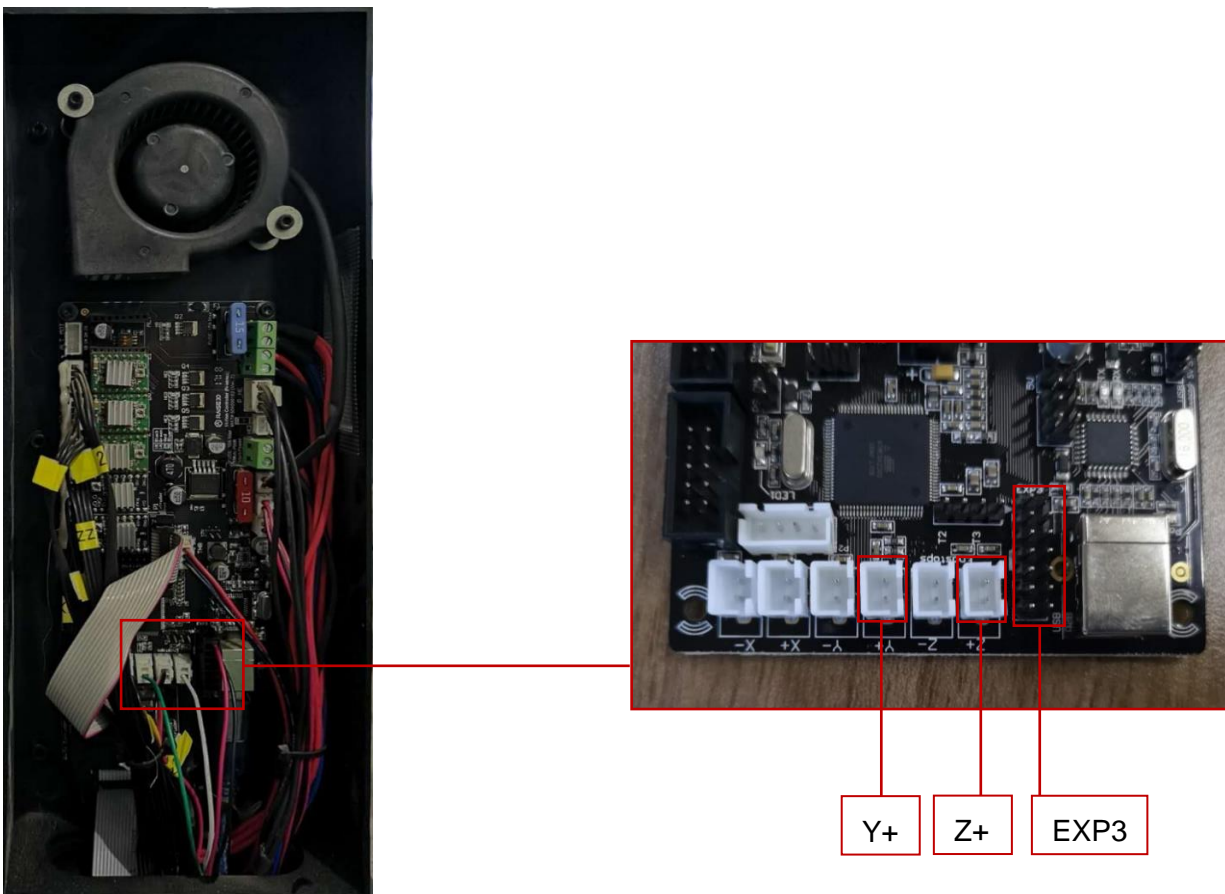
Red-black cable to EXP3 (slot on terminal face to right),

White Cable to Z+,

Green Cable to Y+.



Wiring complete:



### STEP 9: Bundle Remaining Wires



(Optional) Tie the excess cabling in preparation for re-installing the base plate.

### STEP 10: Attach all removed parts

Re-attach the components that have been removed.

This includes:

- Motion Controller Box covering (Step 8)
- Base Plate Covering (Step 7)
- Wire Path Covering (Step 5)

### STEP 11: Install New Firmware

Please download Motion Board Firmware with FRS version and Version 0.9.7 Touchscreen Firmware from <https://www.raise3d.com/pages/download>.

Continue to the “Motion Controller Firmware Update” for instructions on how to update to the latest firmware.

