FPE1

User Manual

PRODUCT OVERVIEW:

| 1	X-axis Limit Switch	7	Levelling Nut	13	Z-Axis Limit Switch
2	Extrusion Head Kit	8	TF Card Slot	14	X-Axis Motor
3	Magnetic Printing Platform	9	USB Port	15	Z-Axis Motor
4	LCD Screen	10	Micro-USB Port	16	Y-Axis Motor
5	Knob	11	Feeder	17	Power Switch
6	Y-axis Limit Switch	12	Extrusion (E) Motor		

INSTALLATION:

Remove the printer from the box & remove the foam packaging, including the plastic wrap around the gantry.
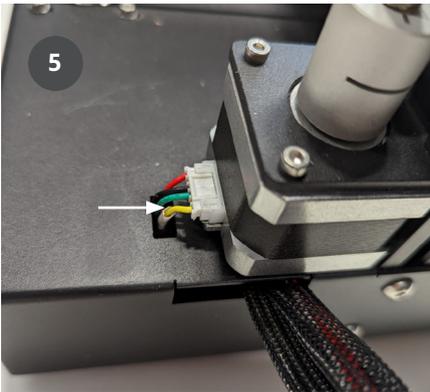

Insert the gantry into the base.
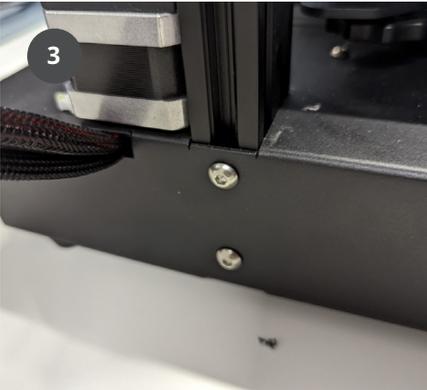
Install the 20mm M4 bolts into the side
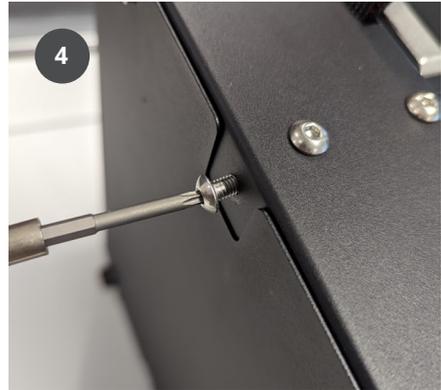
Lay the machine onto its back & install the two 8mm M4 bolts into the base.

Connect the Z Axis motor to the base by removing the black tape, and plugging in the connector to the motor.

Assemble the filament holder by feeding the filament tube (A) through the mounting plate (B), and secure it with the nut (C).
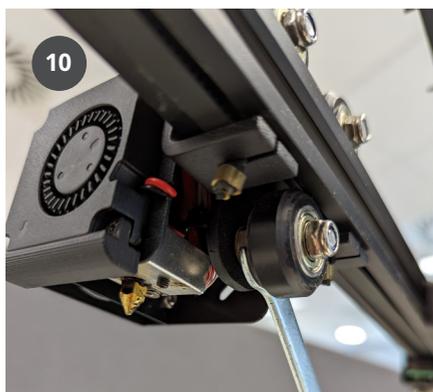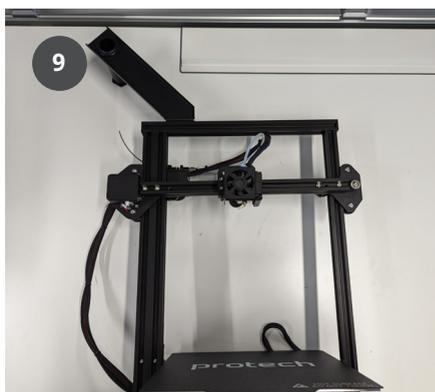

Remove the T-Nuts from the bolts, and place them into the top of the frame, to the left of the rail closest to the extruder.

Place the filament holder over the T-Nuts, and install the bolts through the holder & into the T-Nuts.
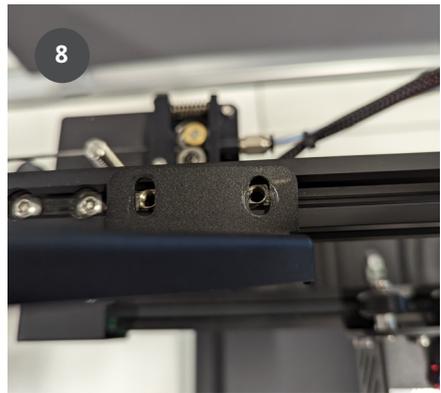
There are eccentric nuts located on the extruder & under the build plate, which should be adjusted with the included spanner. Adjust them where required until the build plate & extruder move smoothly & without wobbling.


Once assembled, plug in the printer via the included power cable & turn on the printer.

Press the rotary knob to enter the menu & scroll down to "Motion", select "Auto Home" & allow the printer to move to its home location. Once homed, select "Disable Steppers" to begin the leveling process.

The head & bed can now be manually moved, and should be set to the four corners during the leveling process.

Rotate all four adjustment knobs under the print bed anti-clockwise until tight before beginning the next step.

Using a sheet of paper or a feeler gauge, turn the adjustment knobs clockwise until the sheet of paper moves with little resistance, or until the nozzle is touching the feeler gauge.
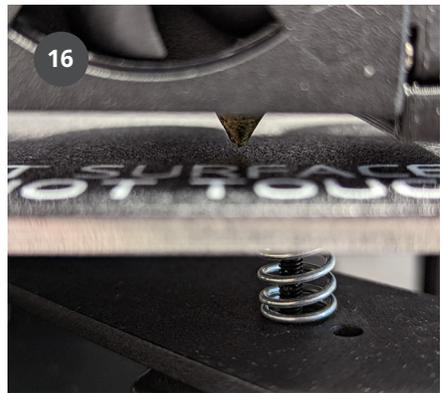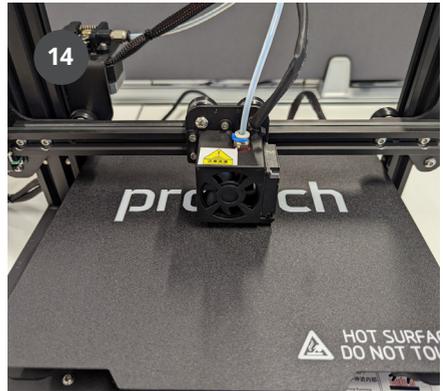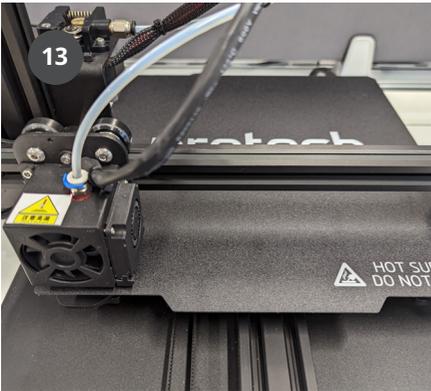
You should now be ready to load filament and start printing!

LOAD, UNLOAD AND CHANGE FILAMENT:
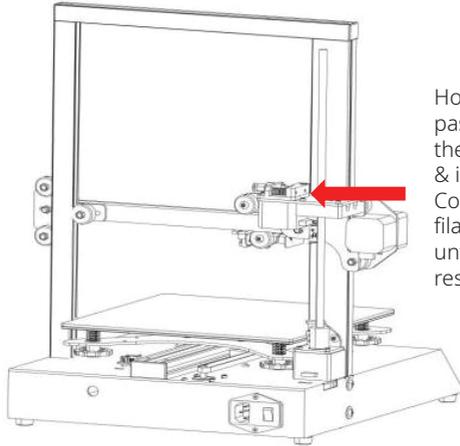
Hold down the lever and pass the filament through the side of the extruder & into the filament tube. Continue to feed the filament into the extruder until you feel some resistance.

Select Change Filament in the main interface of the menu. There are three options, they are Change Filament, Load Filament and unload Filament.
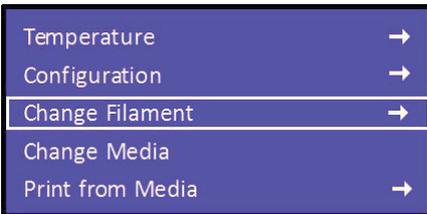
Change Filament

Preheat PLA −Preheats the hotend to a temperature suitable for PLA material change.

Preheat ABS − Preheats the hot end to a temperature suitable for ABS material changes

Preheat Custom −Preheats to a custom temperature to change (Choosing these three options will unload filament and re-start to load filament)

Load Filament

Preheat PLA – Preheats the hotend to a temperature suitable for PLA to load

Preheat ABS – Preheats the hotend to a temperature suitable for ABS to load

Preheat Custom based on custom temperature to load.

```
          Load Filament
Back                          ⬆
Preheat PLA
Preheat ABS
Preheat Custom:              0
```

Unload Filament

Preheat PLA - based on PLA suitable temperature to unload

Preheat ABS - based on ABS suitable temperature to unload

Preheat Custom based on custom suitable temperature to unload.

```
         Unload Filament
Back                          ⬆
Preheat PLA
Preheat ABS
Preheat Custom:              0
```
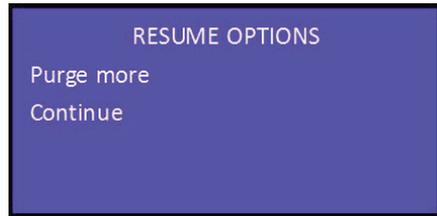
Resume Options

After the load filament is completed the interface will display;

Purge more - will continue to extrude more

Continue - allows you to proceed. The final step, after selection, will return you to the main interface.

```
          RESUME OPTIONS
Purge more
Continue
```
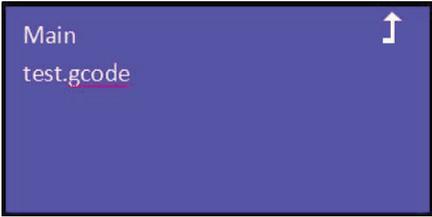
CHOOSE THE MODEL TO PRINT:

Press the knob to enter the menu, select "Print from Media", and press the knob to confirm the selection.

Temperature
Configuration
Change Filament
Change Media
Print from Media

Choose the test files or a file that you have compiled in the slicer software as .gcode, wait for the machine to prepare temperatures and start printing.

Main
test.gcode

TROUBLESHOOTING:

The print is not adhering to the print platform
- The distance between the printing platform and the nozzle is too large (bed leveling). You can adjust the four horizontal adjustment nuts under the platform to ensure that the distance is appropriate. The approximate distance can be the same as the thickness of a business card;
- The printing platform temperature is not high enough, Generally, the temperature of the printing platform using PLA is set at about 60ºC, and the ABS is set at about 100ºC;
- The platform cooling fan is turned on too early, you can set this in your slicer software;

Filament will not load normally due to the extruder gear being stuck
- The temperature has not reached the best melting point of filaments. The temperature can be adjusted properly on the LCD. Generally, the temperature is not high enough.
- The feeding reel is knotted and the filament is not available. After cutting off the filament, adjusting the filament and printing again.
- The distance between the print platform and the nozzle is too small, plugging the nozzle Re-level the bed.
- The diameter of filaments is too large, replace with the correct filament (1.75mm).
- Nozzle has been plugged or damaged, for many reasons, contact the place of purchase.

The printing process has shifted

- Look to see if there is any foreign material interfering with the the works of the undercarriage.
- Friction increases as dust builds up on the axes, use a paper towel or lint free cloth with alcohol to wipe and remove any dirt sticking to the oil.
- Check all the synchronous wheels on the X and Y axes and motor to see if anything is anything is loose. Check to make sure that belts are not loose, if so please tighten them.

The nozzle temperature does not rise, triggering an alarm

- Check whether the heating cartridge and the thermistor wire are inserted properly, and that there is no breakage or damage;
- The line terminal is in poor contact, shut down and re-plug the plug-in terminal and the rehearsal line, and restart the machine;
- There are too many filament on the heat block near the nozzle, which may cause the thermistor to not measure temperature properly, remove the residue or replace the thermistor;

**The machine suddenly stops printing during printing**

- Check if the power supply is normally energized, the display is wrong, take photos as much as possible, and contact the place of purchase
- Multiple printing stops at the same height, the data was not fully exported when the file was sliced or you have a corrupt SD card. Slice the file again;
- After the heating is completed and the print starting but the machine doesn't print after returning to the home position. When the software is sliced, the correct model was not selected. Re-sliced the model.

CURA SETTINGS:

Add the printer
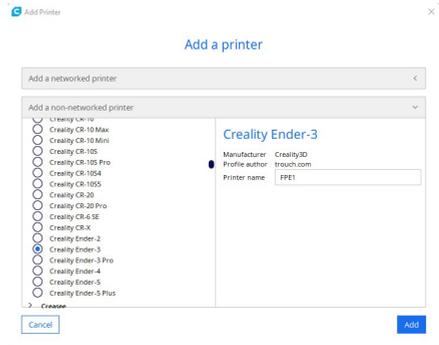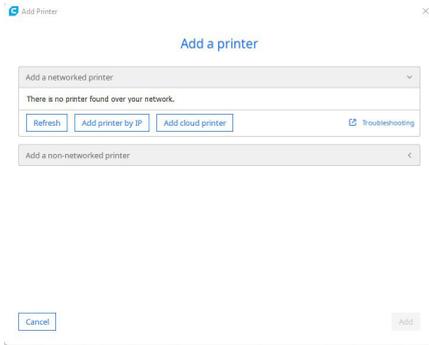
Configuration Parameters
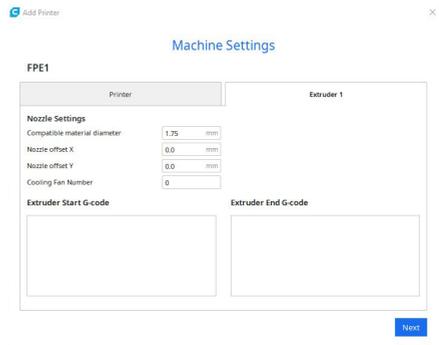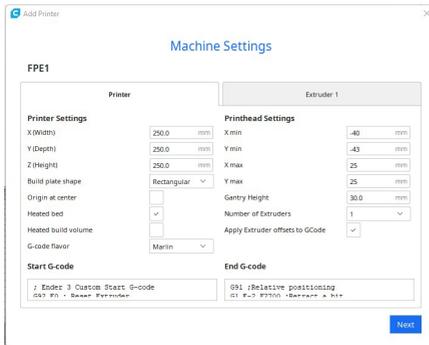
CAUTION:

1. The nozzle temperature can reach temperatures greater than 200°C while printing and remains hot for a period of time during cool down after the completion of a print. Take caution while removing your printed model - do not touch the nozzle with your hand

2. Please follow the instructions in the guide while operating this machine. If you have any questions contact your reseller or the place of purchase for support

3. If support material needs to be removed from the printed model, please wear gloves to avoid injury from tools or the support material during the clean-up process

4. If you encountered a problem with a print or a machine part, please take a photo that represents the problem and another with the machine identification number (the label at the bottom back of the machine), and then contact our after-sales support or the place of purchase

5. The use of quality filament is recommended