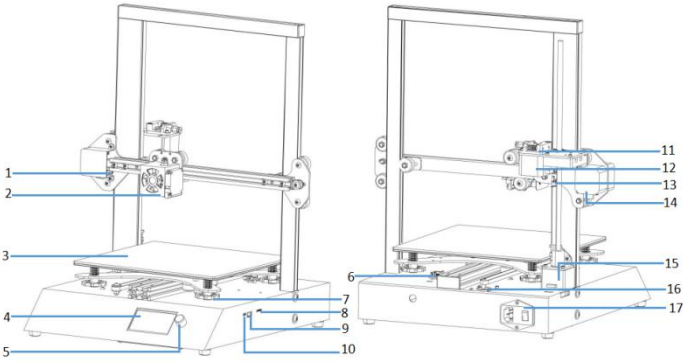
MakerPi P2

Quick Start Guide

Catalogue

Chapter 1 Learn about your 3D printer

1.1 3D printer introduction



1、X-axis limit switch	7、Leveling 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	

1.2 Cautions

1. The nozzle temperature can reach temperatures greater than 200℃ 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 MakerPi after-sales department；

3. If support material needs to be removed from the printed model, please wear gloves so as not to be hurt by tools or the support material during the clean-up process；

4. Reading the "User guide", while actually operating the machine will be more conducive to your operation as you become familiar with the printer；

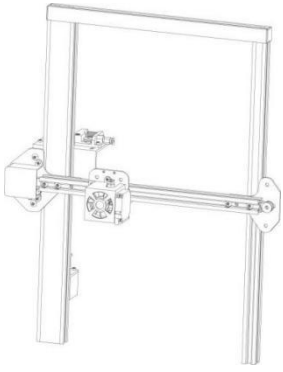
5. If you encountered a problem with a print or a machine part, please take a photo that represents the problem and another with the machine identification number (the label at the bottom back of the machine), and then contact our after-sales support or your reseller；

6. The use of original factory filament is recommended；

7. If your machine does not power on check the power supply under the machine and select the appropriate voltage for your region.

Chapter 2 Preparation before printing

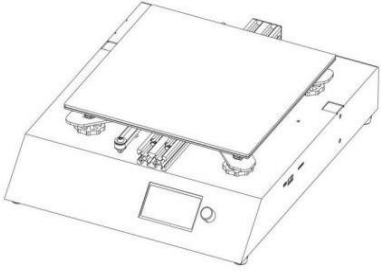
2.1 Install the gantry frame



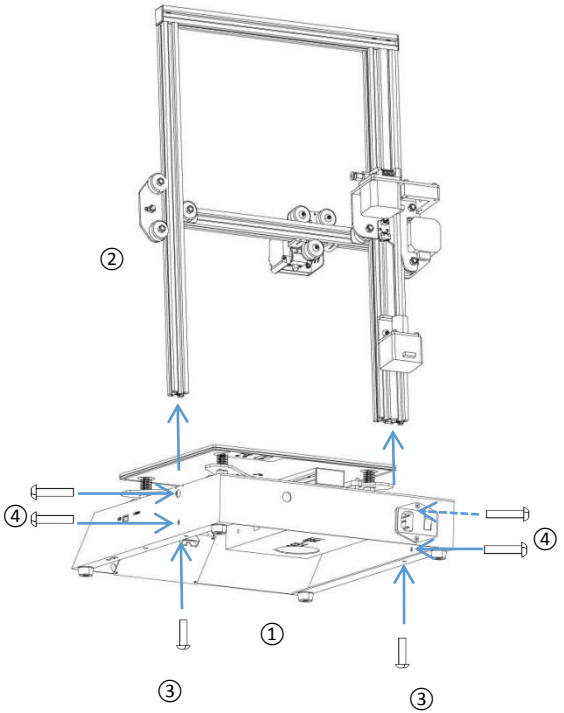
③M5*8 X2

④M5*25 X4

②gantry frame X1



①base frameX1



Insert the gantry frame into the corresponding hole of the base frame, then fix the two M5*8 screws at the bottom first, and finally tighten the four M5*25 screws on both sides of the machine. It may be easier if you temporarily remove the magnetic bed.

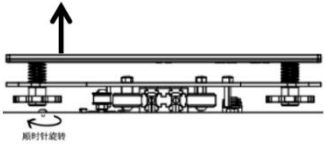
Chapter 3 Adjustment to the printing platform

3.1 Coarse tuning

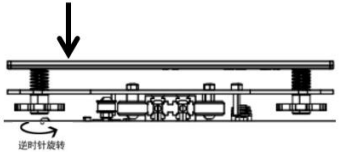
- LCD screen select **Motion → Auto Home**

- When the machine returns to zero, the motor will be automatically locked. You need to select **Motion → Disable Steppers** to unlock the motors

Move the nozzles from corner to corner around the glass plate. Turn the knobs to adjust the distance between the nozzle and the glass plate.**Rotate the platform leveling knob clockwise to raise platform**



Rotate the platform leveling knob counterclockwise to lower the platform

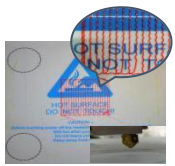


- In coarse tuning, the approximate distance between the nozzle and the glass plate is the thickness of a piece of paper. If the distance is too great, the platform leveling knob should be rotated clockwise to move the platform upward. If the distance is too little and the nozzle is too close to the platform, turn the leveling knob counterclockwise to move the platform down.

3.2 Fine tuning

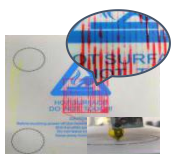
Select a model to print. By looking at the result of the first layer you can determine if fine-tuning of the platform is required. If you do not have a good first layer with proper flow of material you can stop printing, fine-tune and adjustment for the next print. Or you can continue fine tuning the level as the machine prints, live leveling.

- If the filament extruded does not adhere to the bed then the distance between the platform and the nozzle is too great. The filament is thrown down from the nozzle instead of sticking tightly.



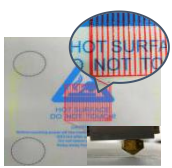
- Turn the leveling knob a little clockwise to make the platform go up. Continue this until the excessive gap disappears and a tight line appears.

- If the filament is found to be too thin or not coherent, it suggests that the distance between the nozzle and the platform is too small, resulting in too small amount of material flow, possibly leading to clogs.



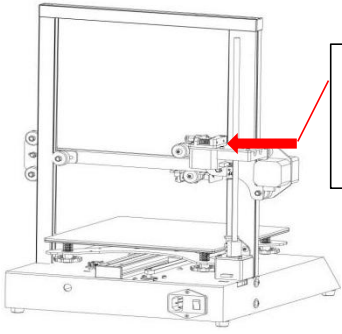
- Turn the leveling knob slightly counterclockwise to lower the platform until the filament output is full and smooth.

- Adjust well the effect of platform printing should be full out of the filament and the line pressure is flat on the platform.

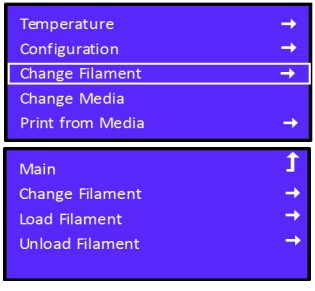


If the distance between the nozzle and the platform is too large or too small, please stop printing and adjust the platform until the distance between the platform and the nozzle is appropriate. **In most cases, the printing failure is caused by the platform not being adjusted properly.** Therefore, please debug repeatedly as required to ensure that the platform height has been adjusted to a better level. And when printing the first layer, it's best to watch the machine print and make sure the machine prints properly before leaving.

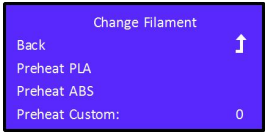
Chapter 4 Load, unload and change filament



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



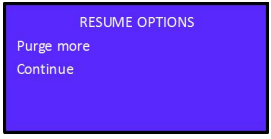
- Change Filament: Preheat PLA –Preheats the hotend to a temperature suitable for PLA material changes； Preheat ABS –Preheats the hotend to a temperature suitable for ABS material changes； Preheat Custom –Preheats to a custom temperature to change (Choosing these three options will unload filament and 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.

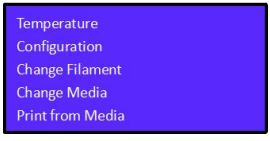
- Unload Filament： Preheat PLA based on PLA suitable temperature to unload； Preheat ABS based on ABS suitable temperature to unload； Preheat Custom based on custom suitable temperature to unload.

- 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.



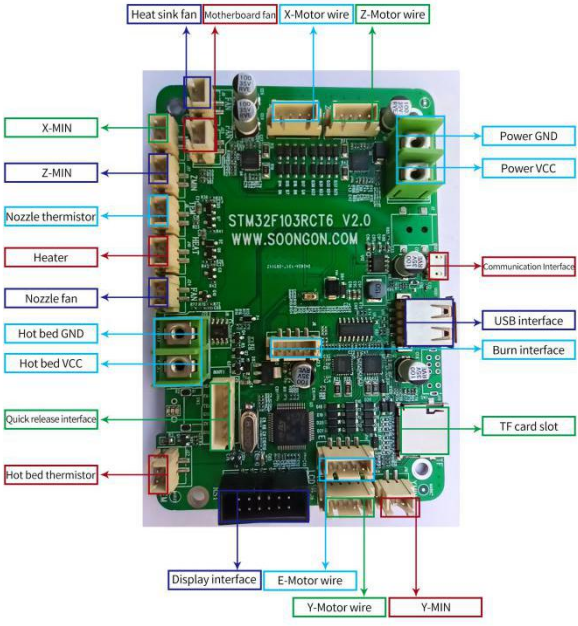
Chapter 5 Choose the model to print

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



- 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.

Chapter 6 Motherboard wiring diagram



Chapter 7 Analysis of common problems

1. Shocked by the machine when using it

The metal-clad machine itself is electrostatically charged, which does not harm the human body. The reason for static electricity is that there is no ground wire at home. The solution to this problem is:

(1) Connect the ground when laying wires at home;

(2) Attach a wire to the metal-clad machine (which can be connected to the bottom of the axis of the Z-axis platform). Guide the other end to large metal objects in the room. Or ground the printer to the ground screw of your electrical socket;

2. The print is not adhering to the print platform

(1) 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;

(2) The printing platform temperature is not high enough, Generally, the temperature of the printing platform using PLA is set at about 60℃, and the ABS is set at about 100℃;

(3) The printing platform does not use high-temperature adhesive tape, you can improve the viscosity by affixing high-temperature adhesive tape.

(4) The platform cooling fan is turned on too early, you can set this in your slicer software;

3.Filament will not load normally due to the extruder gear being stuck

(1) 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.

(2) The feeding reel is knotted and the filament is not available. After cutting off the filament, adjusting the filament and printing again.

(3) The distance between the print platform and the nozzle is too small, plugging the nozzle Re-level the bed.

(4) The diameter of filaments is too large, replace with the correct filament (1.75mm).

(5) Nozzle has been plugged or damaged, for many reasons, contact the after-sale service or your local reseller.

4.**The printing process has shifted**

(1) Look to see if there is any foreign material interfering with the the works of the undercarriage.

(2) 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.

(3) 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.

5.**The nozzle temperature does not rise, triggering an alarm**

(1) Check whether the heating cartridge and the thermistor wire are inserted properly, and that there is no breakage or damage;

(2) The line terminal is in poor contact, shut down and re-plug the plug-in terminal and the rehearsal line, and restart the machine;

(3) 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;

6.The machine suddenly stops printing during printing

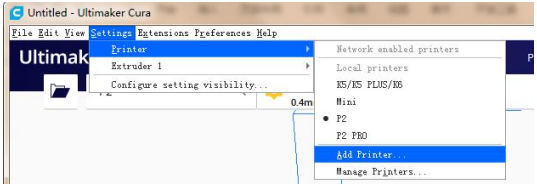
(1) Check if the power supply is normally energized, the display is wrong, take photos as much as possible, and contact the technician;

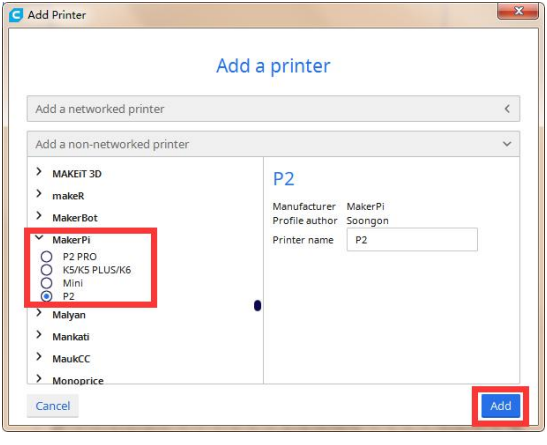
(2) Multiple printing stops at the same height, the data was not fully exported when the file was sliced or you have a corrupt SD card. Slice the file again;

(3) 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.

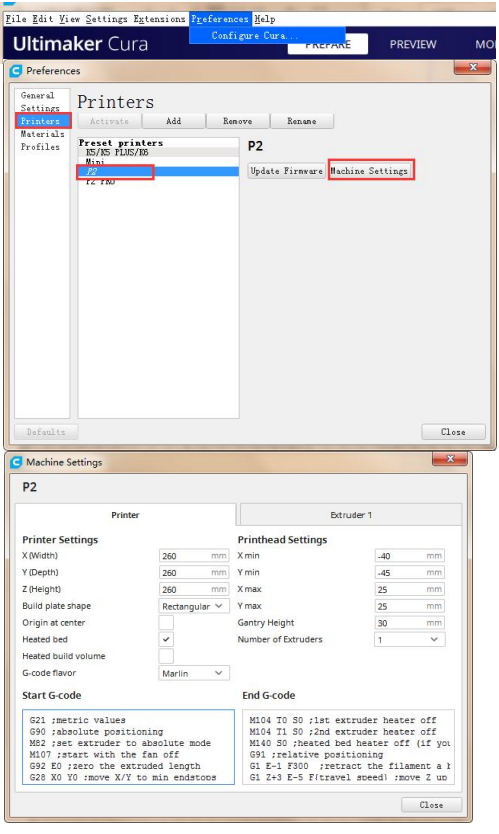
Attachment： It is recommended to use the original slicing software. If the machine is damaged by using any other software, the consequences will be borne by you. If you use other people's software, please refer to the following to change the parameters and commands.

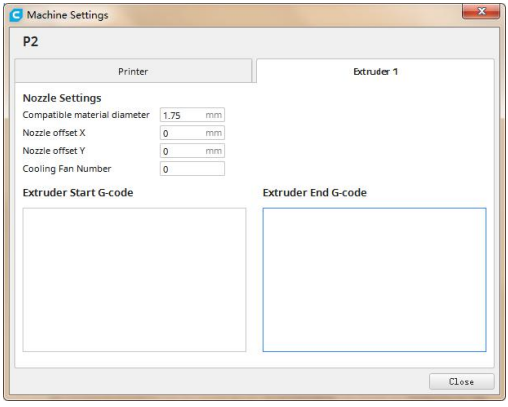
- Add the machine





- Configuration parameter




Machine Settings
P2
Printer
Extruder 1
Nozzle Settings
Compatible material diameter
1.75
mm
Nozzle offset X
0
mm
Nozzle offset Y
0
mm
Cooling Fan Number
0
Extruder Start G-code
Extruder End G-code
Close