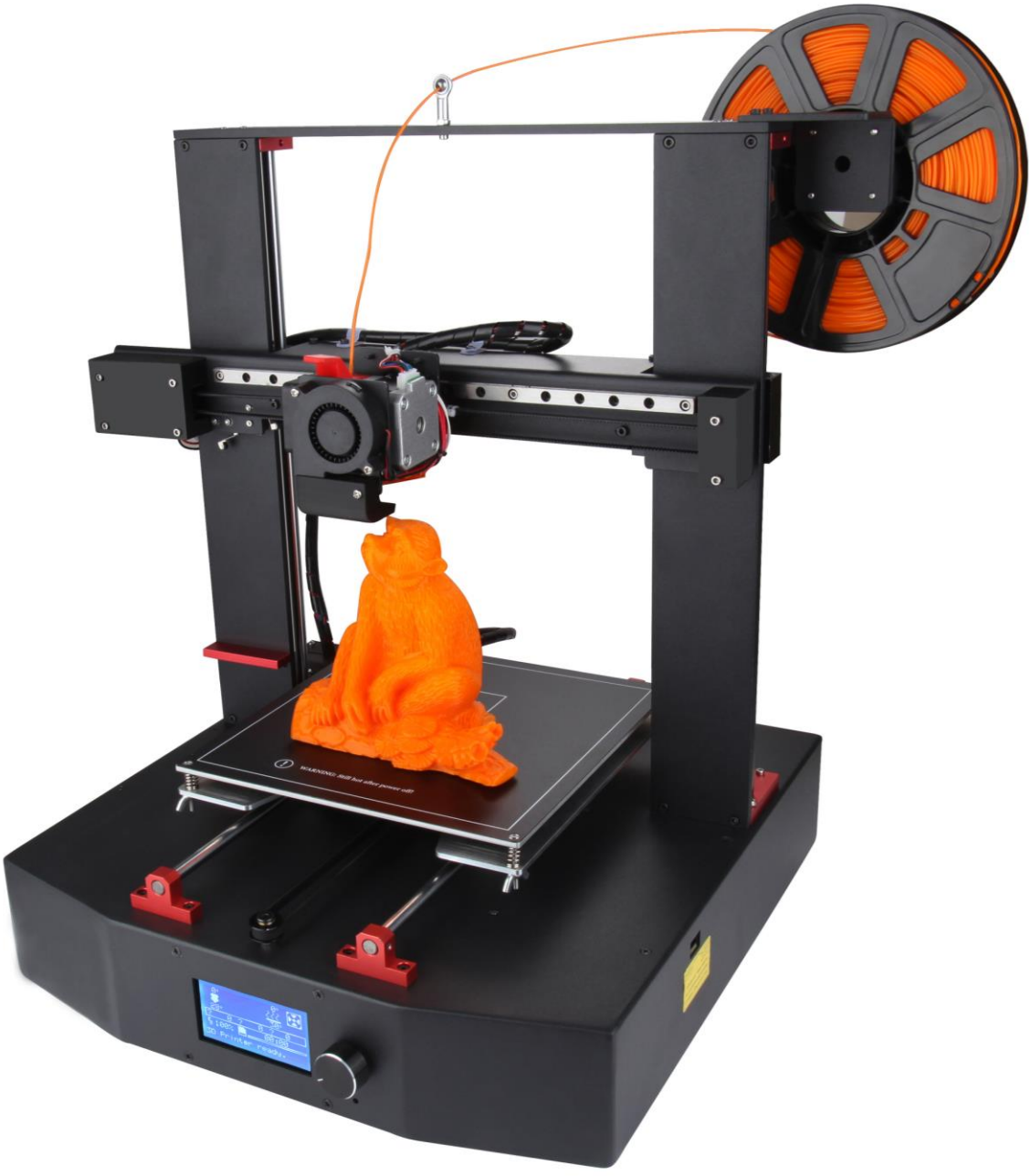
3D Printer Quick Start Guide



Foreword

Thanks in advance for choosing our 3D Printer! With the Quick Start Guide (hereinafter as “Guide”), you could enjoy accomplishing the assembly, Test and Printing step by step. Meanwhile, you will also learn the structure principle and its special FDM printing technology deeply, and then you will get great progress on not only the theoretical knowledge but also the manipulative ability.

To give play to the bigger effect of the printer and ensure the worry-free buying, smooth and enjoyable using, we spare no effect to consider the problem and difficulty you will meet with from when you order the printer and make detail videos and pictures to show the exact settle way. We write this “Guide” elaborately in great detail and we will always accompany with your using 3D printer. The kits would come to you with high-class parts and need you to put them together. So please read the “Guide” carefully before you assemble and use the printer .Please use the printer in strict accordance with the “Guide” to avoid any defective or invalid use caused by improper operation. So please keep the “Guide” for your easy reference.

Special Tips:

With our objective of constant update for our printer, we would not make future notice to you if some specifications and models updated. And we apologize for the inconvenience would lead to you.

We will do our best to help and solve the problem with our products. Your positive review and feedback are so appreciated!

Wish you a nice day!

1 Machine parameters

Printing technology	**FDM**	**printing precision**	**0.1-0.4mm**
Printing size	**220*220*250mm**	**printing speed**	**40-100mm/s(proposal)**
Machine size	**430*400*490mm**	**XY position Accuracy**	**0.02mm**
Display	**LCD**	**Z position Accuracy**	**0.02mm**
Extruder	**1**	**Interface**	**USB， SD，WIFI etc.**
nozzle diameter	**0.4(defaut),0.3,0.5**	**File format**	**G-code,amf,stl,obj etc.**
Filament	**PLA /ABS/HIPS/WOOD**	**Operating system**	**Windows,Lunix,Mac etc.**
Filament diameter	**¢1.75mm**	**Language**	**English，Chinese**
Nozzle temperature	**260℃**	**Slicing software**	**Cura,repitier-host，Simplify3D etc.**
Hotbed temperature	**100℃**	**working condition**	**10-40℃ humidity 20-50％**

2 Important Notice and Attentions

2.1 Please ensure that you move to the right tap position for input voltage (110V or 220V) of the power supply (as shown in the picture).

Warning: Must be in the condition of power equipment of the strike.

Input Voltage	**100~160V**	**200~260V**
Position choice	**110V**	**220V**

2.2 Do not place the printer near flammable or high heat source, please put in a ventilated, cool, dusty, low - static environment（temperature 10-40℃，humidity20-50％）。

2.3 Do not touch hotbed and nozzle when printer working to avoid the scald

2.4 Do not place the printer in an unstable environment, such as vibration or noise, and the sloshing of the machine will cause the instability of print quality.

2.5 Before printing, pleaselevel hotbed (the best distance of the nozzle and the hotbed Is about 0.1mm).

2.6 Don’t plug and unplug the wiring for controller board when power on, especially don’t plug and unplug the connect wiring of power supply.

2.7 When using this printer, please use the material provided or specified by the company (inferior or unmatched consumables are easily blocked or damaged by the nozzle).

2.8 After printing, the superfluous consumables on the nozzle should be cleaned up (preheat the nozzle to the temperature that can melt the filament).

2.9 Maintain the machine regularly, clean the dust, and lubricate the guide rail or the light shaft

3 Open carton and Check the parts

(SD-Card:\ Open carton and Check the parts)

4 Printer assembly

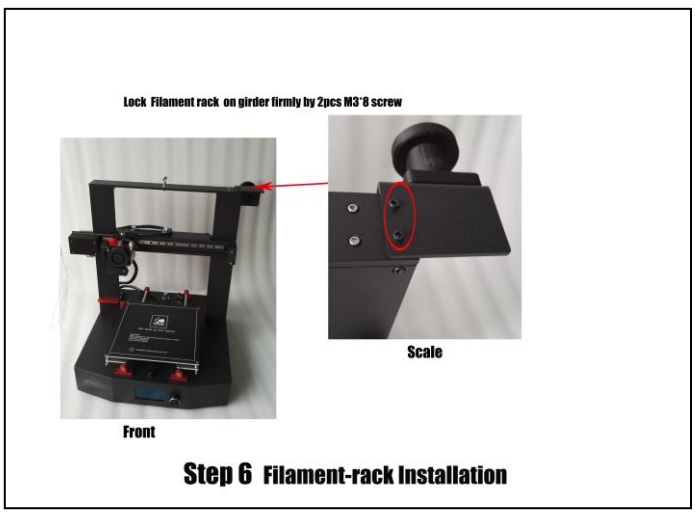
Please assemble the printer by following step1- step6 on assembly diagram and video, and pay attention to the prompt for key of assembling.

Video (SD-Card: \Installation Instruction\Video\1-printer assembly.mp4)

Diagram (SD-Card: \Installation Instruction\diagram\Step1—step6.jpg)

4.1 Mainstructure (as shown in Figure)

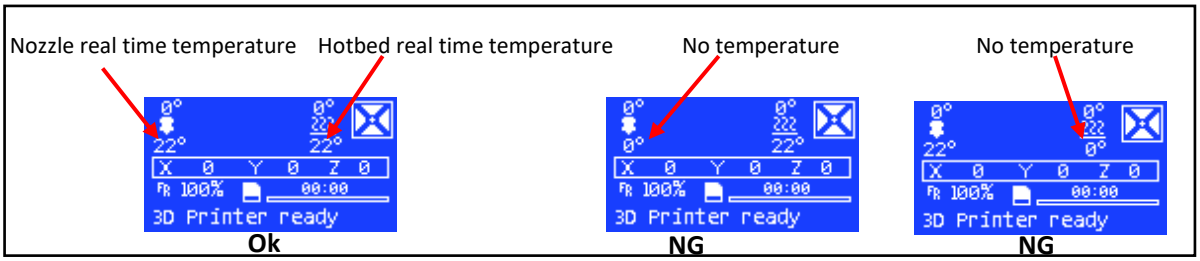
4.2 Printer assembly (as shown in Figure:Step1---step6)



5 Power on inspection

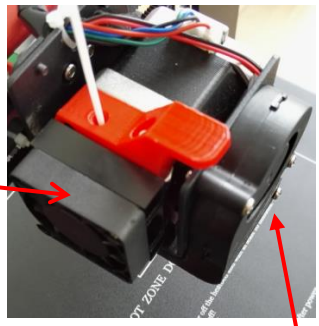
When connecting the power supply to your printer, please make sure whether LCD screen showed correctly or not, hotbed and the heater can be heated rightly or not ; the thermistor,motor,fan and fan1 works normally or not。(**SD-Card:** Installation Instruction\ Video\ 2-Power On Inspection.mp4)

5.1 Turn on the power switch, LCD display (as shown in Figure)

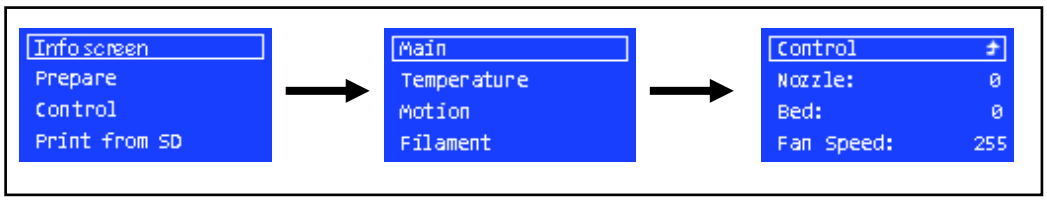


5.2 fan and fan1 Inspection(as shown in Figure)

1.Switch on the power,the fan1 work.

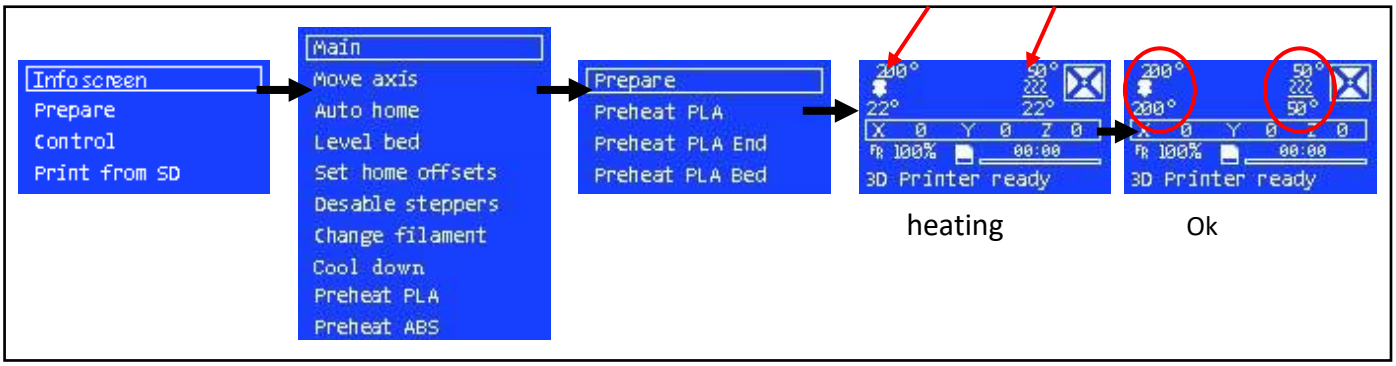


2. “Control” →“temperature” → “fan speed----255”, the fan works.



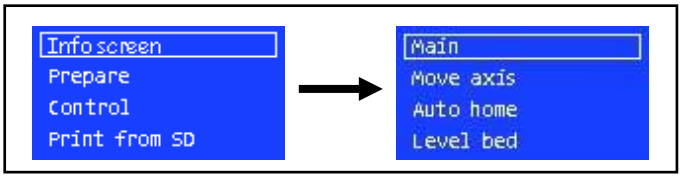
5.3 Nozzle and hotbed heating inspection

“Prepare” ---- “Preheat PLA” ---- “Preheat PLA”



5.4 “Auto home” inspection

“Prepare” --- “Auto home”



Then X axis will move towards left, Y axis will move towards back, Z axis will move down, each axis motor will stop moving till their endstop

6 Level hotbed

（Note：The hotbed has been leveled before the printer go out. If you need to adjust it again, please follow the method）

6.1 Manually level hotbed

(SD-Card:\Installation Instruction\Video\3-Manually level hotbed.mp4)

Turn on the power switch，click **“Prepare” --- “Auto home”**。 At this time, the XYZ axis move back to The origin. Screw the screws at 4 angle of hotbed to make the nozzle above 0.1mm to the hotbed .

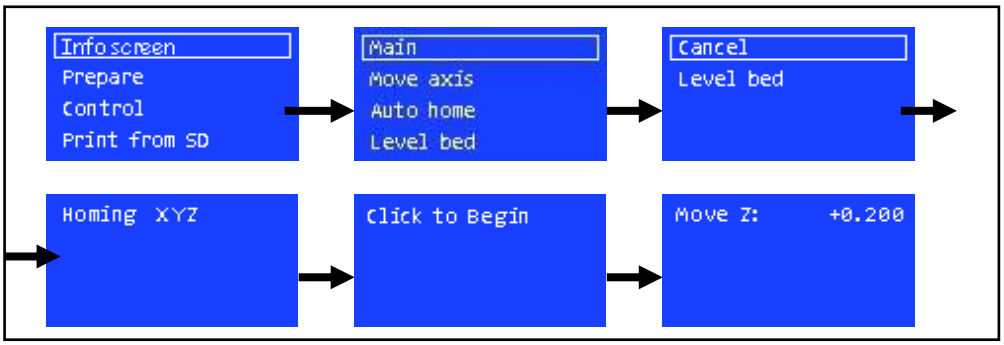
(PS: After Auto home, please click “Disable Steppers” or turn off the power, otherwise, you will can’t move the XYZ axis by hand)(Picture6.1)

6.2 Auto level hotbed

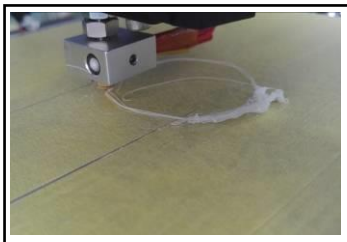
(SD-Card: Installation Instruction\Video\4-Auto level hotbed.mp4)

Turn on the power switch，Click **“Prepare” --- “Level bed” -- “Level bed” ---“homingXYZ”---“click to begin”**, At this time the nozzle is located at the top left corner of the hot bed. LCD display“Move Z：+0.200” . observe the distance between the nozzle and the hot bed： If the distance is greater, reduced the Z+0.200 value makes the nozzle close to the hot bed by button；If the distance is too small or the nozzle has been pressed to press the hot bed，increase the Z+0.200 value makes the nozzle above 0.1mm to the hotbed .

Follow the LCD display, Complete the other 3 Leveling of a corner（PS：The auto level bed function does not require a hotbed to be horizontal，The system automatically saves the adjustment value of four corner，when the nozzle reaches the position of four angles In the printing process,The system automatically corrects the Z value to get a precise printing model）

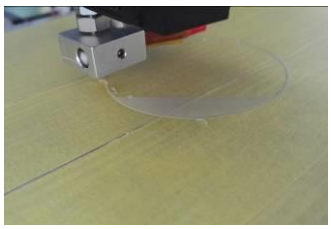


The different printing effect depends on the different distance between nozzle and hotbed：



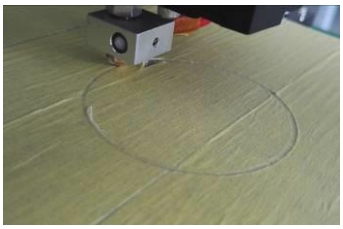
PIcture 6.2

The distance between nozzle and hotbed is too high



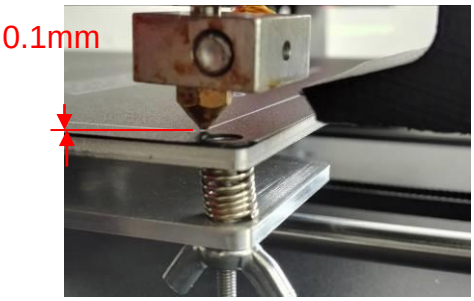
Picture 6.3

The distance between nozzle and hotbed is proper



Picture 6.4

The nozzle is too close to hotbed



Picture 6.1

The High distance between the hotbed and the nozzle makes the model non stick to the hotbed, causing the model to break out of the hotbed。The nozzle is too close to hotbed, will affect the nozzle silking and lead to the hotbed is scratched.The different printing effect depends on the different distance between nozzle and hotbed.

7 Change Filament

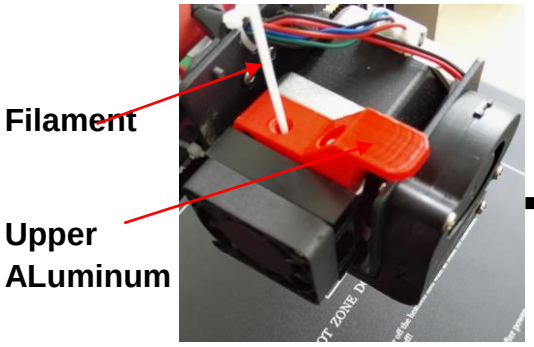
7.1 Manually Change Filament

(SD-Card:\Installation Instruction\Video\5-Manually Change Filament.mp4)

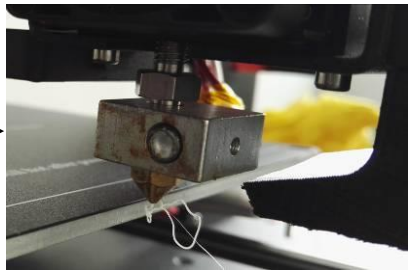
Note：before pulling out or inserting filament,Firstly preheat the nozzle to the exact temperature **(PLA：200～220℃，ABS：240～260℃)**

7.1.1 Insert the Filament： Firstly preheat the nozzle to the exact temperature(PLA：200～220℃，ABS：240～260℃) Once the temperature is up to the same as setting ,Press the upper aluminum piece on the extruder motor and meanwhile insert the filament into the throat (You can cut the filament into oblique angle with scissor to plug in smoothly. Picture 7.3), push down to extrude part of filament (Picture7.1), then let the aluminum piece go, finally clear up the filament extruded.

7.1.2 Pull out the filament: Firstly preheat the nozzle to the exact temperature(PLA：200～220℃，ABS：240～260℃) Once the temperature is up to the same as setting, press the upper aluminum piece on the extruder motor with left hand, meanwhile push down to extrude part of filament and then pull out it rapidly with right hand.(PS:Don't pause in the process to avoid the jam lead by the cooling midway. Picture 7.1)



Picture 7.1



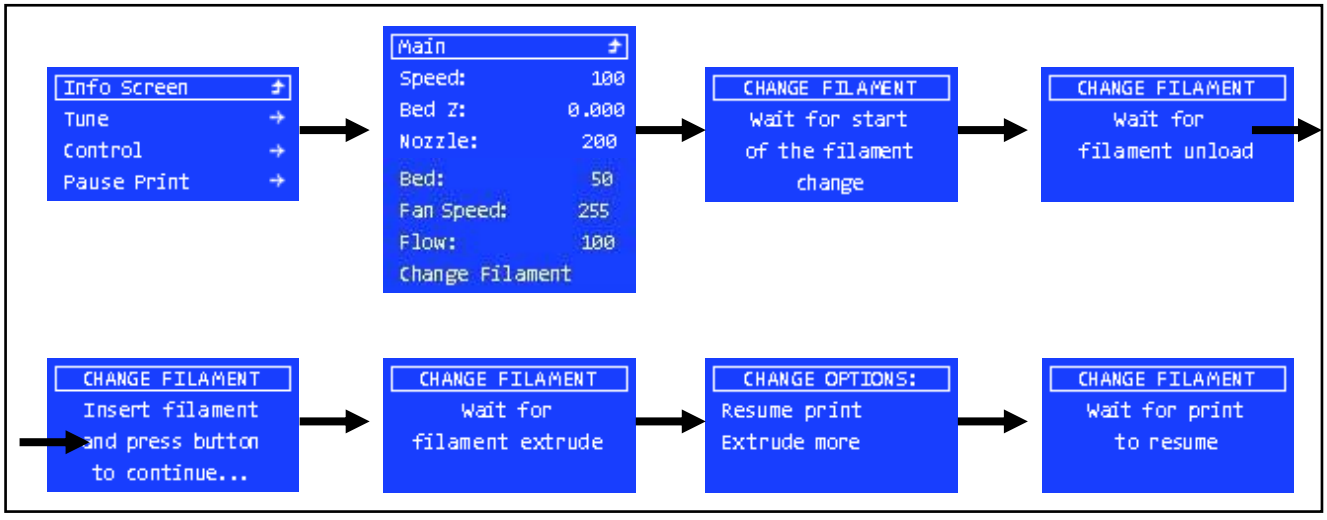
Picture 7.2

Picture 7.3

7.2 Change Filament When Printing

(SD-Card:\Installation Instruction\Video\6-Change Filament When Printing.mp4)

When the model is printed to a certain position,Click**“tune” →“change filament”；** The printer stop working and the XY axis would be back to the origin, then the extruder would send back the filament from the printer automatically.
Change the filament manually (Follow the following step) and press the knob, then the printer would Go on printing starting from the former position of the printing model

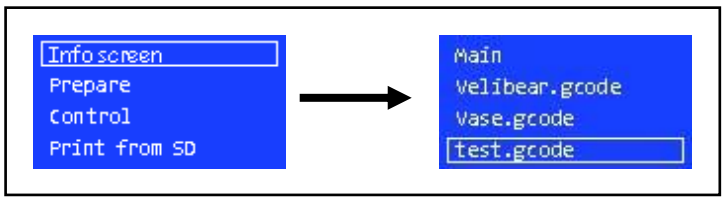


8 Print test and resume print

8.1 Print test

(SD-Card:\Installation Instruction\Video\7-Print test and resume print.mp4)

After all the above-mentioned test and you make sure the printer works well. Now you can get start a printing test. Please insert the SD Card into the card slot on the left side of the case and then choose the **"test.gcode"** file and start printing with rotating the spin button.

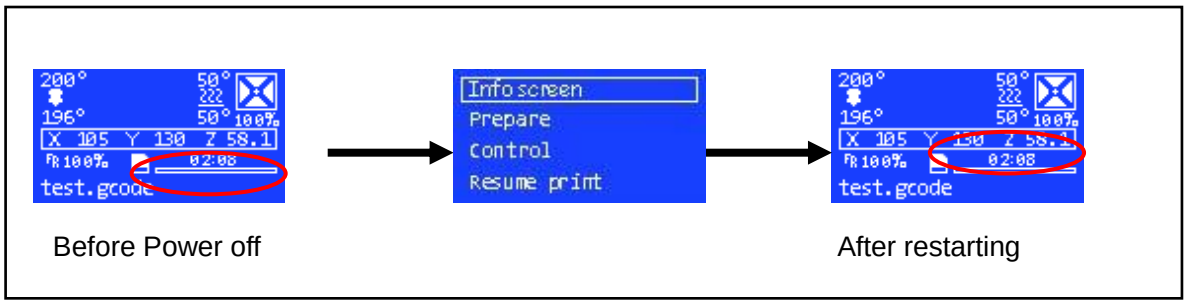


The printer can only print files in gcode format，If you want to print a model of STL format，you need convert it into gcode format by slicing software

Slicing software setup:（SD-Card:\Slicing software\" How to use cura15.04.pdf "）

8.2 Resume print

When printing in case of unexpected power failure, power it back on and click **"Resume print'**
The model will automatically go on printing from the position of power off .



Before Power off

After restarting

Congratulations! You've already accomplish the whole assembly for your 3D printer. Please feel free to contact our customer service if you have any problem on technology or other. We will spare no effect to settle your problems accordingly. As you complete the printing test, you would be pride of yourself by creating the first 3D printer work. And welcome to share your amazing and successful DIY experience to our page online.

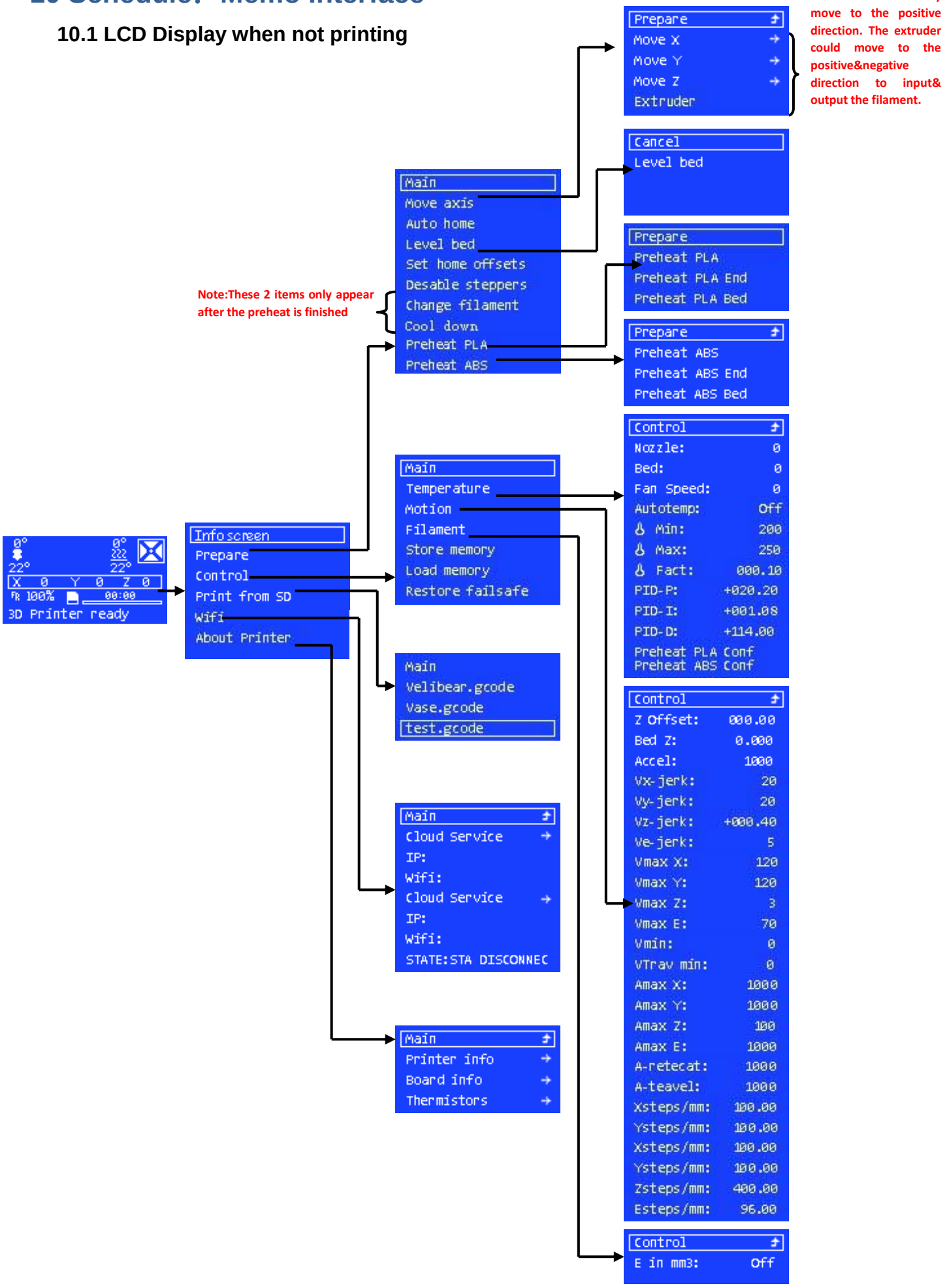
9 Common problem

More detailed problem handling refer to the "common problem" document in the SD card （**SD-Card:\common problem** ）

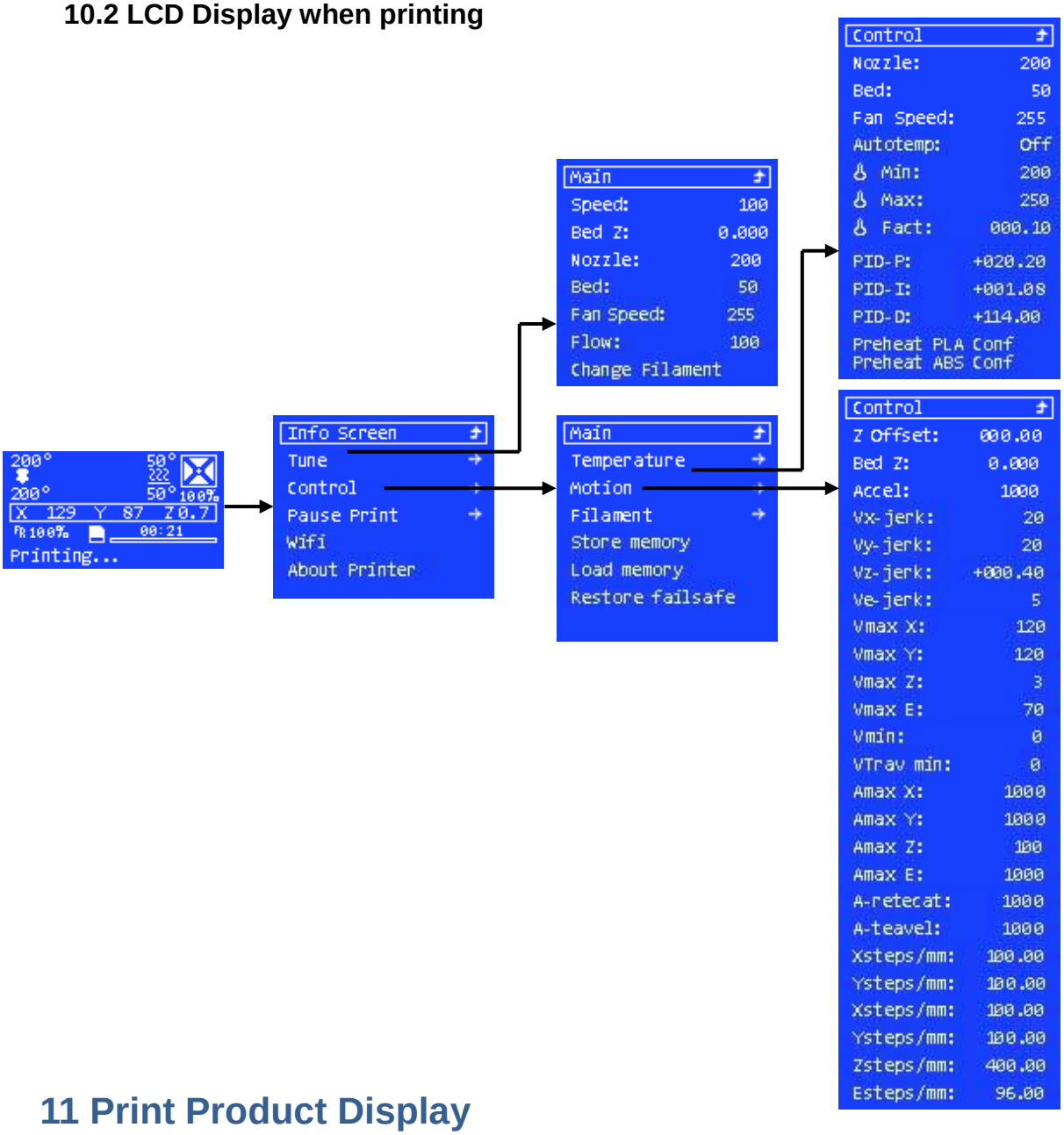
Common problem	Solution method
The real time temperature of nozzle is zero	Connecting the nozzle thermistor with the mainboard“TH”
The real time temperature of hotbed is zero	Connecting the hotbed thermistor with the mainboard "TB";
LCD screen is not bright	1. Confirm whether the power supply is normal ； 2.Confirm the LCD screen on the EXP1 port is connected with the EXP1 port on the mainboard, and no loose or poor contact 3.Confirm whether the supply voltage is normal(turn off the power and connect the mainboard through the USB data cable)
Rotation button cannot be up and down	Confirm the LCD screen on the EXP1 port is connected with the EXP1 port on the mainboard, and no loose or poor contact
Blurred screen	Press the reset button on the mainboard or power-off restart
Nozzle clogging	Clean nozzle or change a new one
Intermittent filament extrude	1.preheat the nozzle to the exact temperature（PLA：200～220℃ ，ABS：240～260℃） 2.confirm if the filament feed wheel is loose or not 3. Filament may have impurities to replace it
Model divorced hotbed	The distance between nozzle and hotbed istoo far, level to make the nozzle above 0.1mm to the hotbed
Nozzle scrapin hotbed	The distance between nozzle and hotbed is too close, level to make the nozzle above 0.1mm to the hotbed
Model dislocation	1. Settle way of Dislocation for X direction: Check if Motor drum in-phase of X axis is loose or if the X axis belt is too tight or loose; 2. Settle way of Dislocation for Y direction: Check if Motor drum in-phase Y axis is loose or if the Y axis belt is too tight or loose. 3. Settle way of Dislocation for X &Y direction: Check if Motor drum in-phase X & Y axis is loose or if the X &Y axis belt is too tight or loose.
Model grow multi filament	The model set up Retraction distance (about 5mm) and speed (about 80mm/s)when slicing.
Part of Model defaut	The model set up support when slicing
Model deformation	1.Hotbed must preheat 50℃（PLA）or 85℃(ABS)，then has a adhesion to the model。 2. The model set up platform. 3. adjust the nozzle to the thickness of 1 piece of A4 paper above the hotbed.

10 Schedule：Memo Interface

10.1 LCD Display when not printing



10.2 LCD Display when printing



11 Print Product Display