

Debug and Print

catalogue

Debug and Print	- 1 -
catalogue	- 1 -
1 Connect and Software	- 3 -
1 Software Introduction	- 3 -
2 Connect printer to PC.....	- 7 -
3 Repetier and control printer	- 8 -
1) Software Installation	- 8 -
2) Language Settings.....	- 9 -
3) Printer settings	- 10 -
4) Connect the printer.....	- 11 -
5) Panel Introduction.....	- 11 -
6) some important command.....	- 16 -
2 Leveling and printing.....	- 24 -
1. Auto-leveling	- 24 -
2. Start printing	- 25 -
1) Feeder filament	- 26 -
2) Slice.....	- 30 -
3) slice setting.....	- 32 -
4) printing	- 37 -
4 Offline printing	- 40 -
1. load the model.....	- 40 -
2. slice	- 41 -
3. Export Gcode file.....	- 43 -
4. Copy.....	- 44 -
5. Printing.....	- 44 -

thank you for your kind support to choose our product!

when you use the printer,meet some problems, pls contact us.

Amazon aftersale email 1:dapengqian@126.com

Other email:rose@flsund3d.com

Technical Support skype 1:wangbo5111

Technical Support skype 2:James

Technical Support skype 3:oldjiawei Yin

whatsapp :008613183017642

1,If you are satisfied with kossel 3d printer kits,please leave a positive feedback to us,thank you so much for your kindness.

2,If you are not satisfied for any reason,please contact us before leaving a negative feedback(any negative review no longer be changed again),we will work together with you to help you solve any problem until you are satisfied.

1 Connect and Software

1 Software Introduction

Need software as follows:

A:**arduino**,it's the firmware working environment.

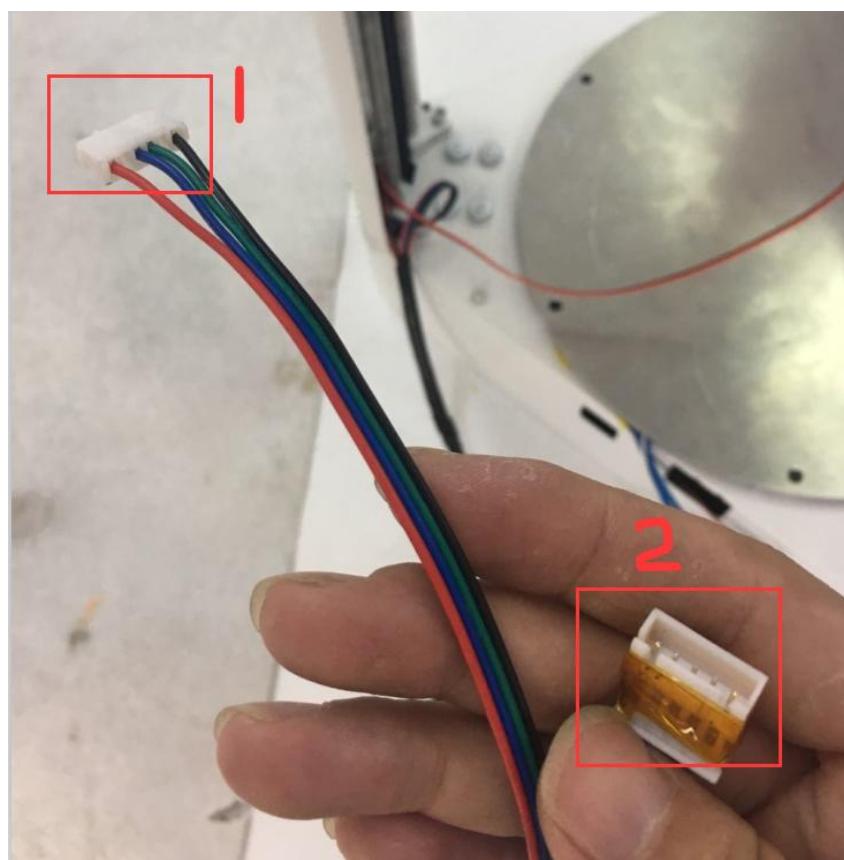
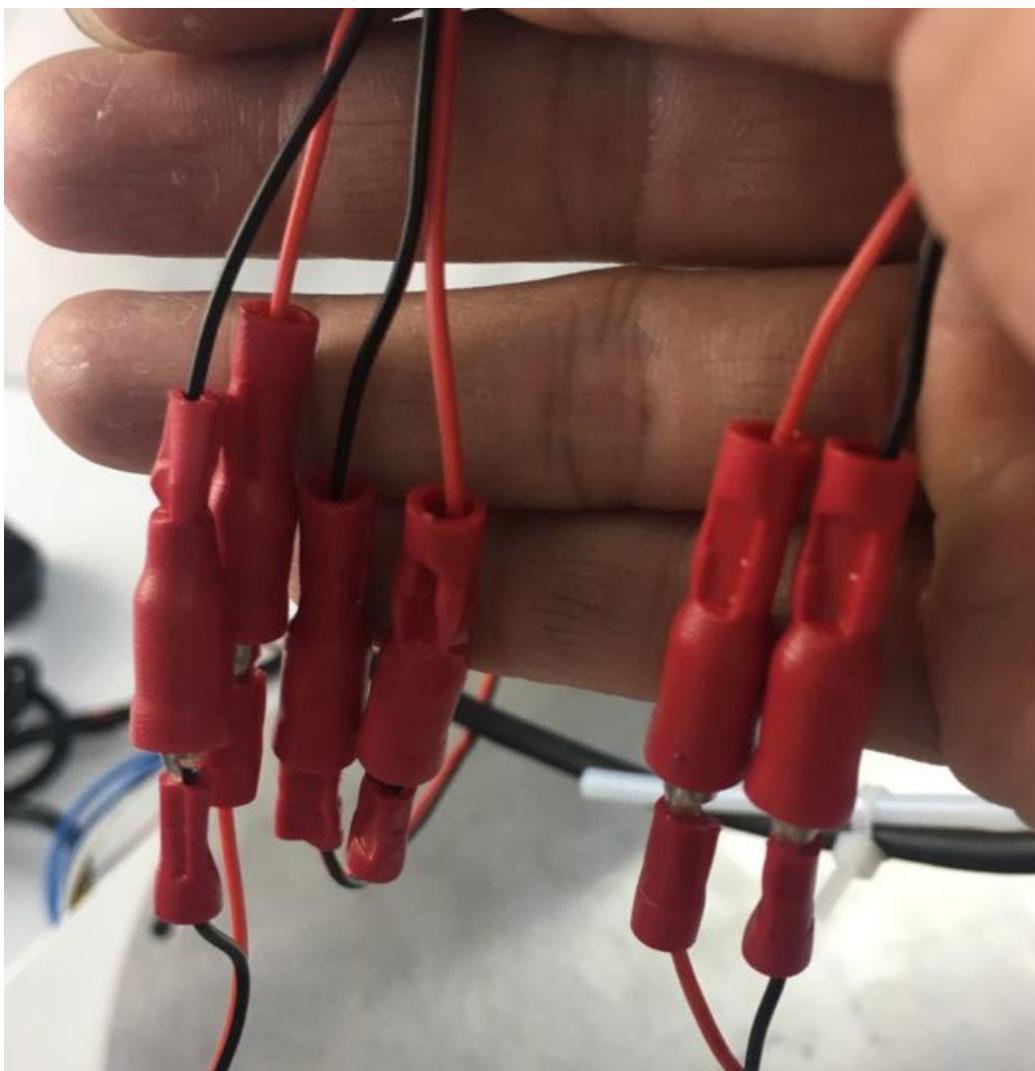
B:**Marlin**,it's the firmware,it's program to run printer working,need flash firmware to motherboard.

C:**RepetierHost**,it's also PC software,can control the printer,can slice the model, when printing,it's good to use.

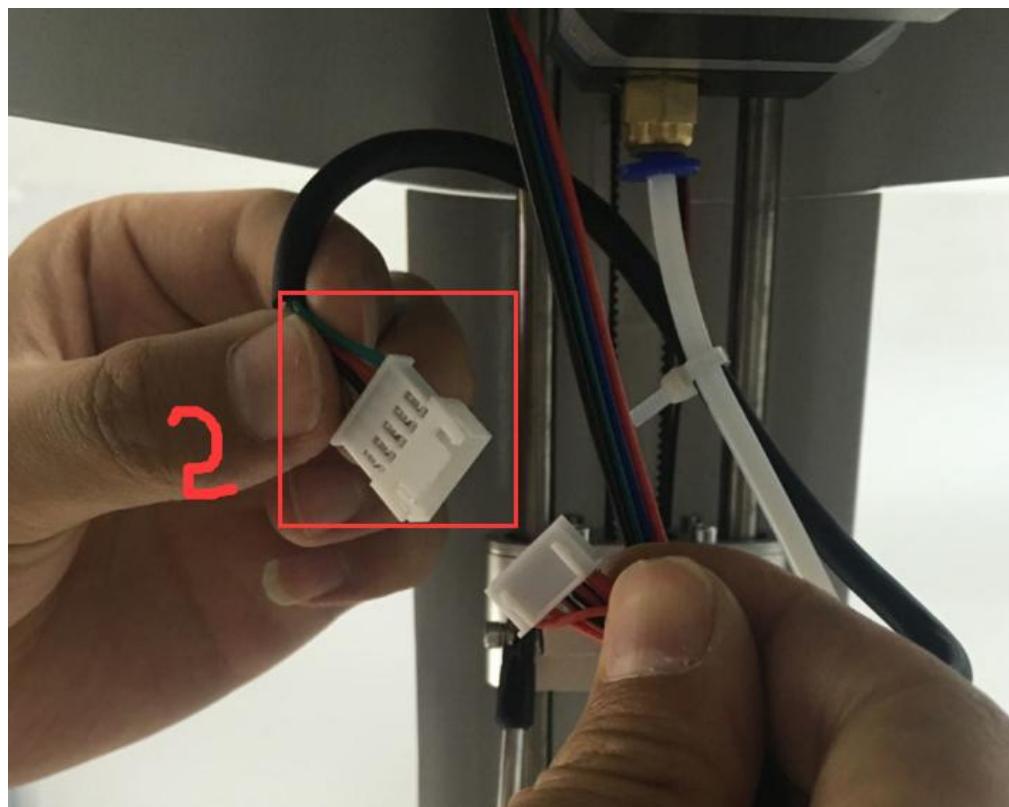
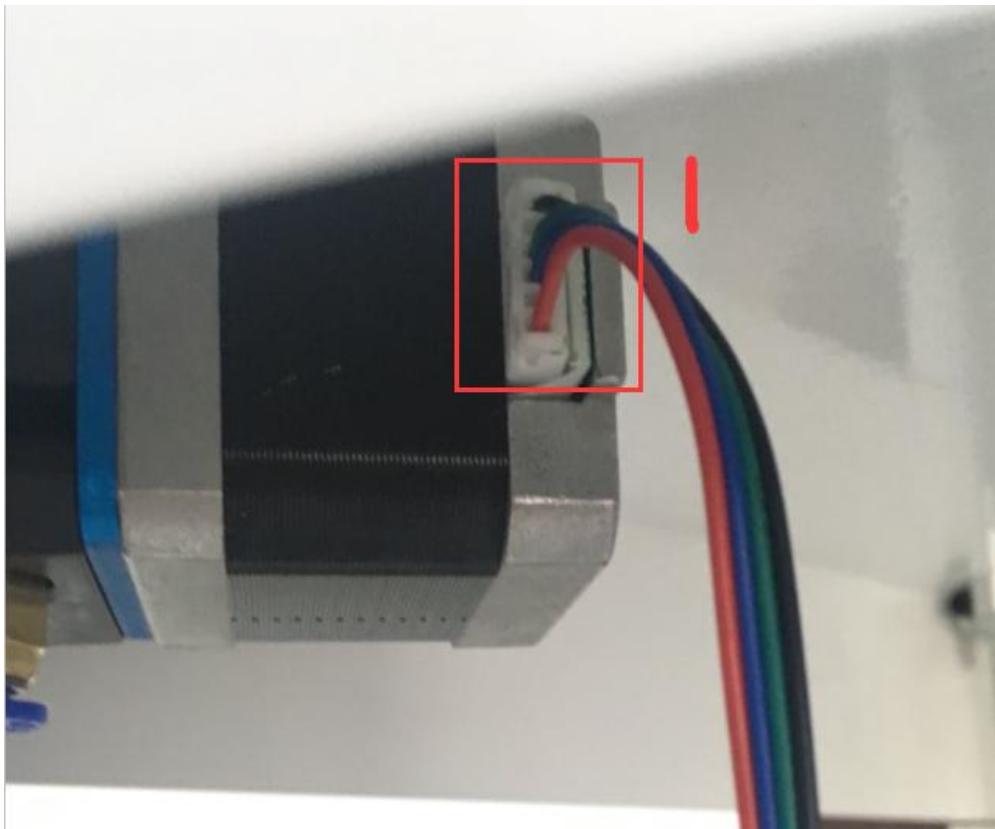
2 Connection



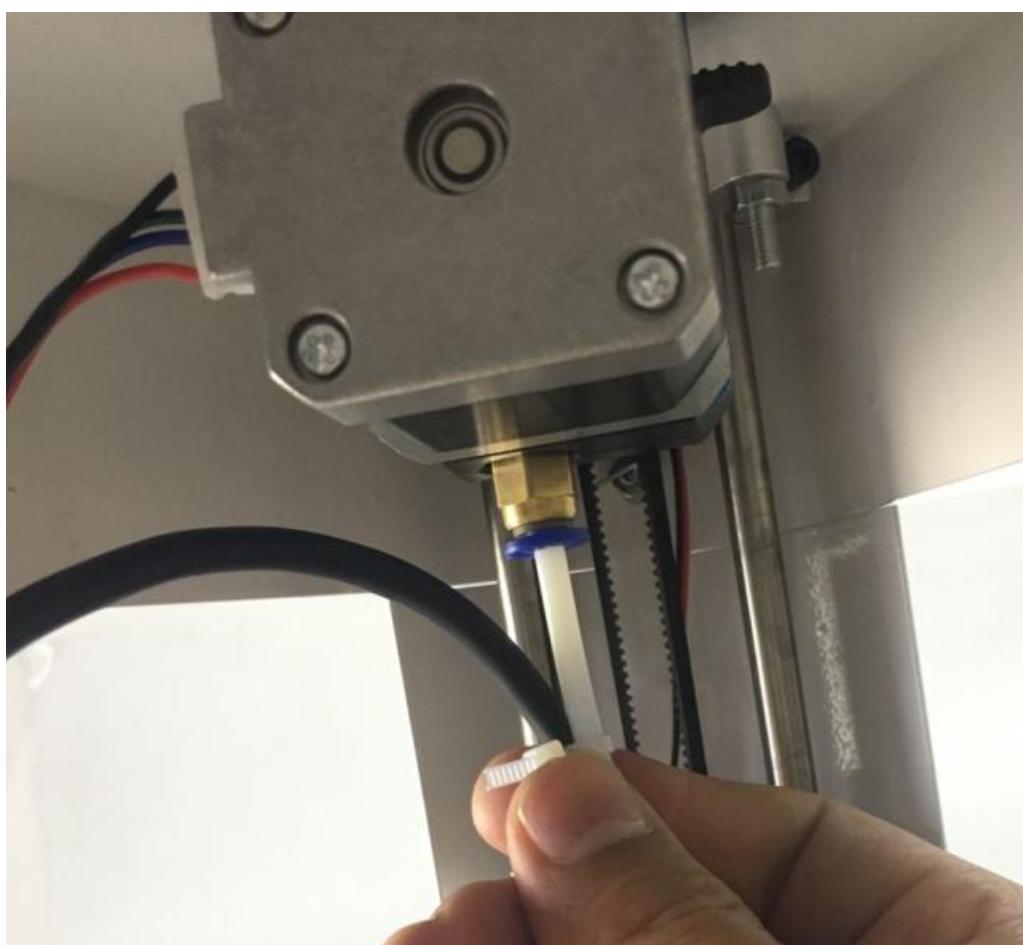
This is switch cable ,we need connect all the three switch cable.note: **red cable connect red cable ,black cable connect black cable**



The connector connect extrusion motor ,the connector connect effector



Connect the feed tube and the extruder

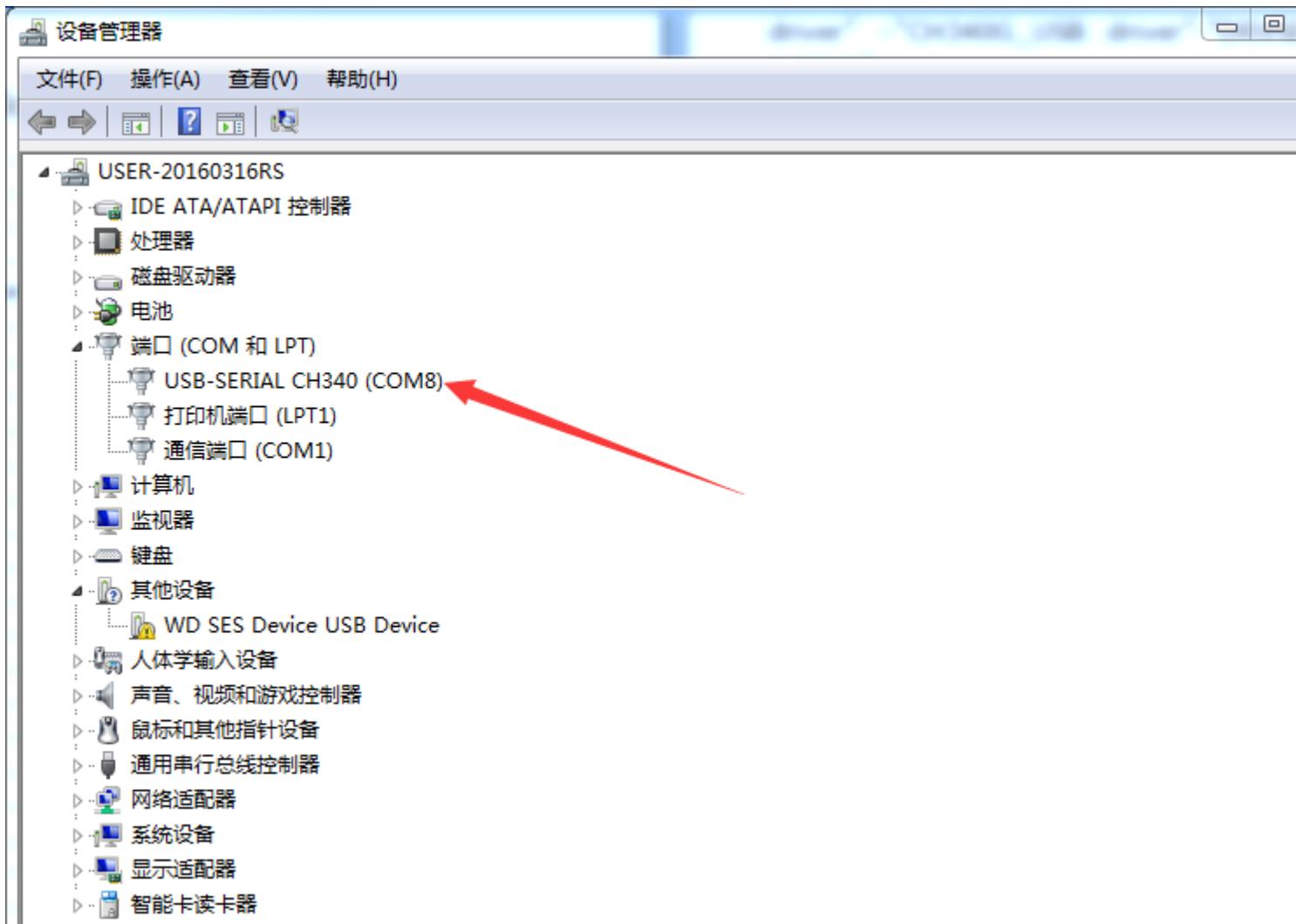


2 Connect printer to PC

Install the driver. copy the file in the sd card to PC. open the file " CH340G_USB toTTL driver"-“CH340G_USB driver”-“DRVSETUP64”(64-bit system) or “SETUP”*(64-bit system).



Check Device Manager, will find the hardware



If the PC cannot find the hardware. pls check out the file “Solve streamline Version Windows 7,Cannot install driver issue”.do as the file show.

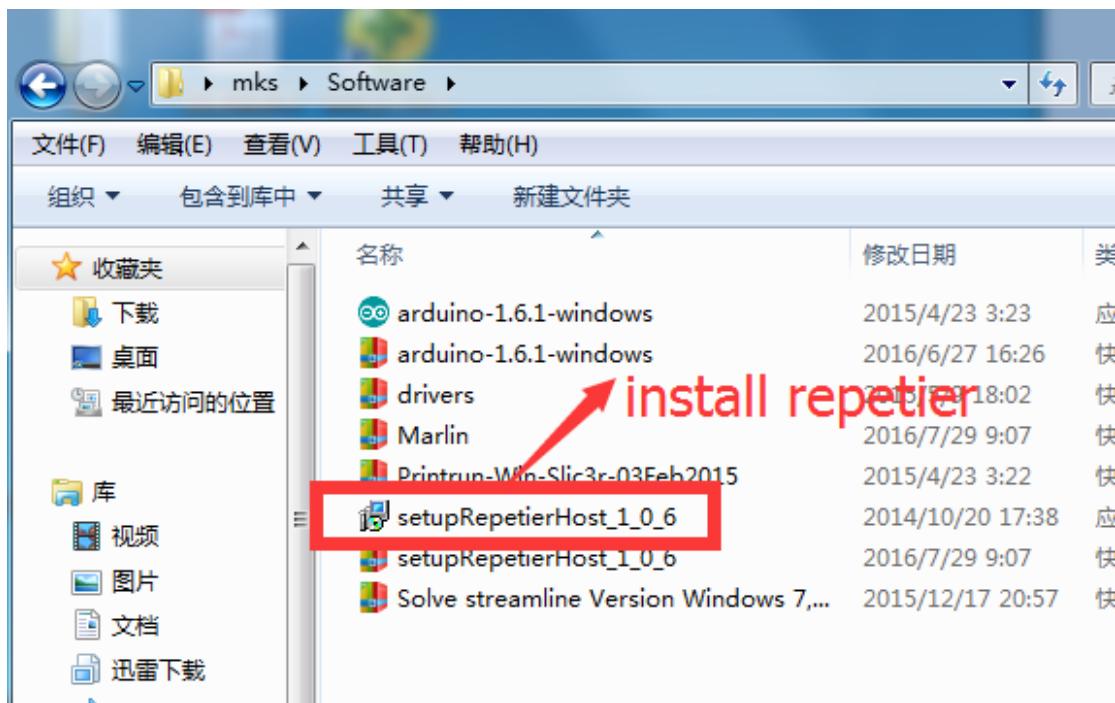
3 Repetier and control printer

1) Software Installation

The repetier is software to control the printer, so need install it first.

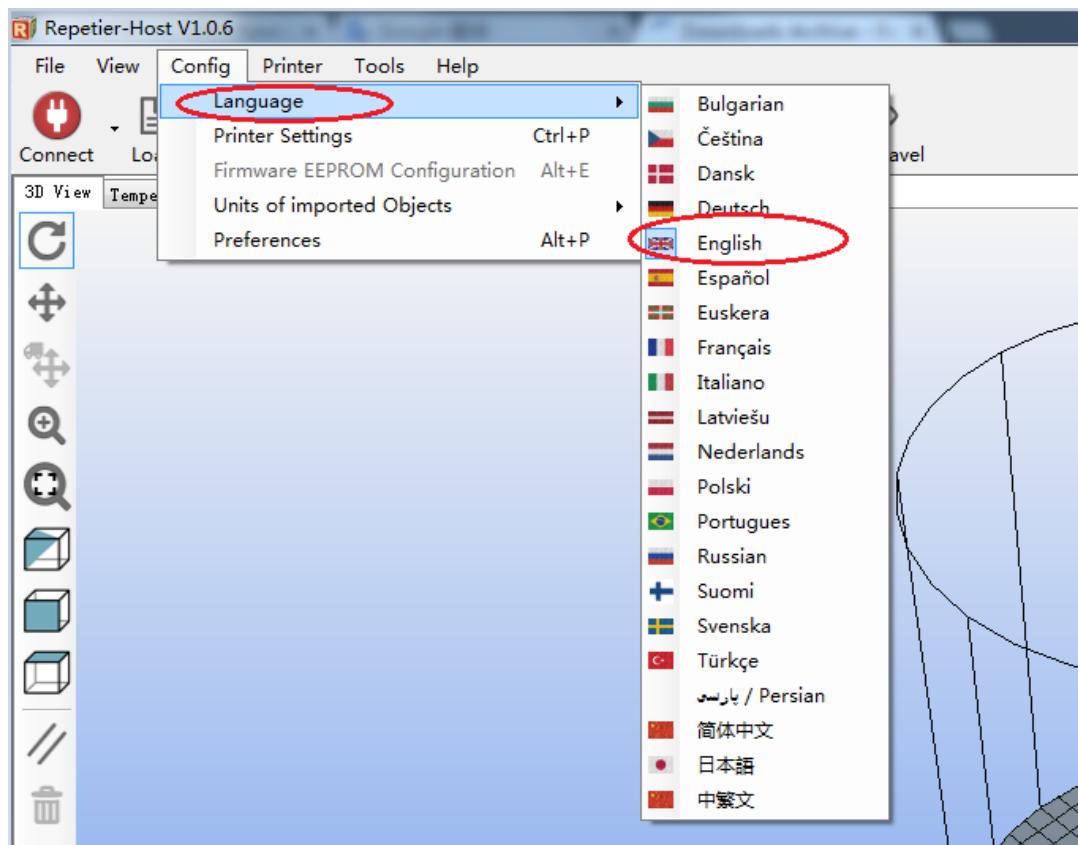
Install the “software,setupRepetierHost_1_0_6”, the software could be download on the link:<http://www.repetier.com/download/>

About the more info about the Repetier, pls go the the link :
<http://www.repetier.com/documentation/repetier-host/>

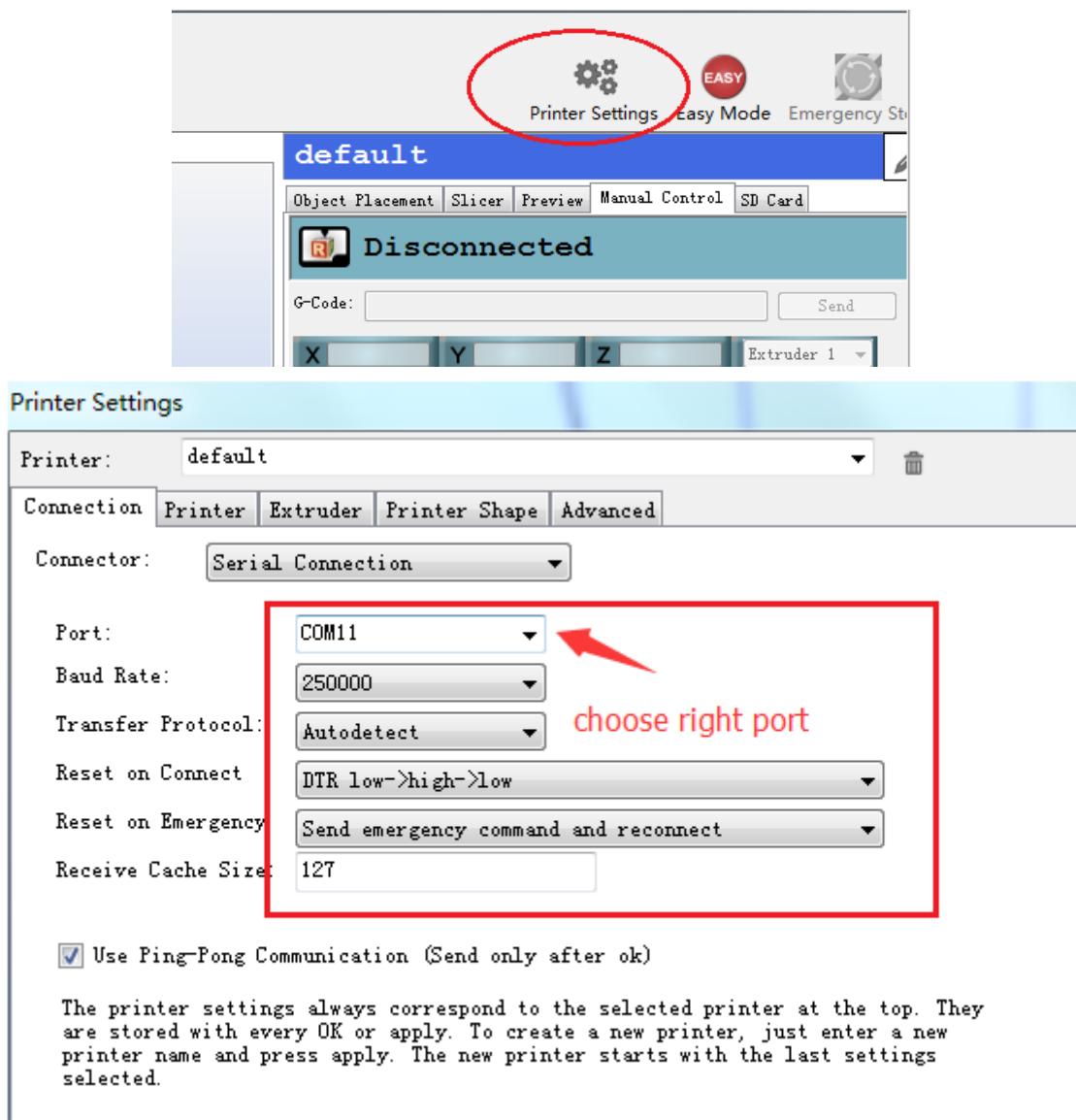


2) Language Settings

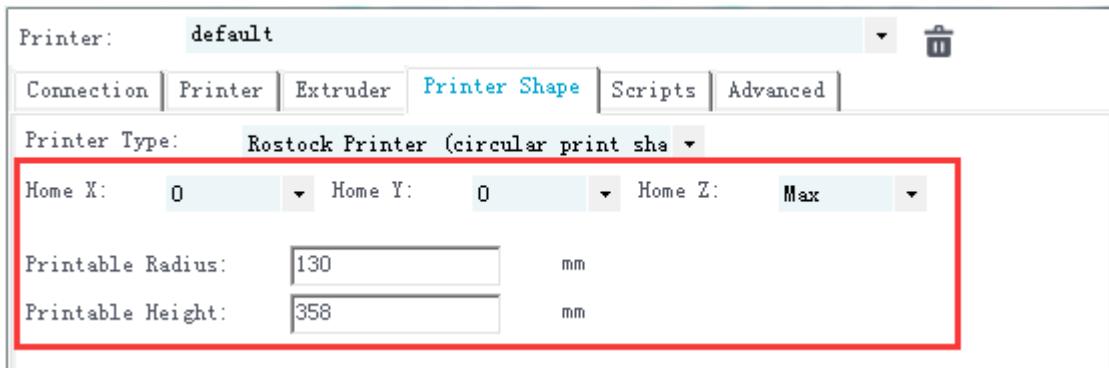
Set the language, Config-Language-choose the suit language.



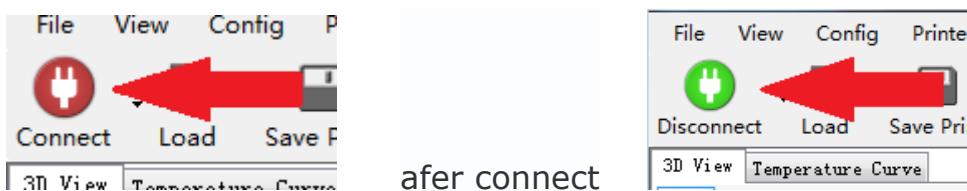
3) Printer settings



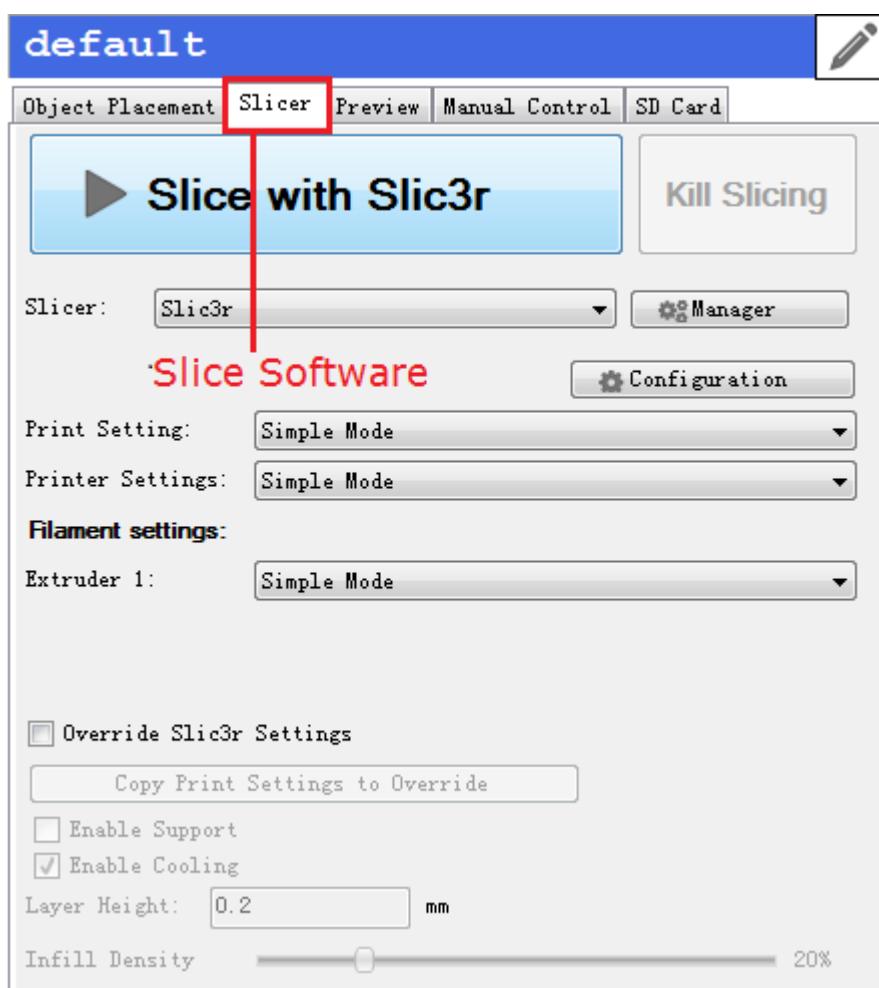
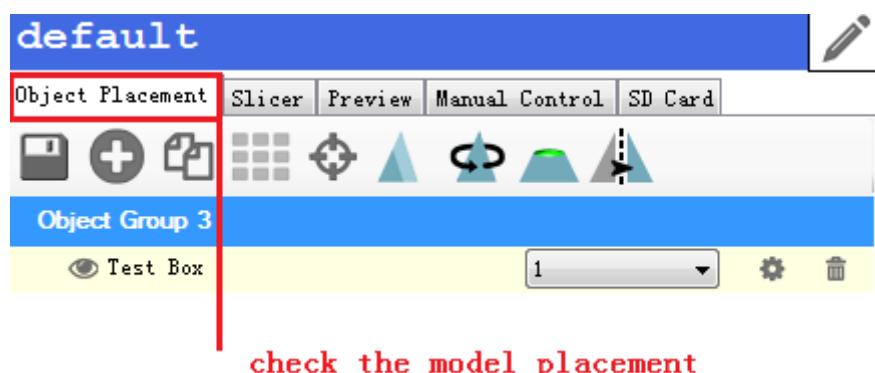
IN the printer shape,choose the Rostock printer,the home X is 0,the home Y is 0,the home Z is Max.the Radius could be setted 130 and the height could be setted 358 Temporarily. this two data could be modify late.

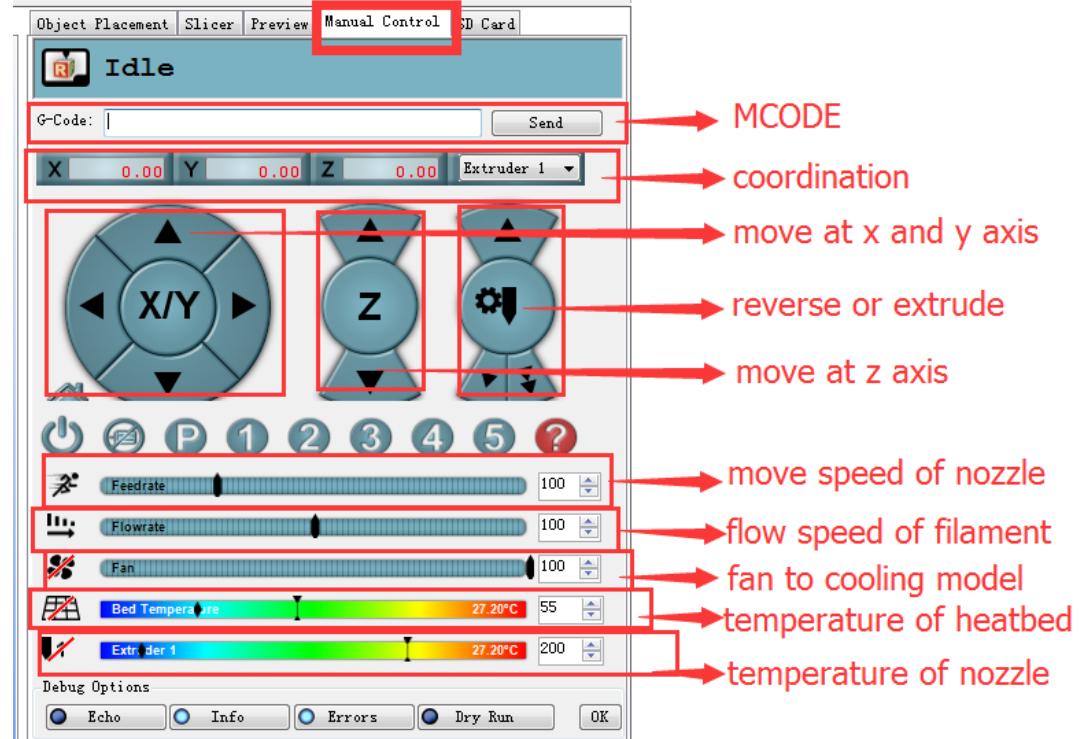
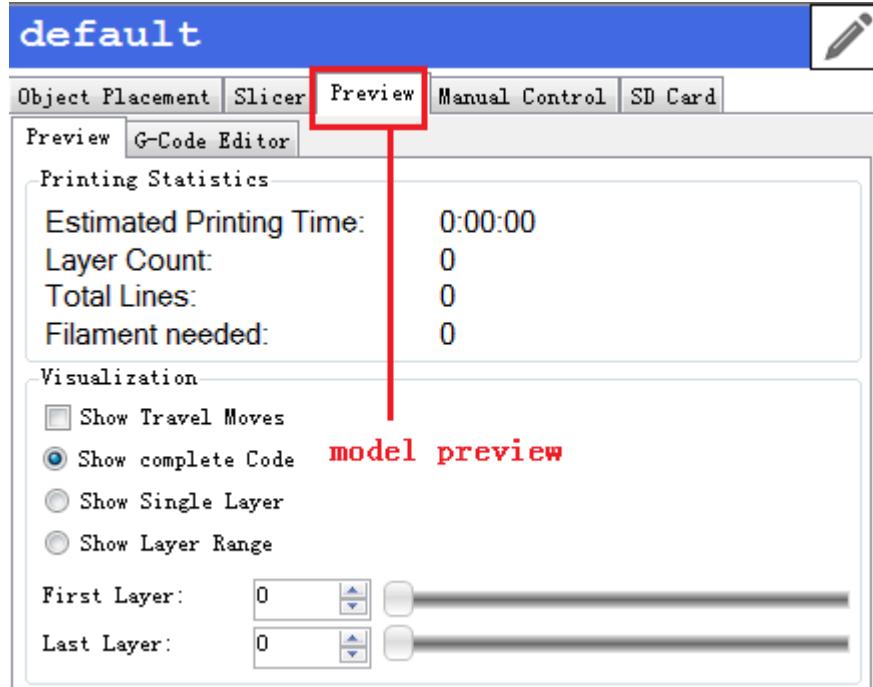


4) Connect the printer



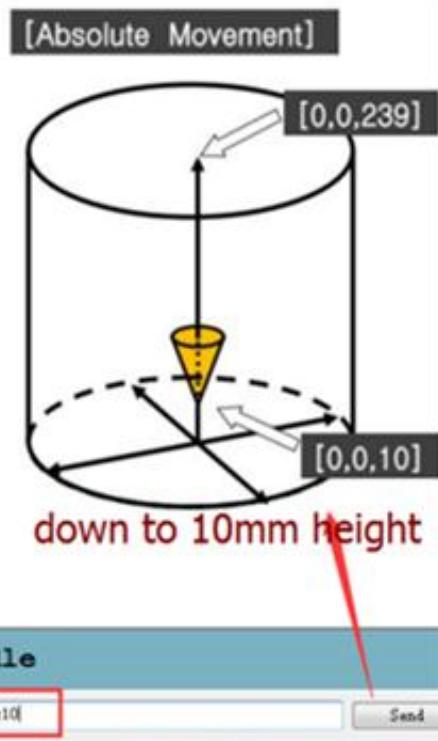
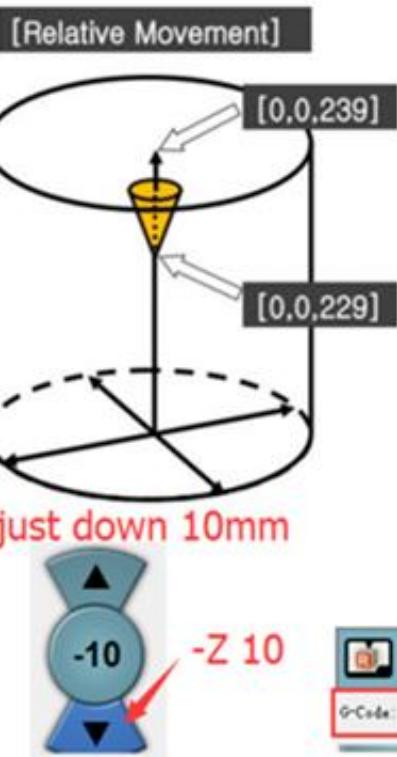
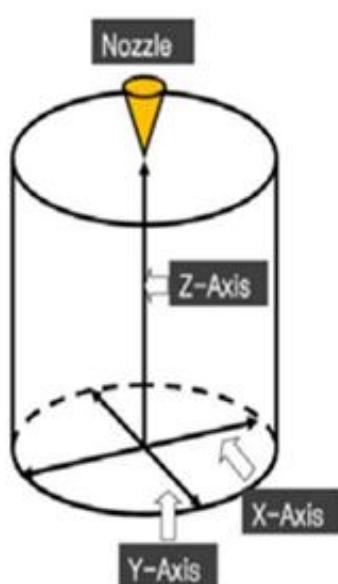
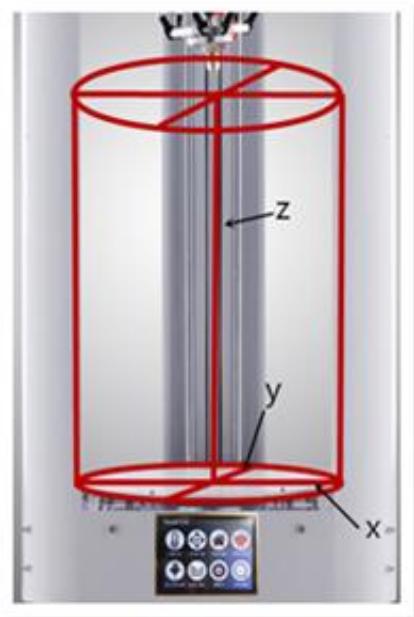
5) Panel Introduction



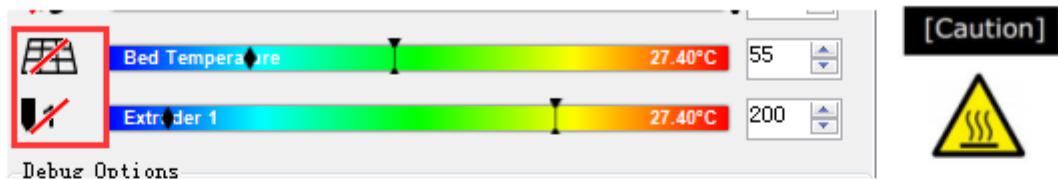


home function same to G28

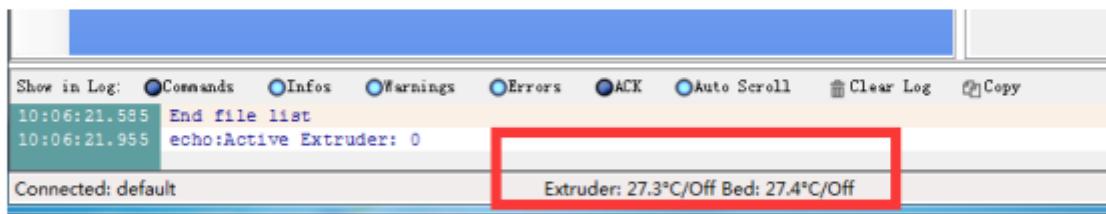
>> Move nozzle at x y z axis



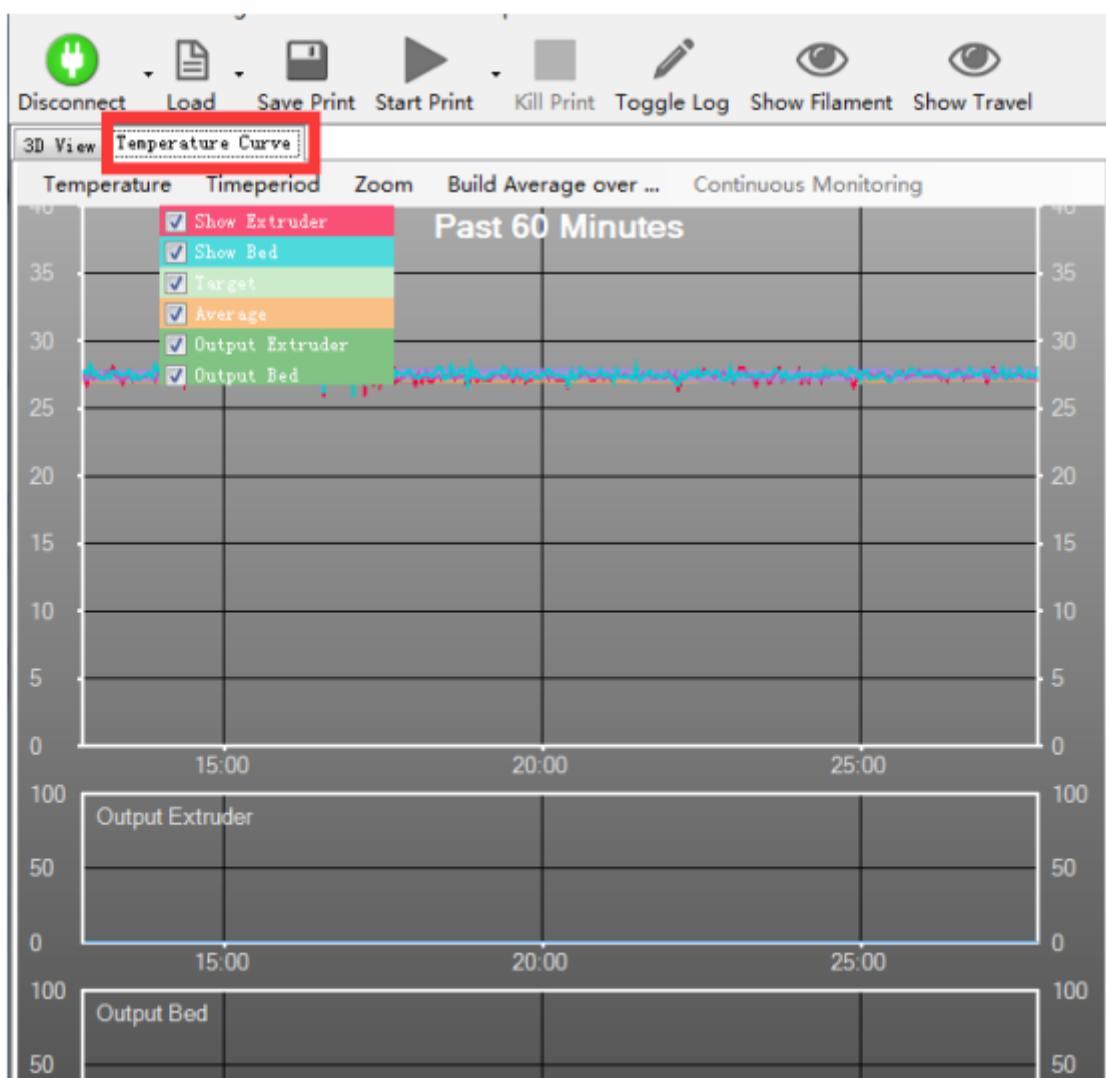
>> Preheat hotend and bed



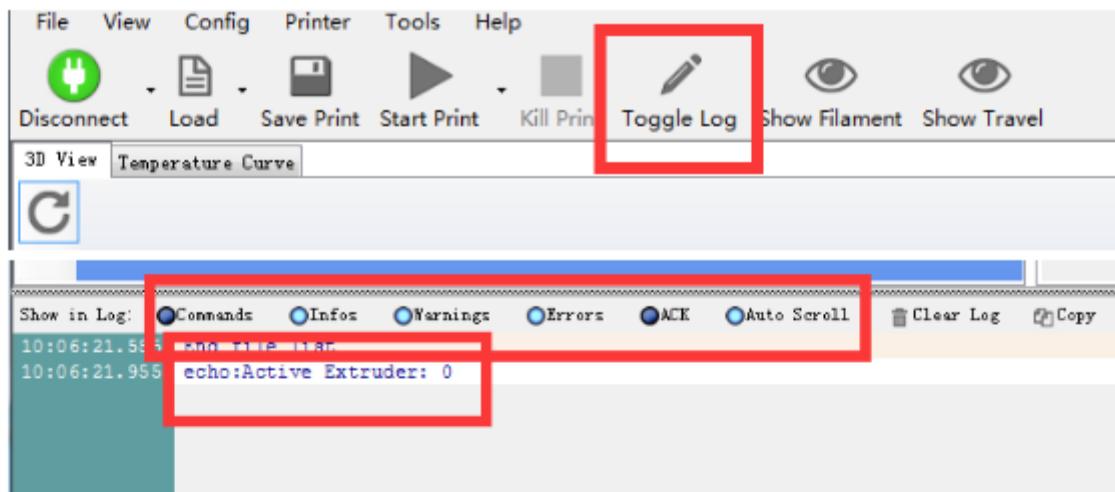
Check from there (bottom of repetier)



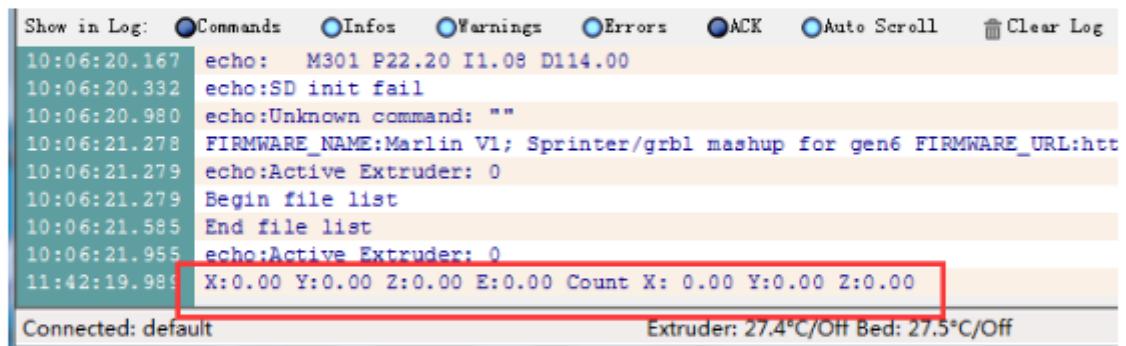
Temperature curve



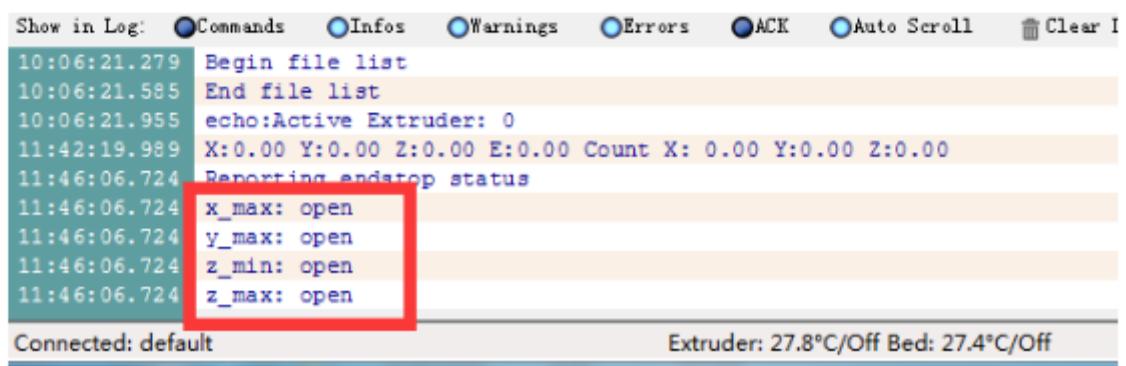
>>Info of operation, Check at the bottom



>> Info of coordination ,send m114 then check at the bottom



>> Info of limit switch, send m119 then check at the bottom

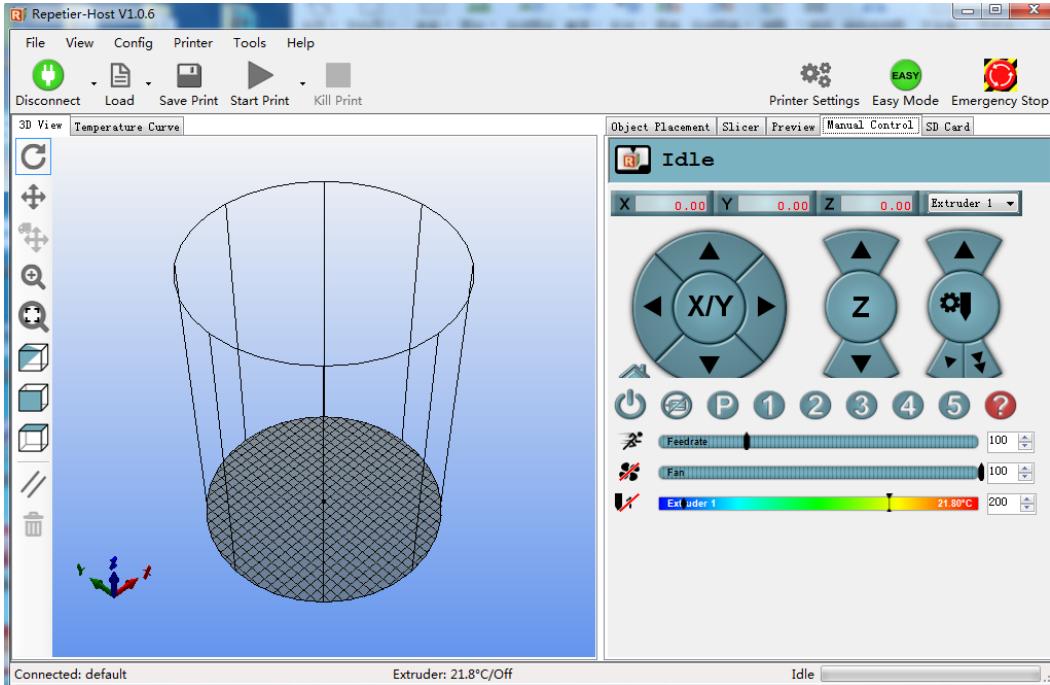


Observation: x_max, y_max, z_max, z_min

Hit the switch= triggeredn Not hit switch= open

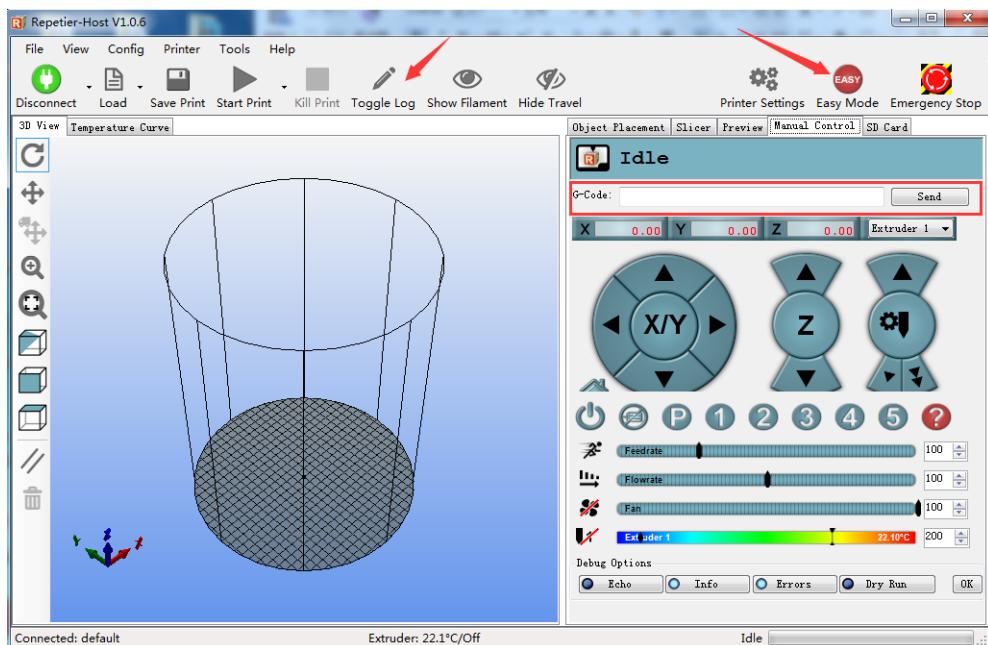
6) some important command

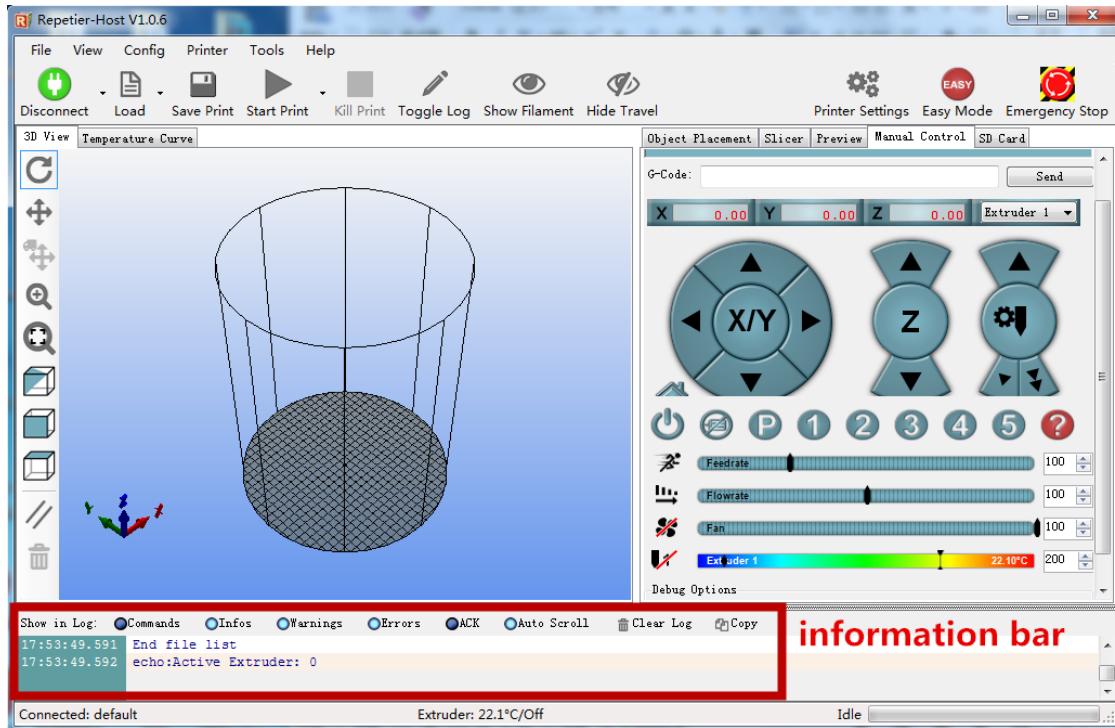
Controloing the printer by repetier, after opening repetier, choose right port and click connect. The repetier interface is like this



open “command bar” where we can input command. **Click Easy Mode open command bar**, can input command in command bar.

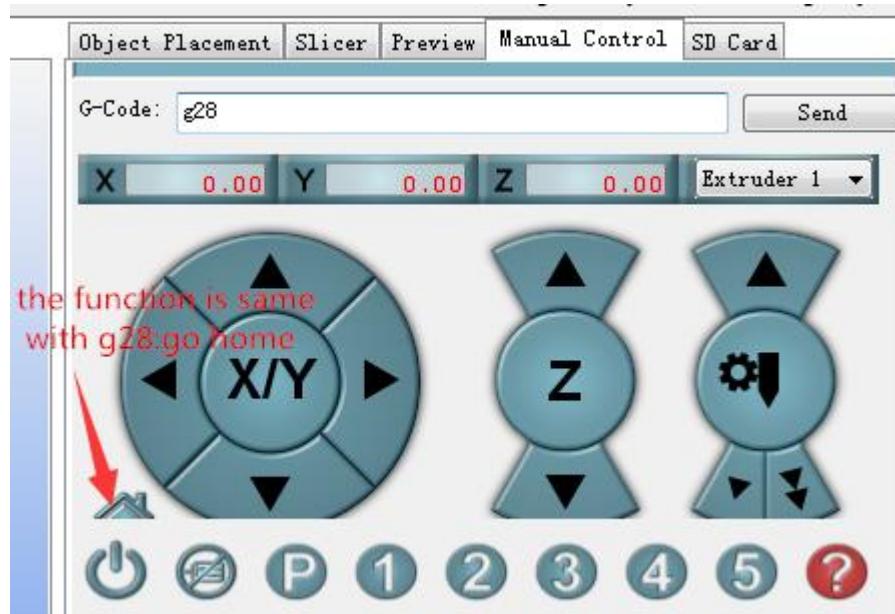
Then **click Toggle Log**, The information bar appears below the repetier interface. can read info about printer in information bar.





(1) g28---all axis go home

In the repetier letters are case-insensitive, G28 also can be used. but in simplify3D, only can use capital letters .The other command is the same



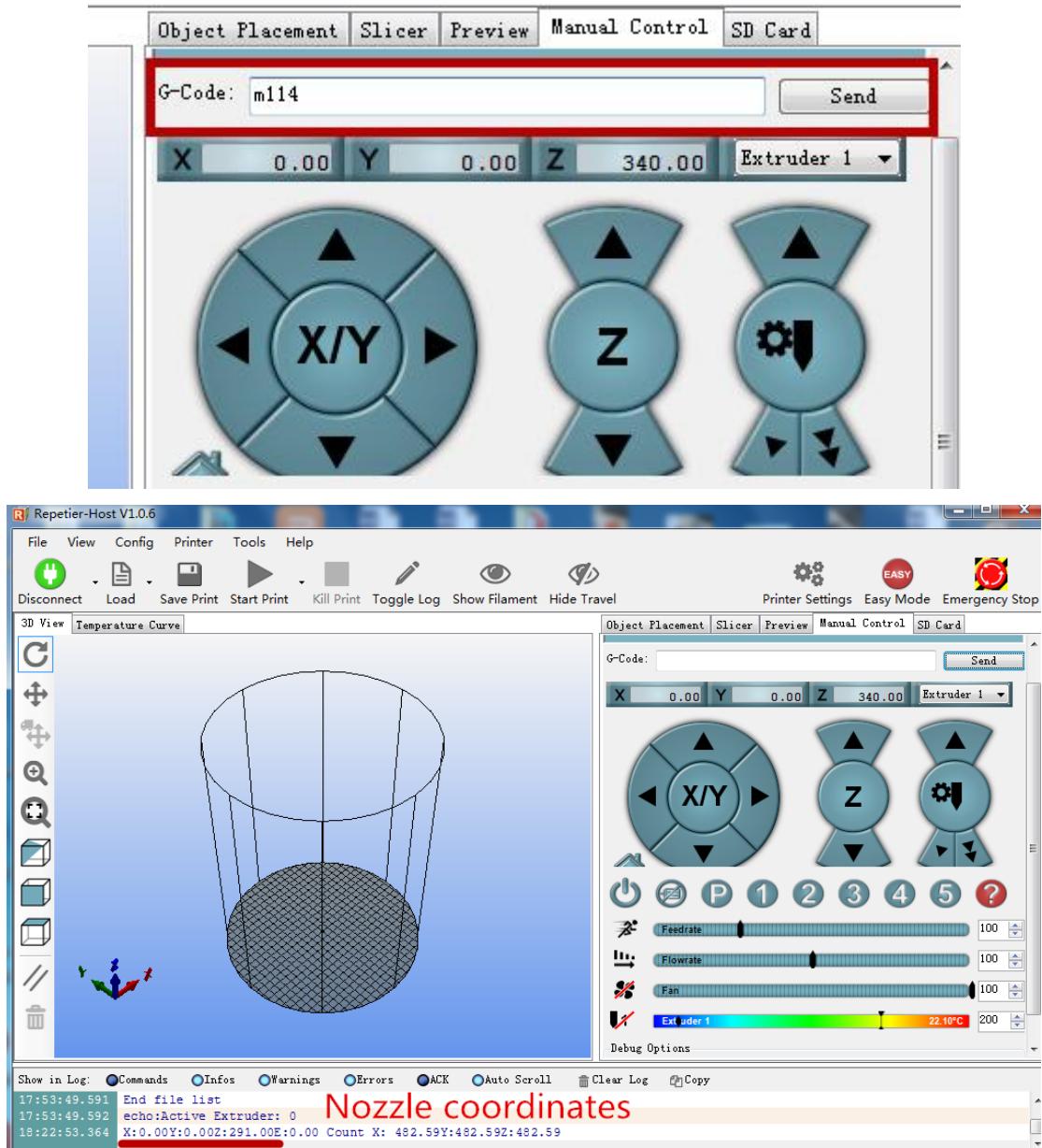
Send g28,in delta 3D printer all axis rise and hit limit switch ,then stop at the highest position.



G28 is same to this icon

(2) m114---check the current coordinates of the nozzle

input m114 and send ,can see the current coordinates of the nozzle in information bar.



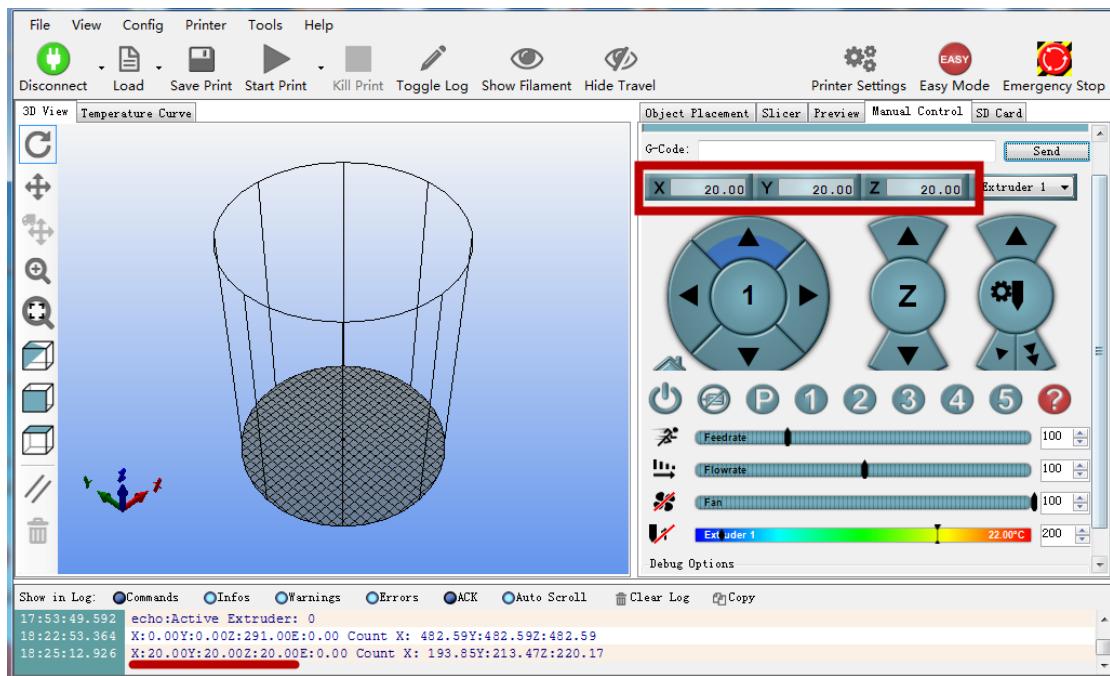
This coordinate is the coordinates of the nozzle after the home,z axis coordinate varies according to the maximum height set by each person

(3) g1 x_ y_ z_----move nozzle to targeted coordinate

For example ,input g1 x20 y20 z20,the nozzle will go to coordinate x y z(20 20 20)



After we send this command ,we can view coordinate of nozzle now.



It's ok to move only one or two axis

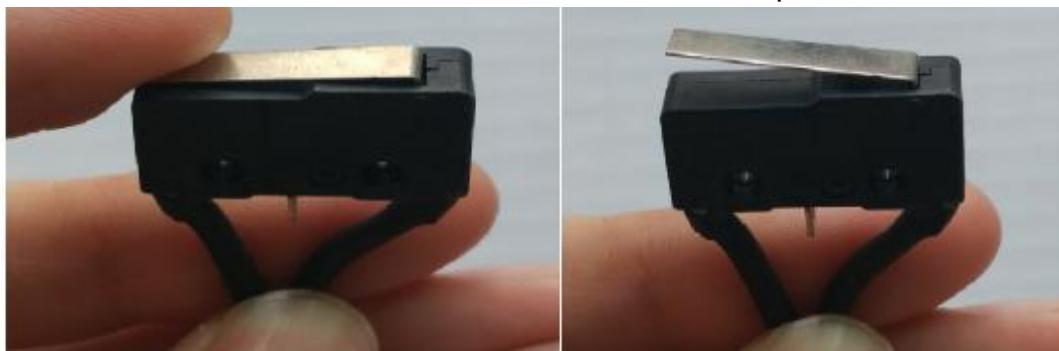
Eg:

g1 z0—x and y keep previous coordinate,z coordinate arrive to x 0,this arrive the lowest bottom;
 g1 x20—y and z keep previous coordinate,x coordinate will arrive to x 20;
 g1 x20 y10—z keeps previous coordinate,x coordinate arrive to x 20;y coordinate arrive to y 10;
 g1 y15 z30—x keeps previous coordinate,y coordinate arrive to y15; z coordinate arrive to y 30.

(4) M119----check the status of the switch.

The switch status is important directive,when meeting the motor moving problem,can check the switch status to search problem.

When hit the switch,it shows TRIGGERED;if not touch, it shows open.



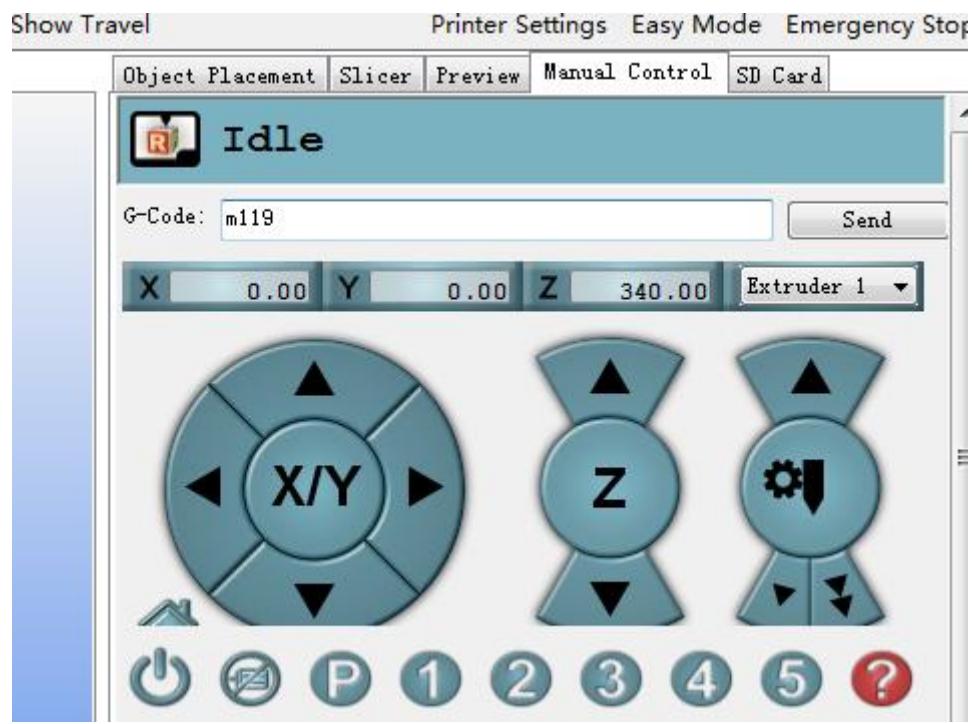
switch on

switch off

Show in Log: Commands Infos Warnings Errors ACK Auto Scroll Clear Log Copy	Show in Log: Commands Infos Warnings
17:15:21.551 X: 0.00 Y: 0.00 Z: 11.00 E: 0.00 Cc 17:15:26.348 Reporting endstop status 17:15:26.351 x_max: TRIGGERED 17:15:26.352 y_max: TRIGGERED 17:15:26.352 z_min: open 17:15:26.352 z_max: TRIGGERED	16:36:23.879 X: 0.00 Y: 0.00 Z: 11.00 E: 0.00 17:14:42.268 Reporting_endstop status 17:14:42.269 x_max: open 17:14:42.269 y_max: open 17:14:42.269 z_min: open 17:14:42.269 z_max: open

switch on

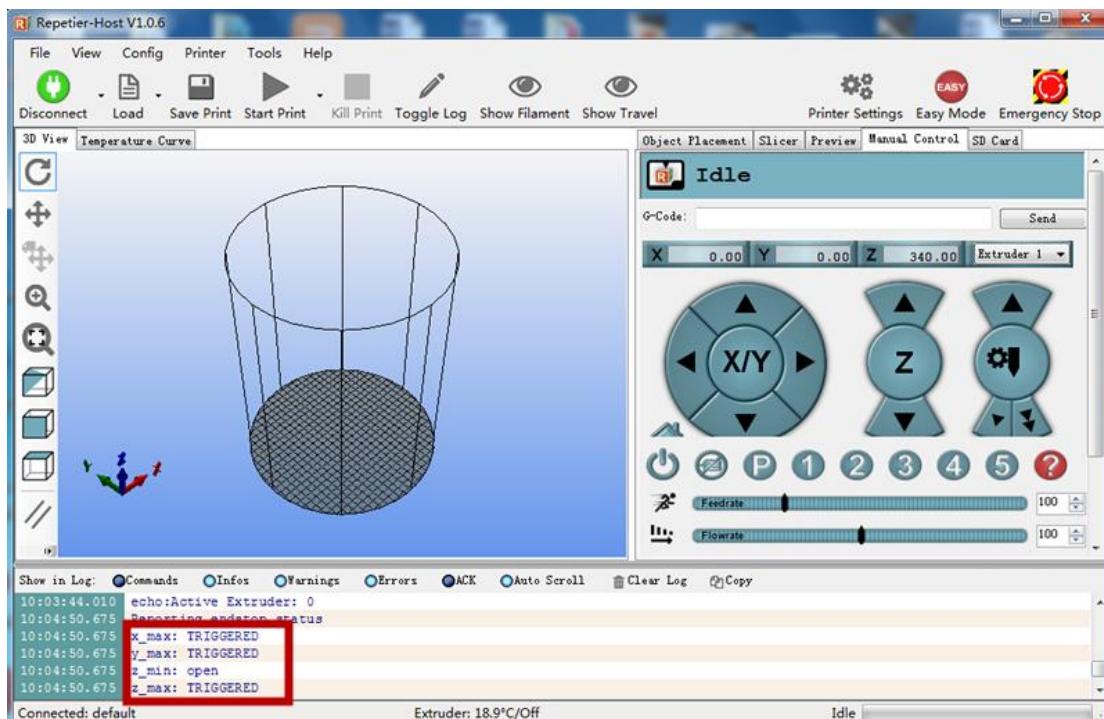
switch off



When send g28,the nozzle will go home,then send m119

It show:

x_max TRIGGERED
 y_max TRIGGERED
 z_max TRIGGERED.
 Z_min open (this is autoleveling switch)



If the nozzle is at the middle air, not hit any limit switch, all four switch show open.

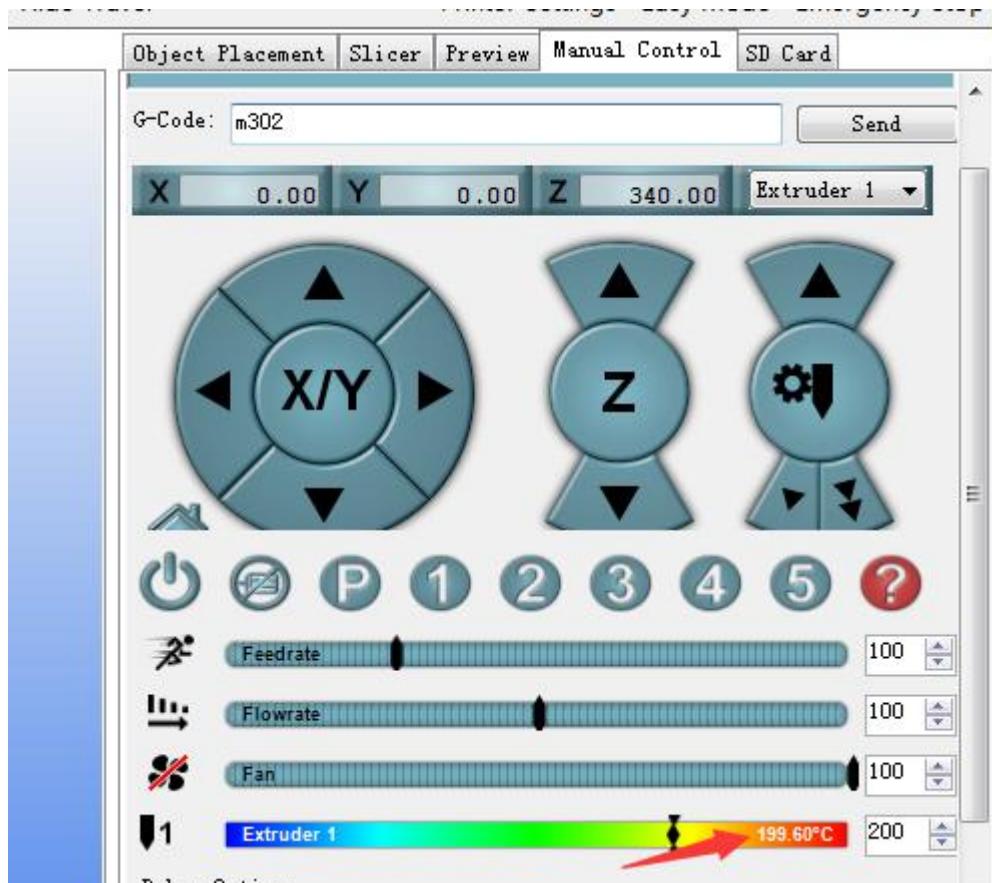
It show:

x_max open
y_max open
z_max open
Z_min open (this is autoleveling switch)

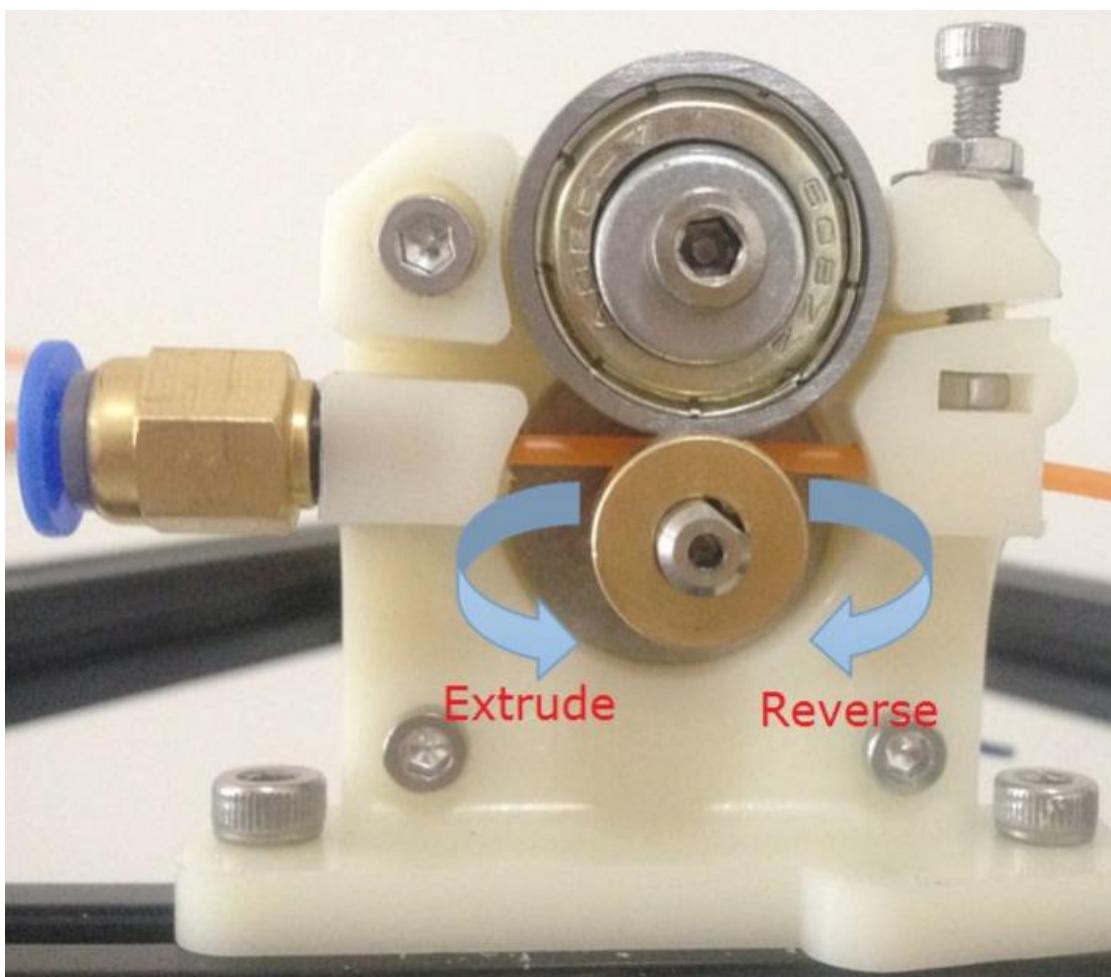
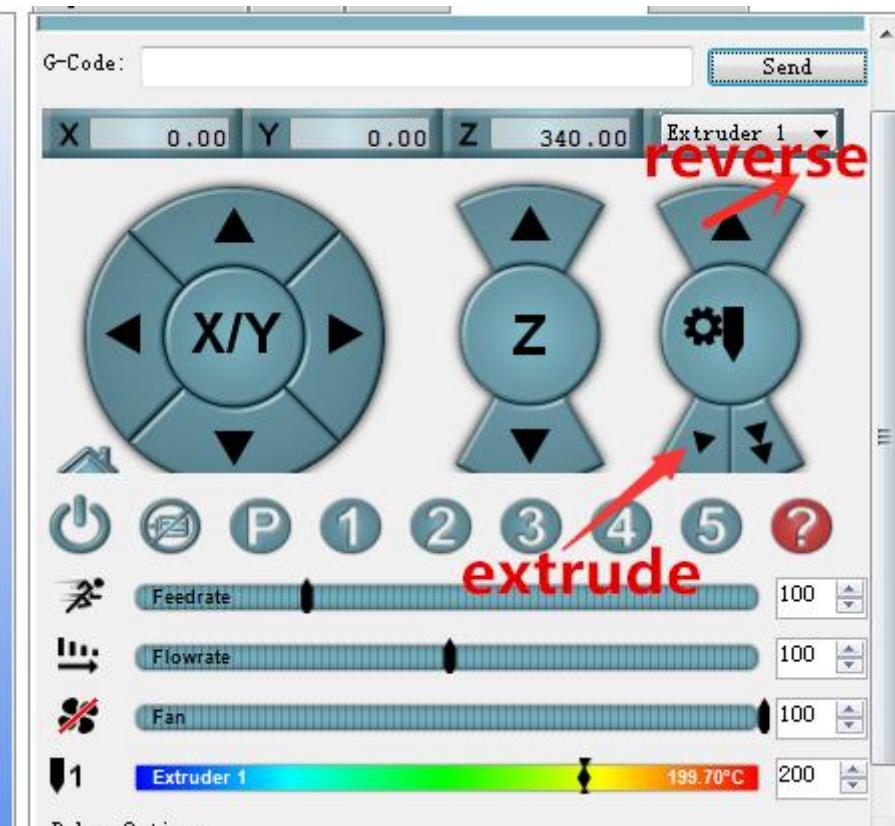


(5) m302----manual control extruder motor

Before manual control extruder motor ,need heat nozzle to targeted temperature and can melt filament.this step is to prevent the extruder run at cold status, then input 302.



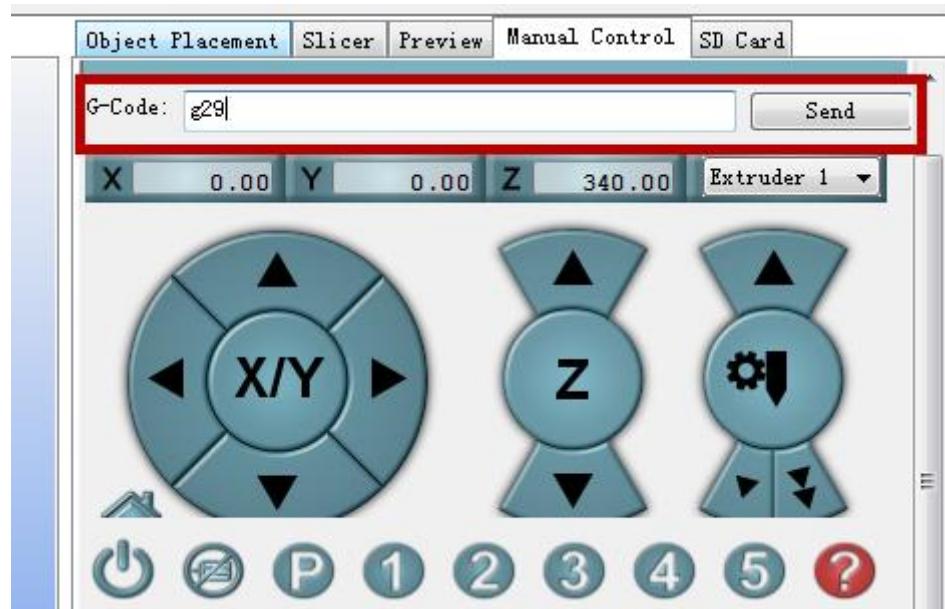
Important note: if use M302 code, must guarantee the nozzle temp reaach 175°C .
If can not reach 175°C , the extruder can not run. !!!



When heating the nozzle ,first input m302 and send ,and then click extrude,we can see extrude motor run ,and filament come out from nozzle(if you have installed filament)

(6) g29----Auto leveling command

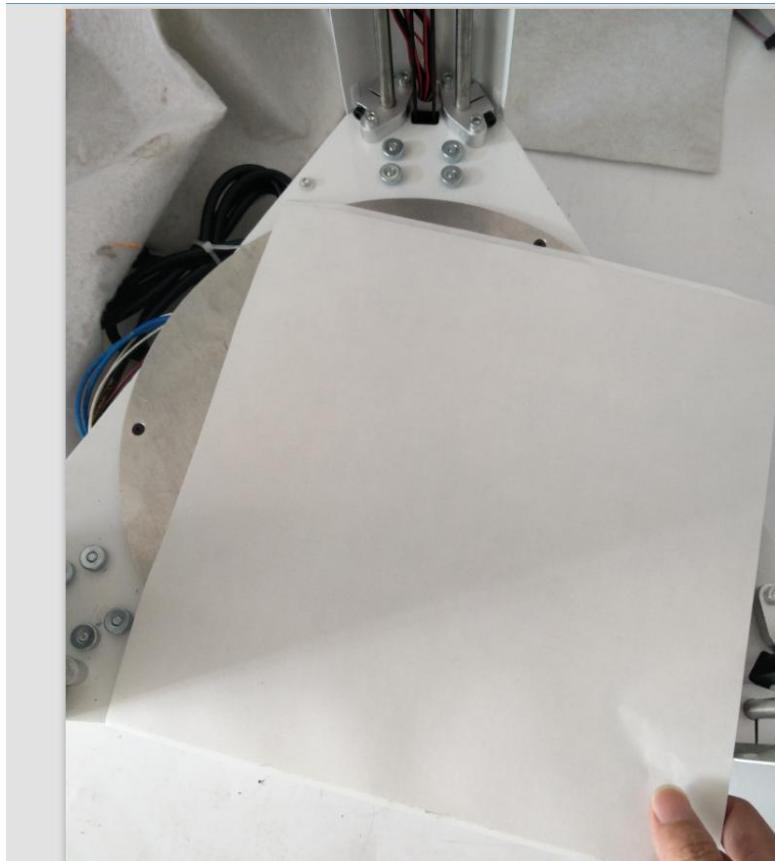
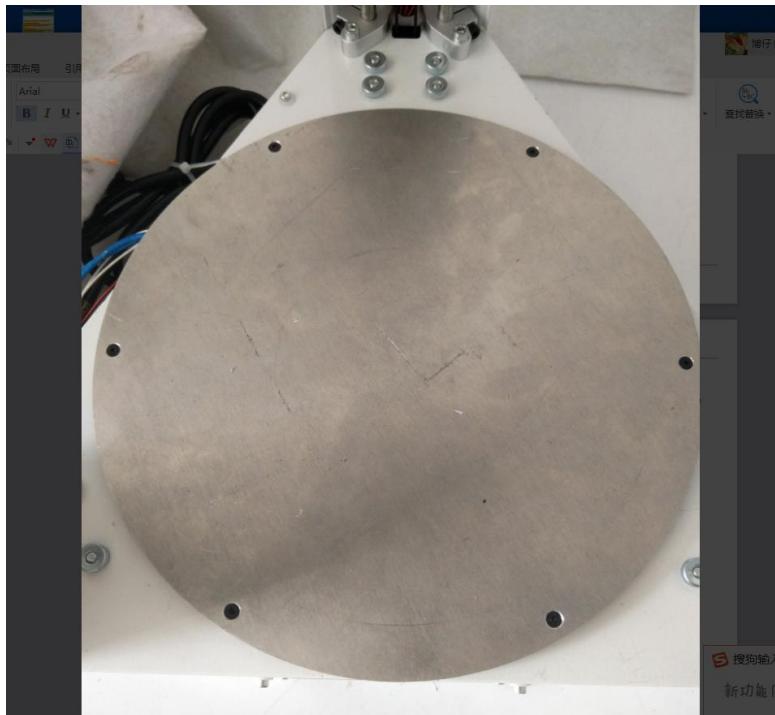
g29 is to control auto-leveling,input g29 and send ,the nozzle go down and touch bed with dozens of points.then can print directly(after using g29 don't use other command).

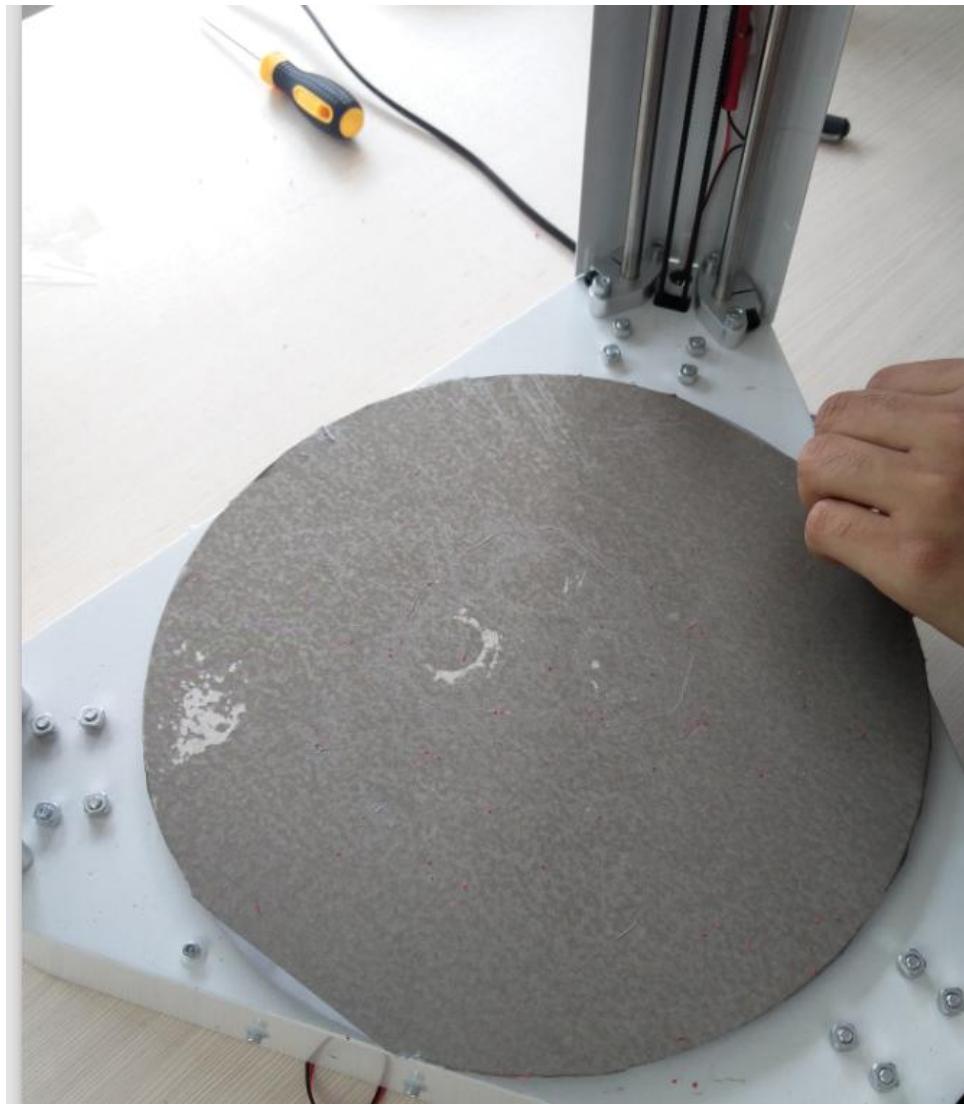


2 Leveling and printing

1. Auto-leveling

Before printing ,we need level the printer ,Auto-leveling is convenient.**before using auto-level ,we need paste square adhesive tape on the platform.**





Before auto-level **must heat nozzle to setting temp (200 degree),then input g28 go home and g29 to auto-level.**

2. Start printing

Important Note

A,when use switch power supply,If your country AC voltage is 220V,pls choose 220V;if it's110V,pls choose 110V,there is one adjust button on the switch power supply.

B, when heating the nozzle or printing,for the fan which cooling heat sink,guarantee it working,if not,pls stop heat and print.

C,when first printing or when you are not familiar to the printer.we recommend you not set Reverse filament,to avoid the nozzle block. And when you are familiar to the printer and understand it well, you could make the advanced settings.

D,we recommend you use the software "Repetier"when printing,it's intelligent and efficient.

E, the temperature is an important parameter, for PLA filament, the working temperature is 200°C-210°C, you could adjust it, and the temperature should not be too high. Too high temperature may lead to Nozzle clogging.

1) Feeder filament

Before printing, connect USB and power supply, then feeder filament. First heat nozzle to 190 degree.



Place the filament seat



Place filament



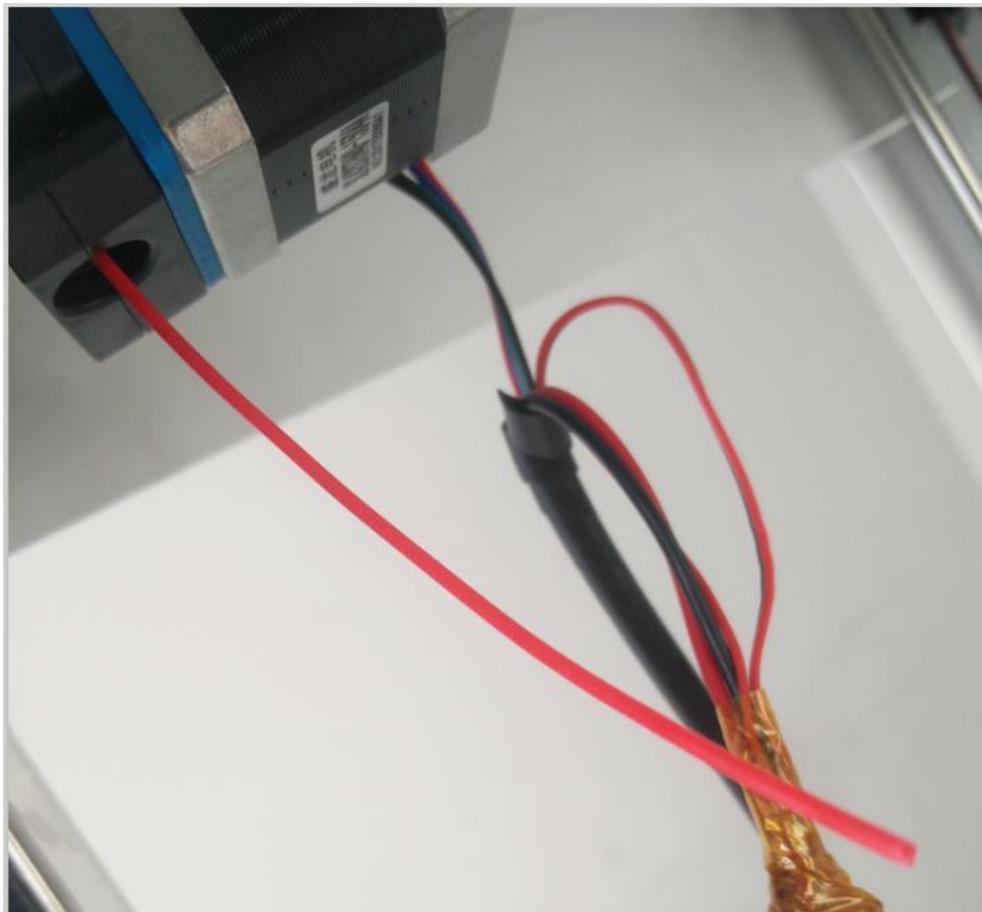
Unscrew the connector



Press the spring



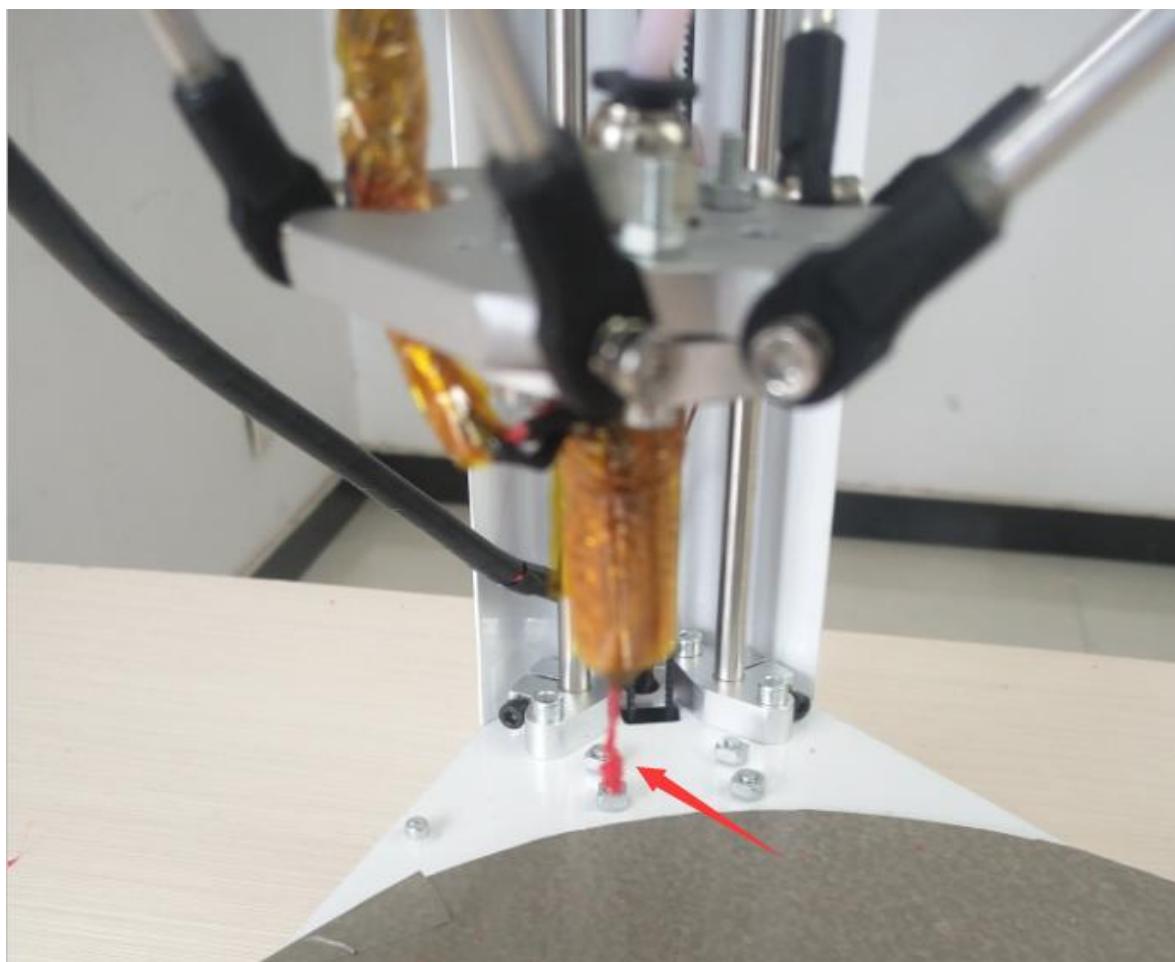
Filament pass through extruder



Then screw the connector and press filament make filament in to nozzle

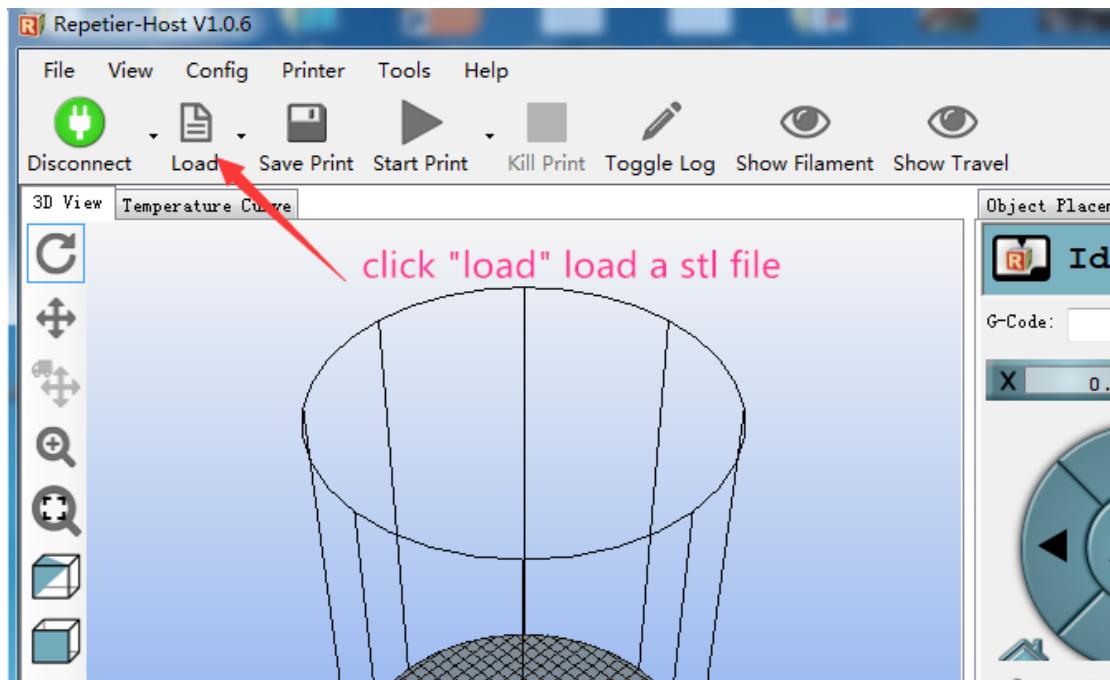


Then filament come out from nozzle ,that show filament assemble is done



2) Slice

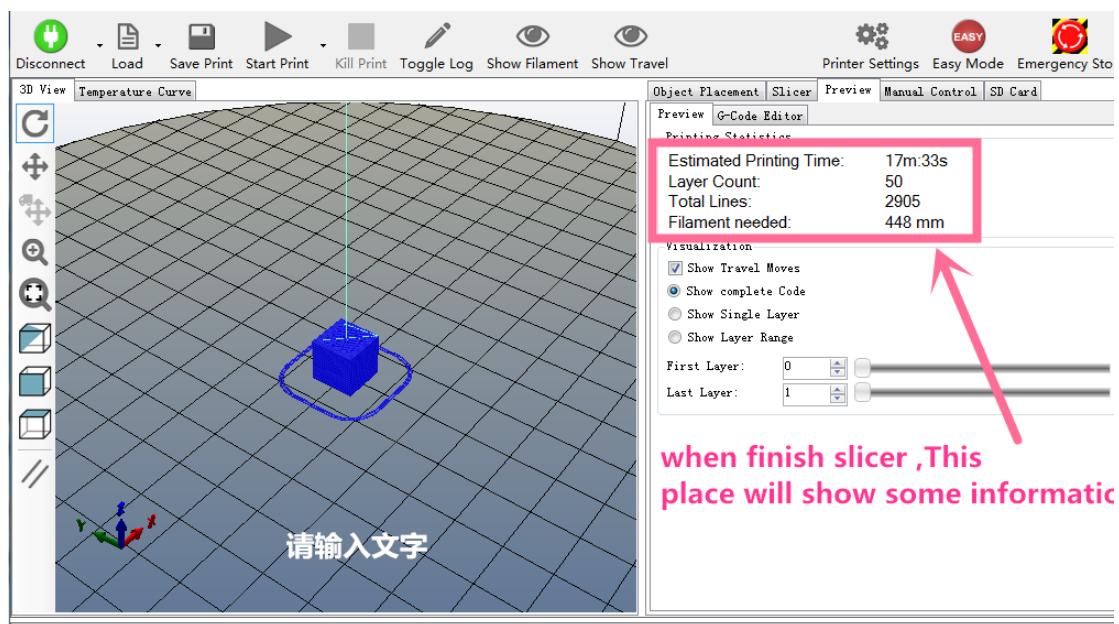
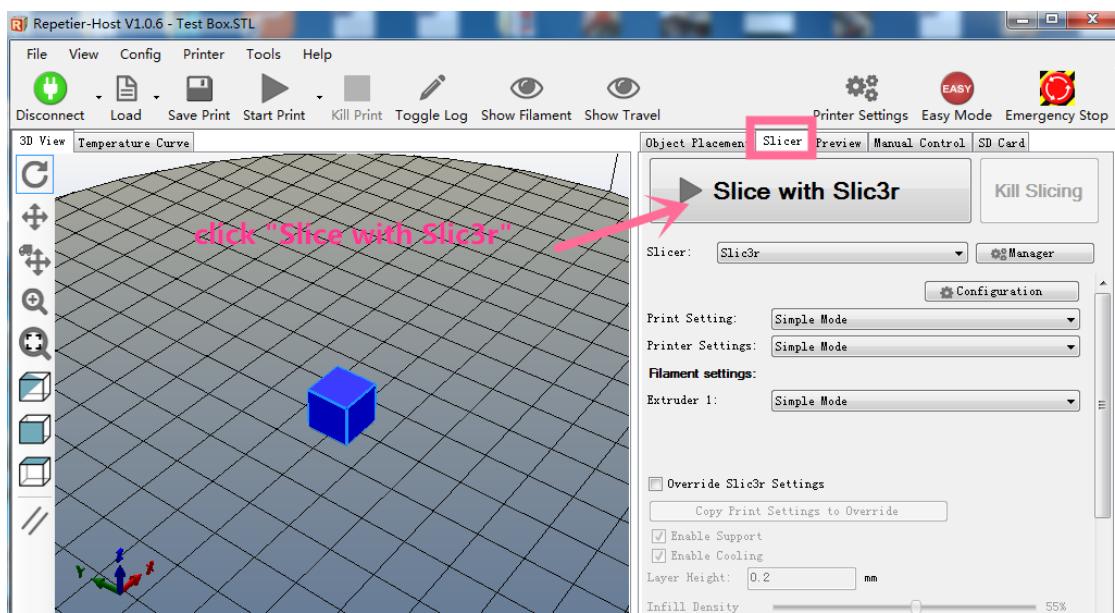
The 3d printer only can identify g-code files, so need slice first, transfer the stl file to g-code file.



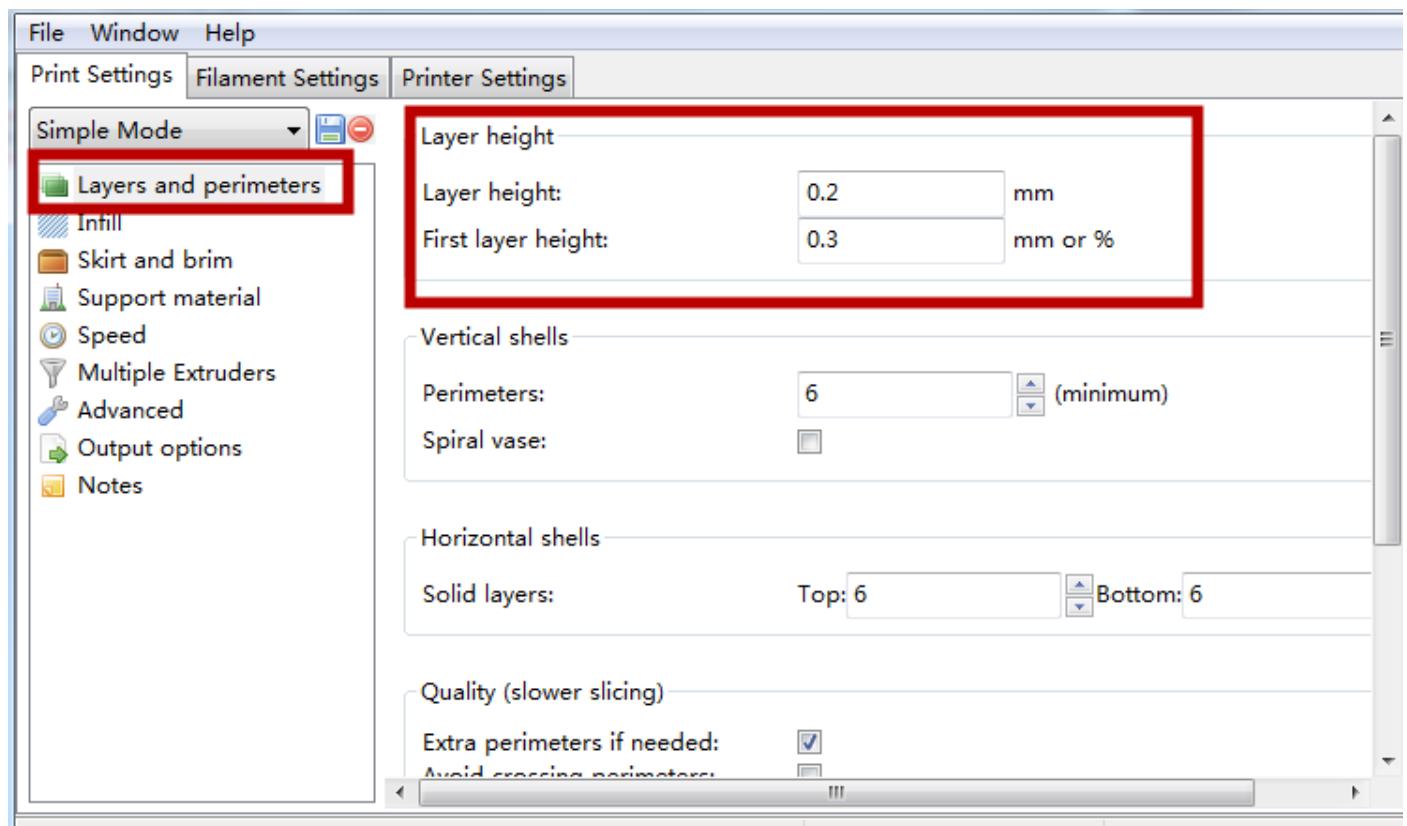
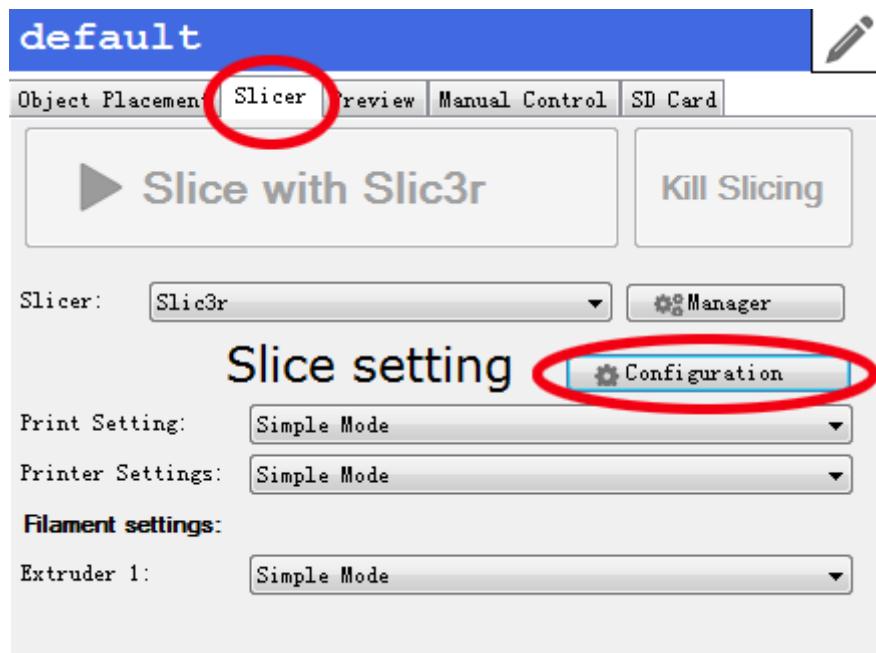
A screenshot of the software interface showing a list of 3D models in the print queue. The models listed are:

Model Name	Created Date	Type	Size
LCD Bracket	2016/8/3 18:44	3D Model Files	148 KB
LCD Shell	2016/8/3 18:44	3D Model Files	497 KB
Limit block	2016/8/3 18:44	3D Model Files	37 KB
Overall pulley	2016/8/3 18:44	3D Model Files	180 KB
Self-leveling effect set 1	2016/8/3 18:44	3D Model Files	7,555 KB
Self-leveling effect set 2	2016/8/3 18:44	3D Model Files	5,189 KB
Self-leveling effect set 3	2016/8/3 18:44	3D Model Files	186 KB
Test Box	2016/8/3 18:44	3D Model Files	1 KB
The wire feeding machine 1	2016/8/3 18:44	3D Model Files	249 KB
The wire feeding machine 2	2016/8/3 18:44	3D Model Files	179 KB
Wire feeder Fixture	2016/8/3 18:44	3D Model Files	179 KB
Wire feeder	2016/8/3 18:44	3D Model Files	249 KB

A pink annotation text 'choose a model you want to print' is overlaid on the image. At the bottom, there is a file selection dialog with fields for '文件名(N):' and 'GCode/3D-Files'.



3) slice setting



My Settings (modified)



Layers and perimeters

Infill

Speed

Skirt and brim

Support material

Notes

Output options

Multiple Extruders

Advanced

Infill

Fill density:

20 %

Fill pattern:

rectilinear

Top/bottom fill pattern:

rectilinear

Reducing printing time

Combine infill every:

1

layers

Only infill where needed:



Advanced

Solid infill every:

0

layers

Fill angle:

45

°

Solid infill threshold area:

70

mm²Only retract when crossing
perimeters:

Infill before perimeters:



Print Settings Filament Settings Printer Settings

My Settings (modified)

Filament Cooling

Enable

Keep fan always on:

Enable auto cooling:

If estimated layer time is below ~30s, fan will run at 100% and print speed will be reduced so that no less than 30s are spent on that layer (however, speed will never be reduced below 10mm/s).
If estimated layer time is greater, but still below ~60s, fan will run at a proportionally decreasing speed between 100% and 80%.
During the other layers, fan will always run at 80% except for the first layer.

this fan is turbo fan, can be controled by repetier

Fan settings

Fan speed: Min: 80 Max: 100 %

Bridges fan speed: 100 %

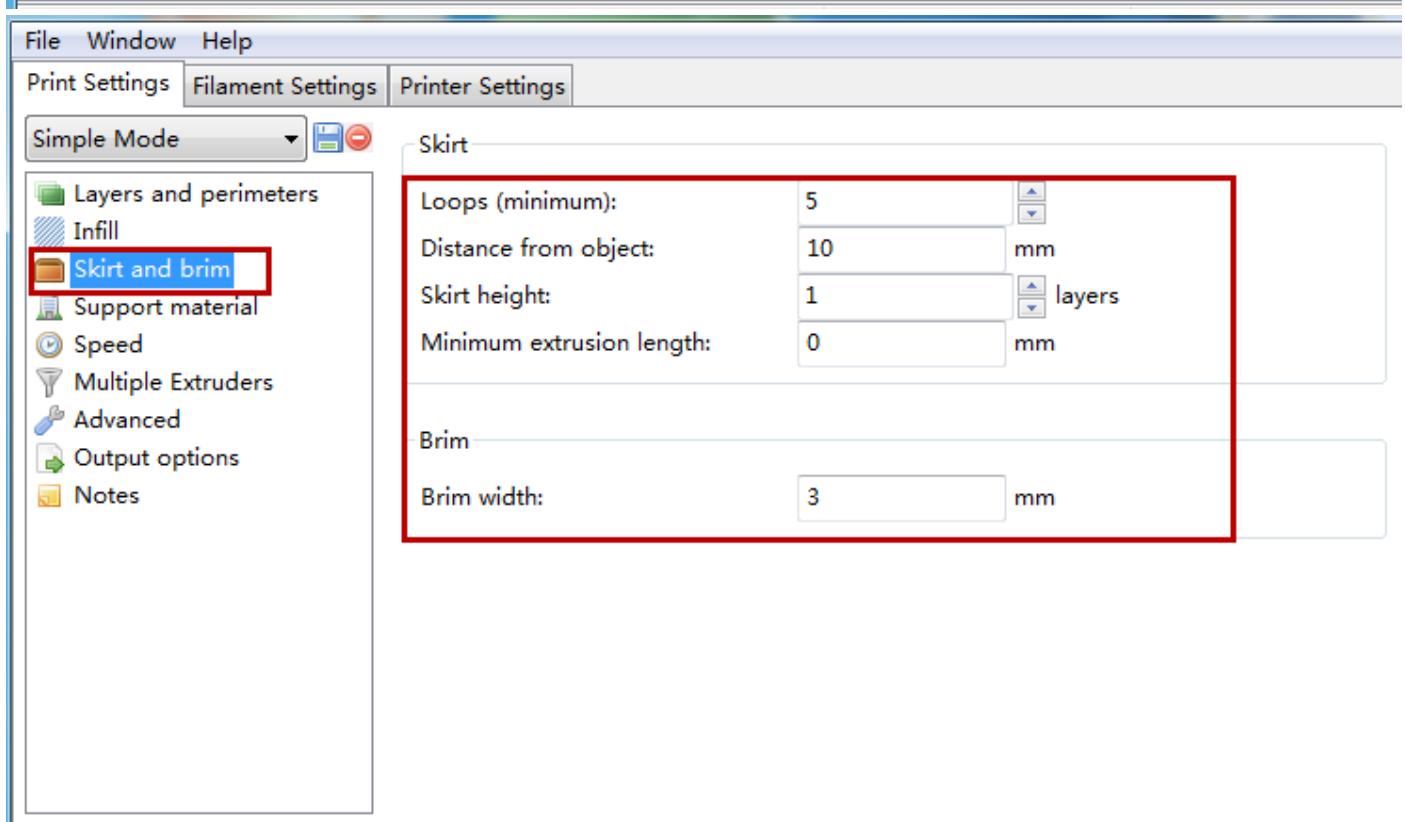
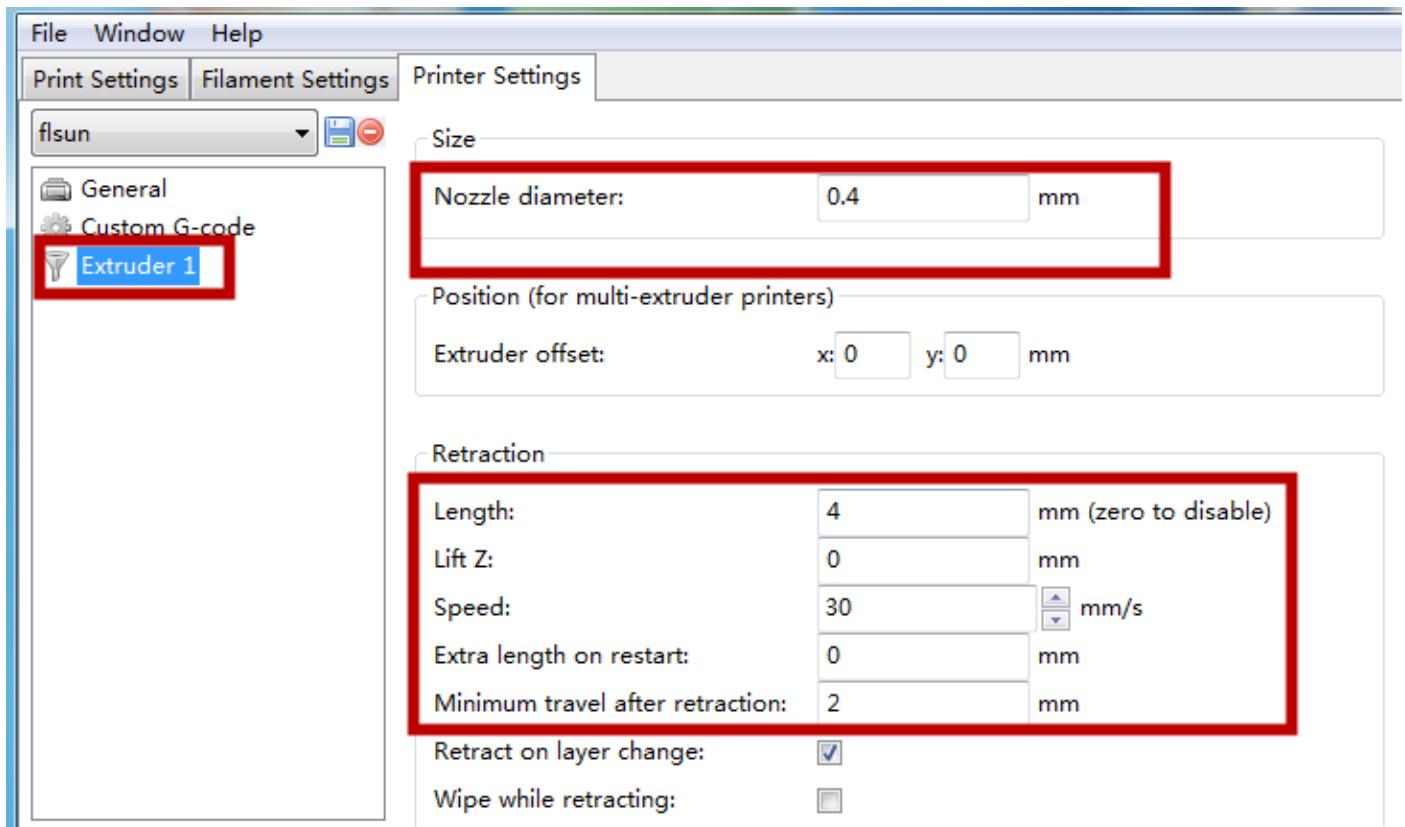
Disable fan for the first: 1 layers

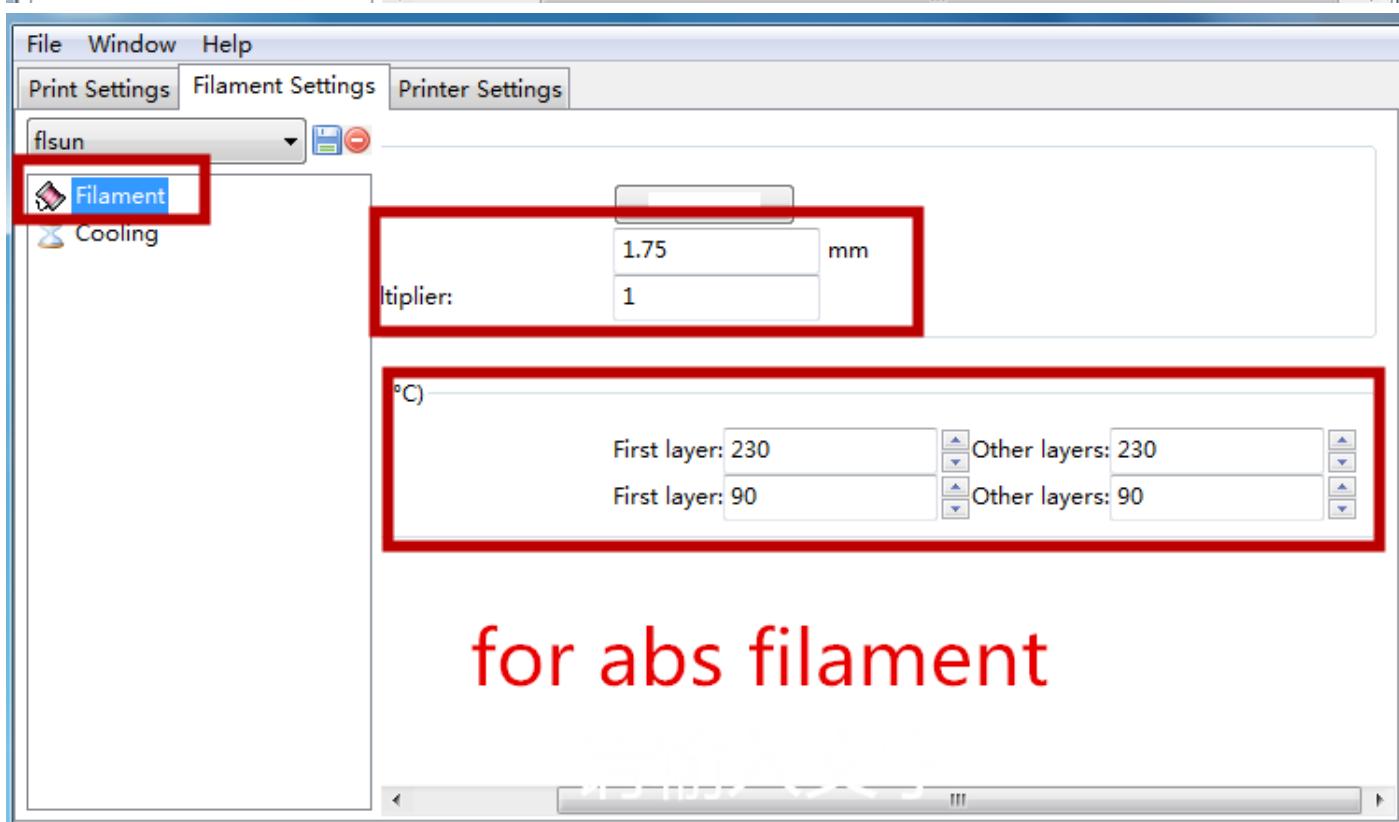
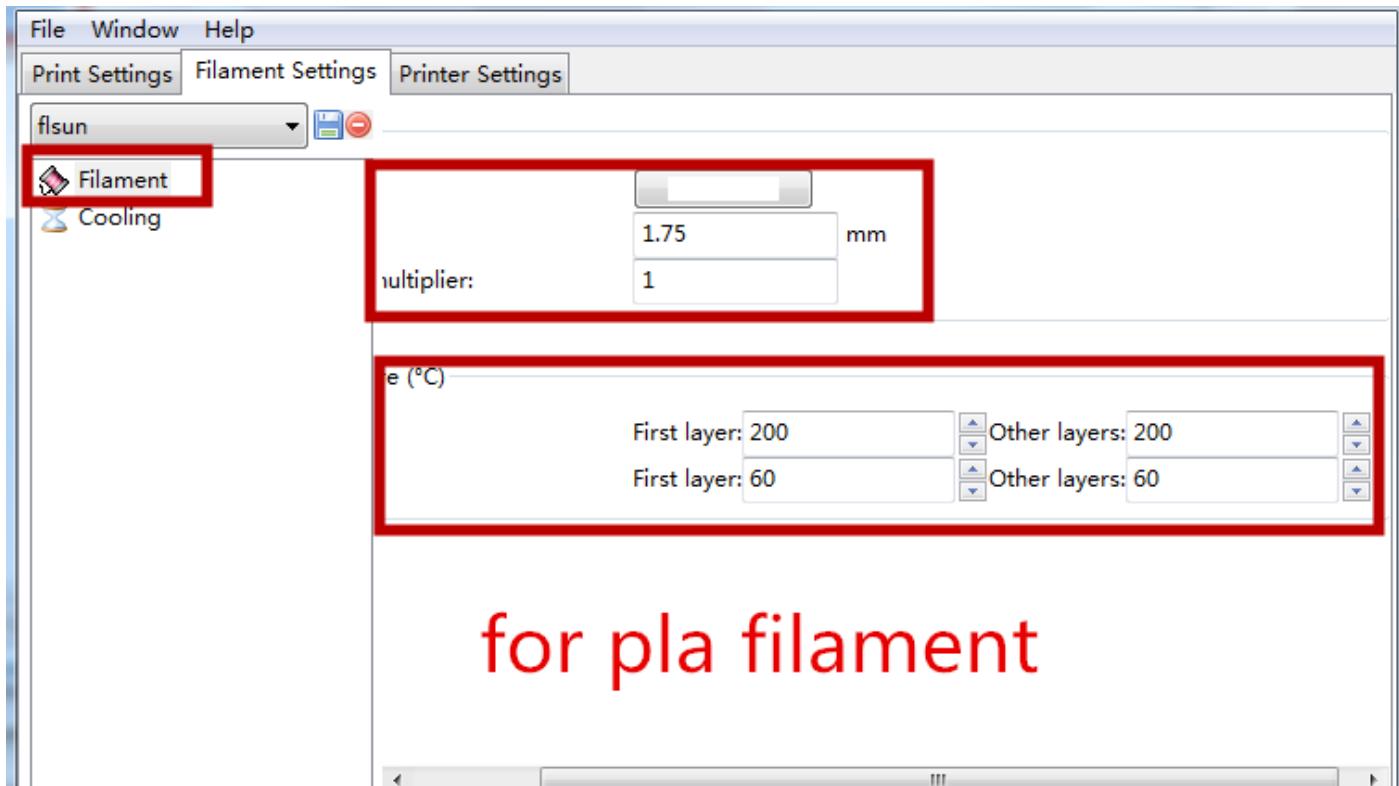
Cooling thresholds

Enable fan if layer print time is below: 60 approximate seconds

Slow down if layer print time is below: 30 approximate seconds

Min print speed: 10 mm/s





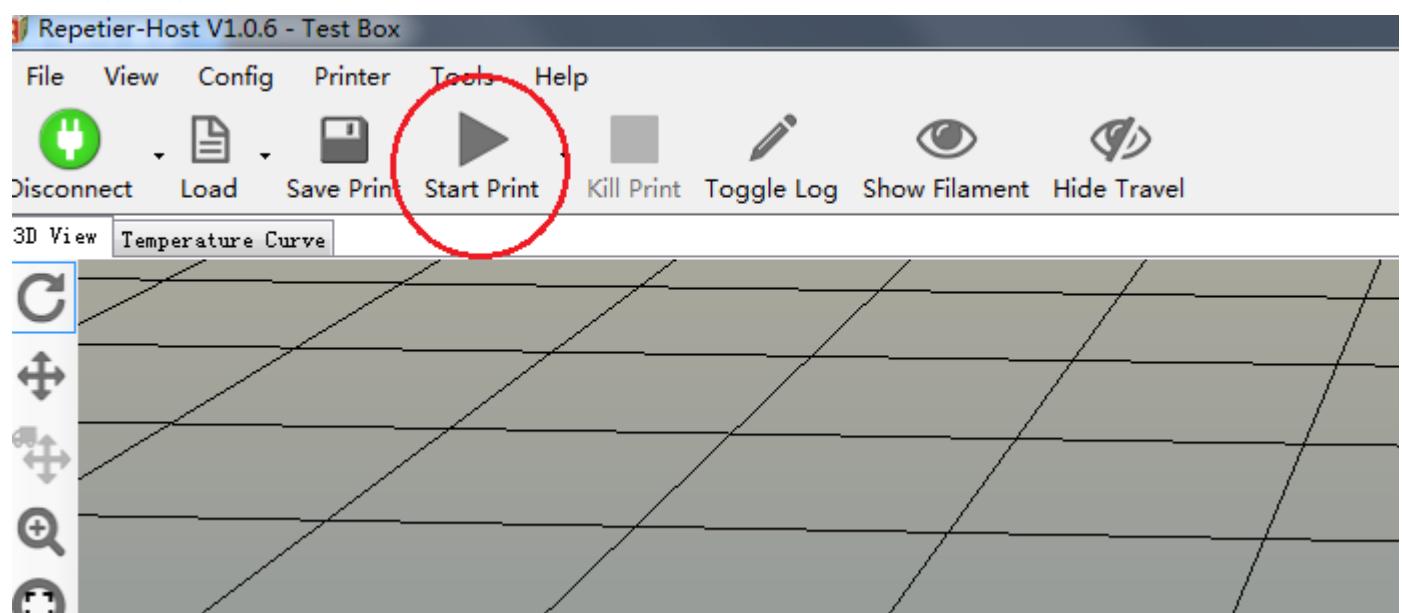
Everytime you need to save after change parameter

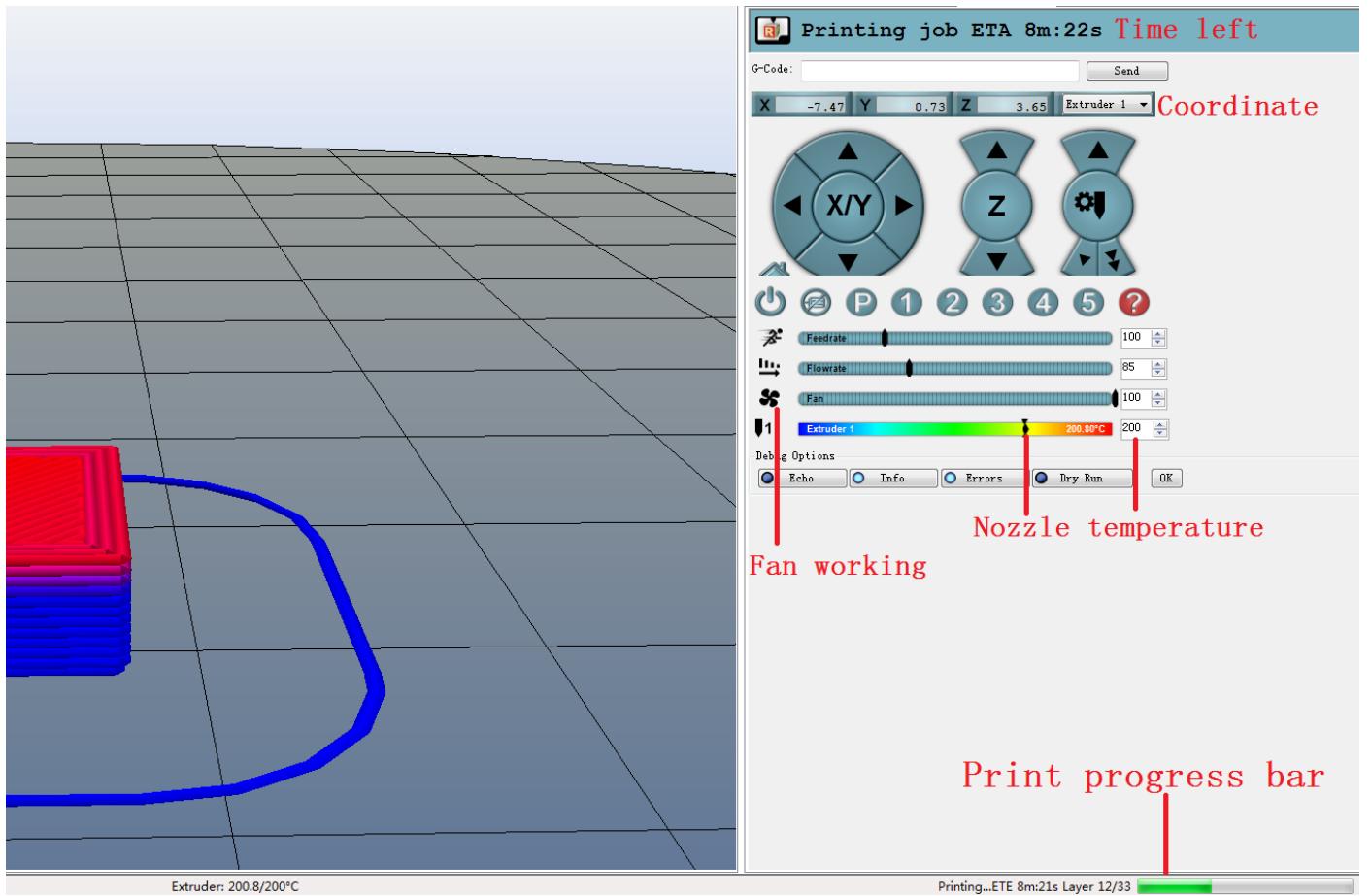
The above pictures only show some key parameters setting when slice, about more info about the slic3d software, pls go to the link as follow.

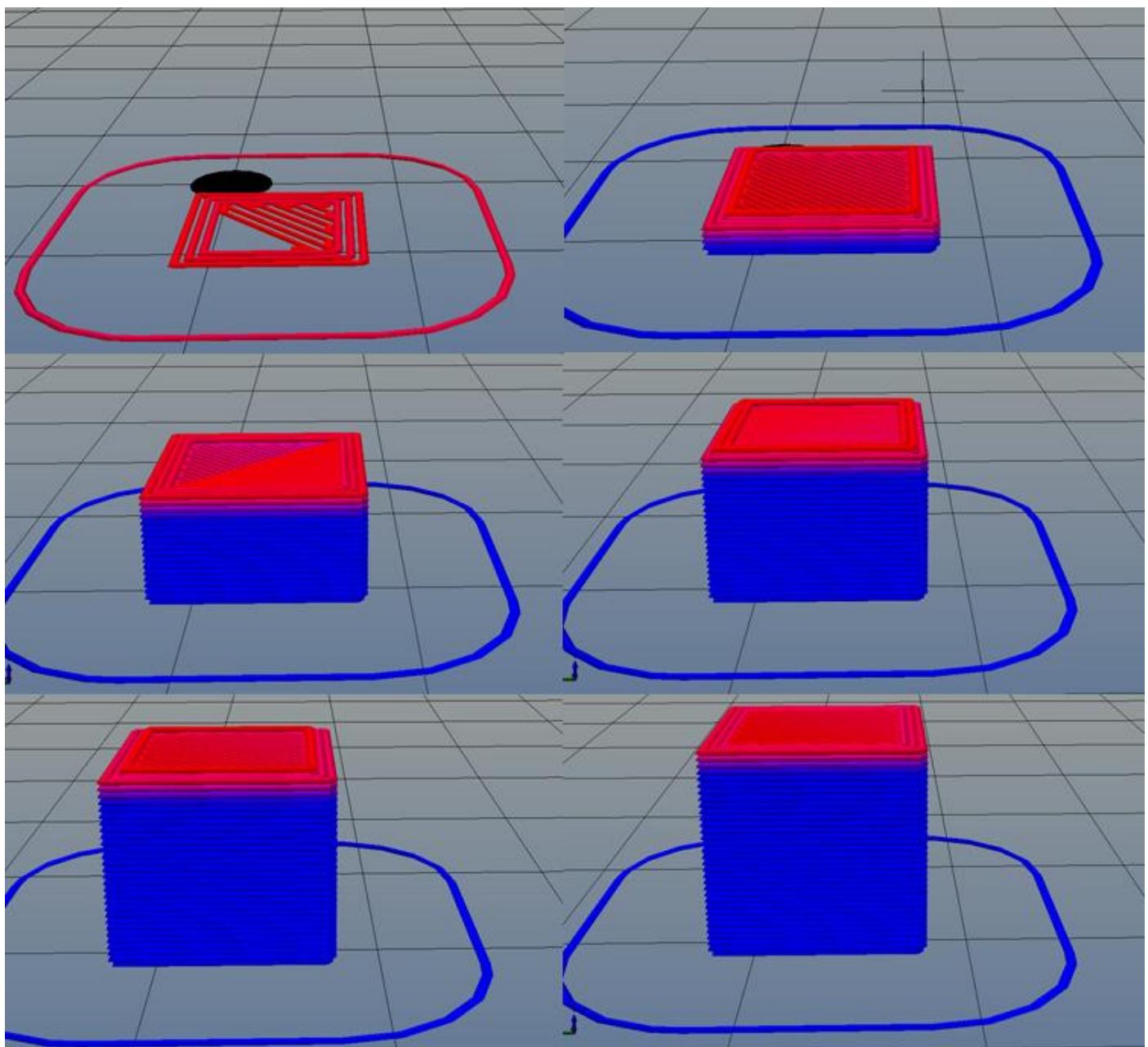
<http://manual.slic3r.org/intro/overview>

4) printing

Complete sliced,could start printing,click the “Start print”,will print the model, the panel display printing progress.

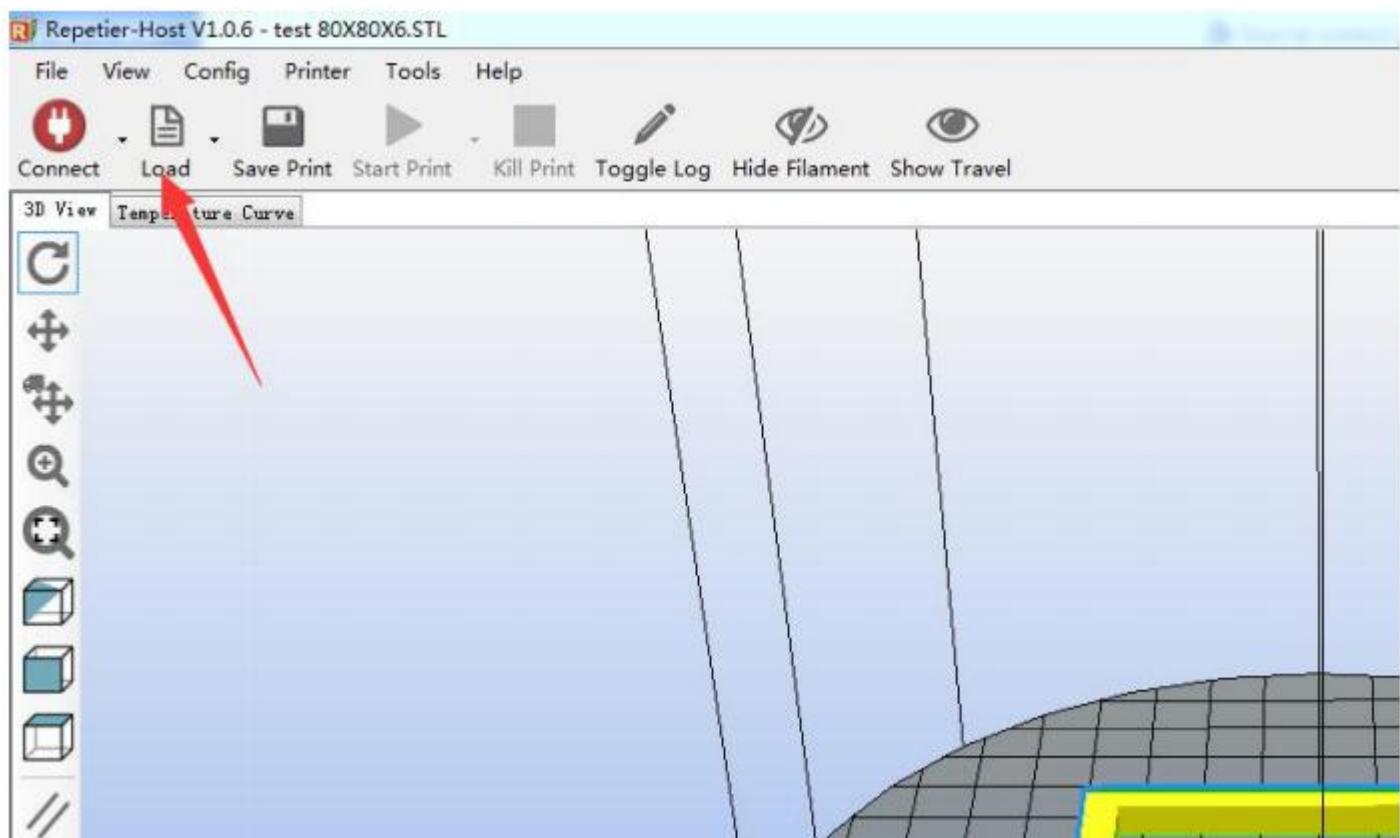


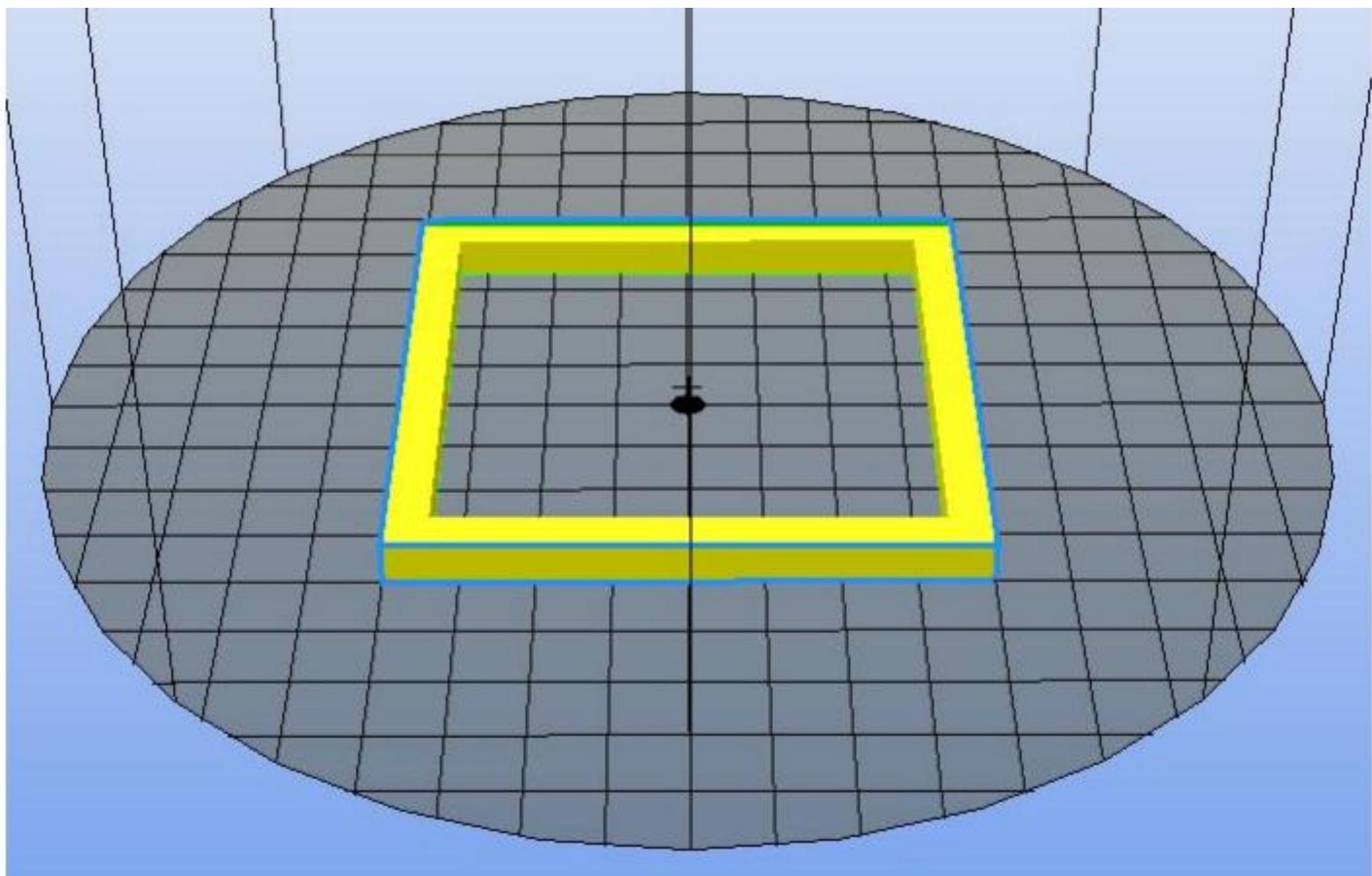




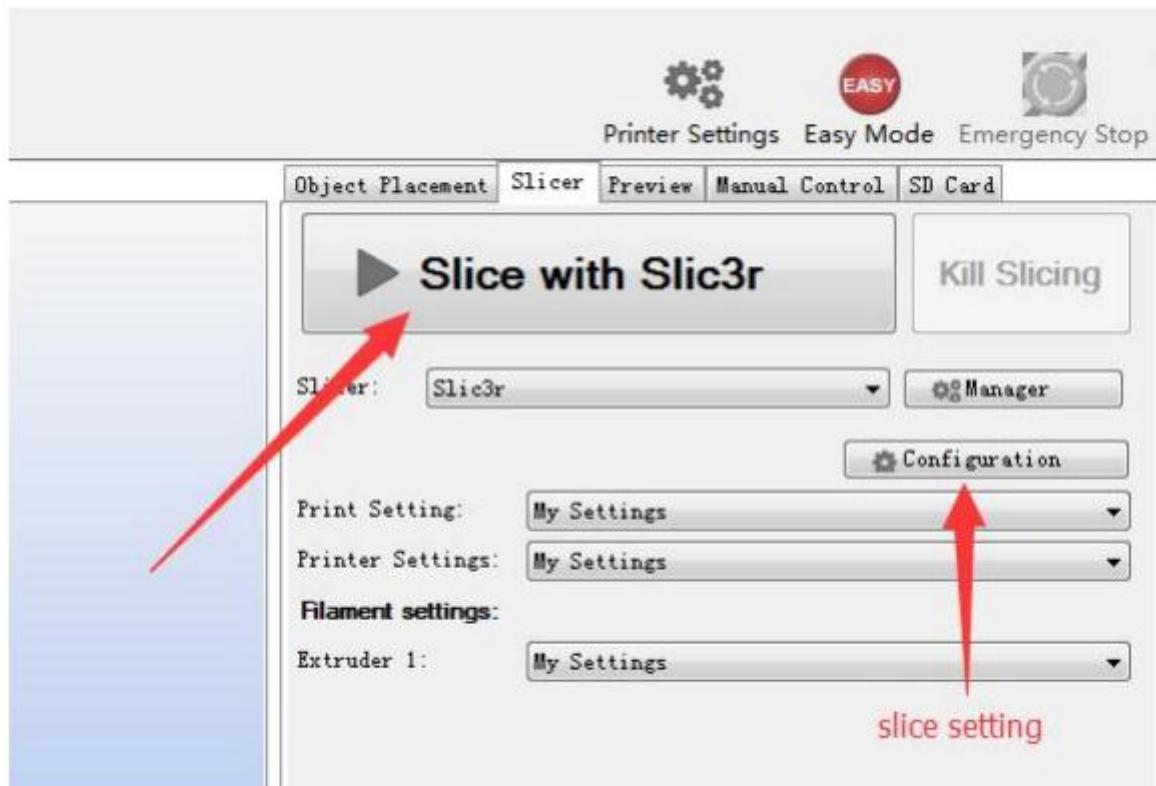
4 Offline printing

1. Load the model





2. slice





Printer Settings Easy Mode Emergency Stop

Object Placement Slicer Preview Manual Control SD Card

Preview G-Code Editor

Printing Statistics

Estimated Printing Time: 49m:5s
Layer Count: 23
Total Lines: 12895
Filament needed: 3736 mm

Visualization

- Show Travel Moves
 Show complete Code
 Show Single Layer
 Show Layer Range

First Layer:

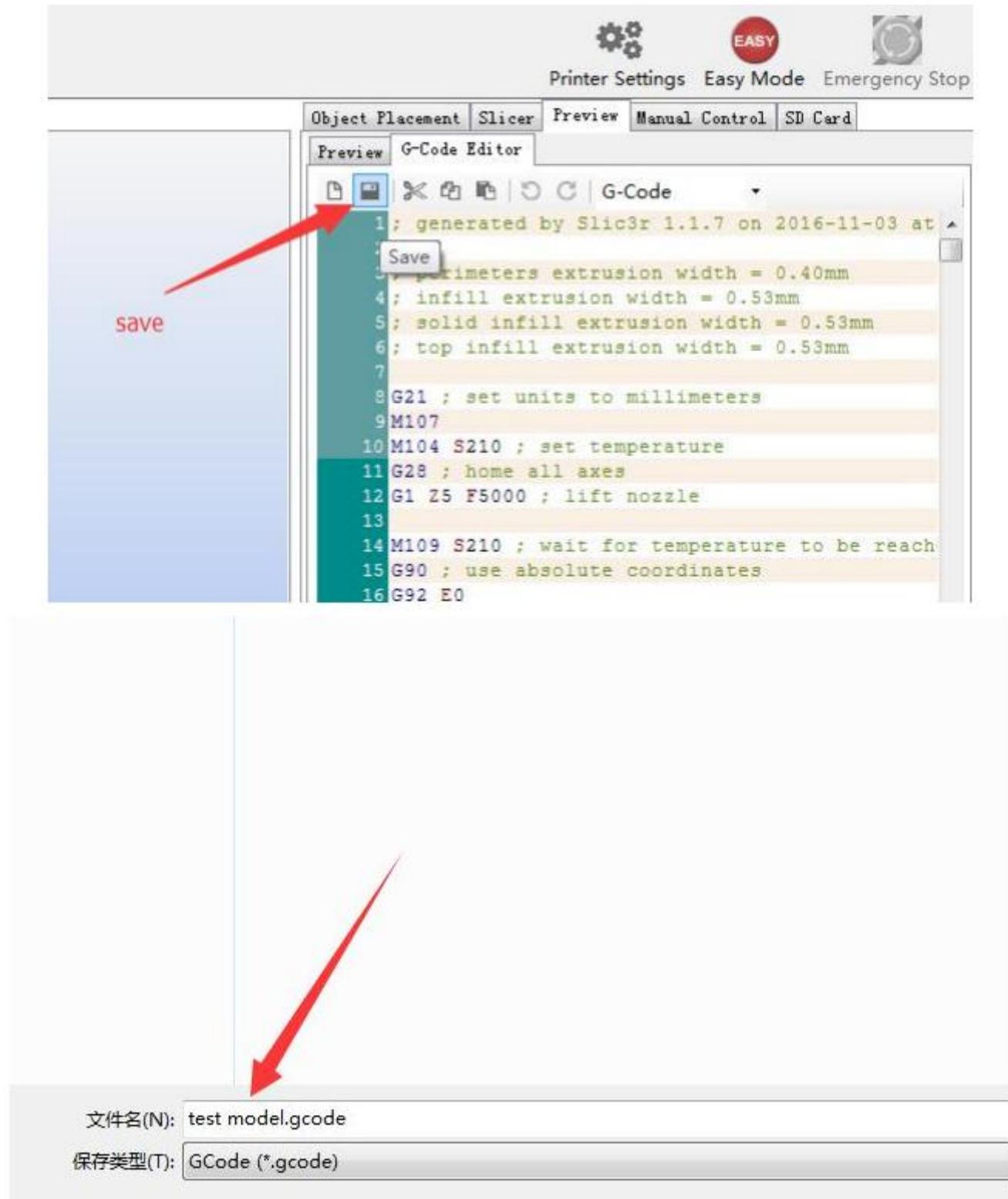
0

Last Layer:

1

after slicing

3. Export Gcode file



new folder				
名称	修改日期	类型	大小	
test model.gcode	2016/11/3 0:10	GCODE 文件	406 KB	

↑ Gcode file

4. Copy

Copy the Gcode file to SD card and insert the SD card into LCD

5. Printing

This is the main interface of the screen,it can display nozzle temp and bed temp

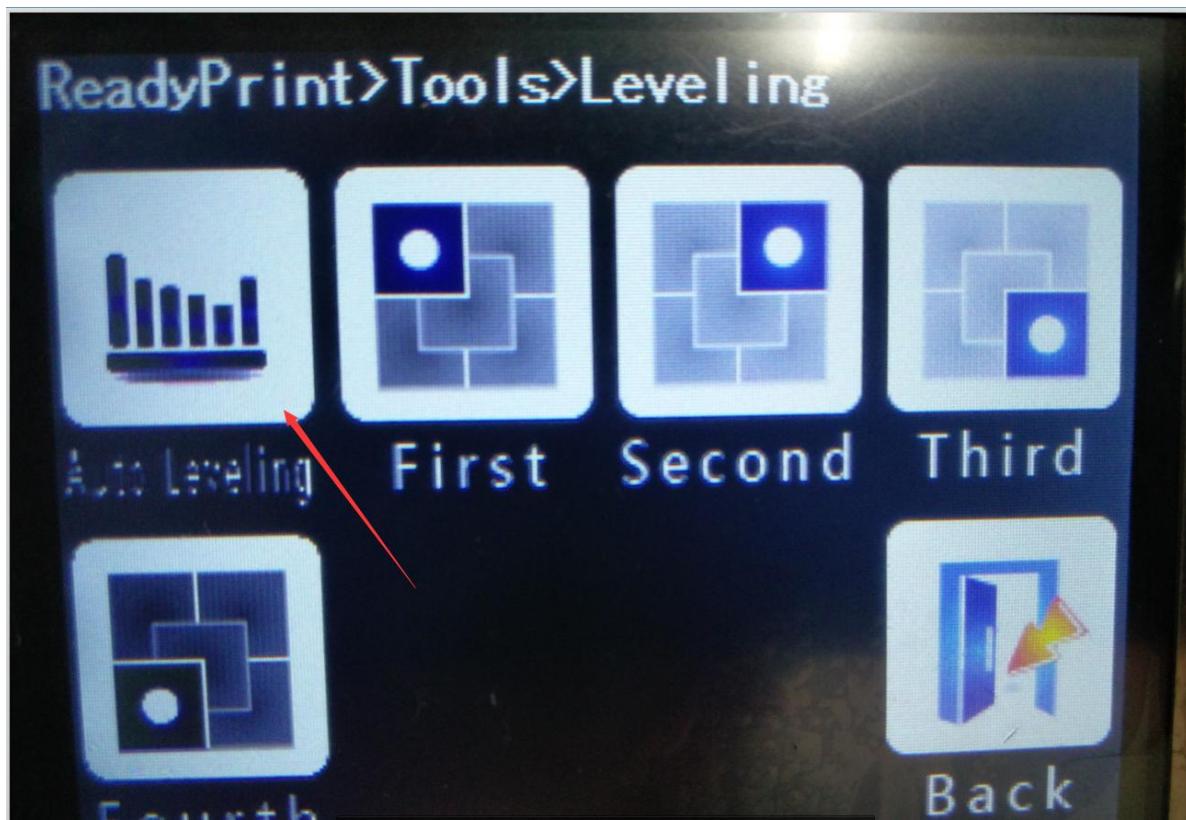


Then you click tools---home---all home



Then click leveling---autolevel

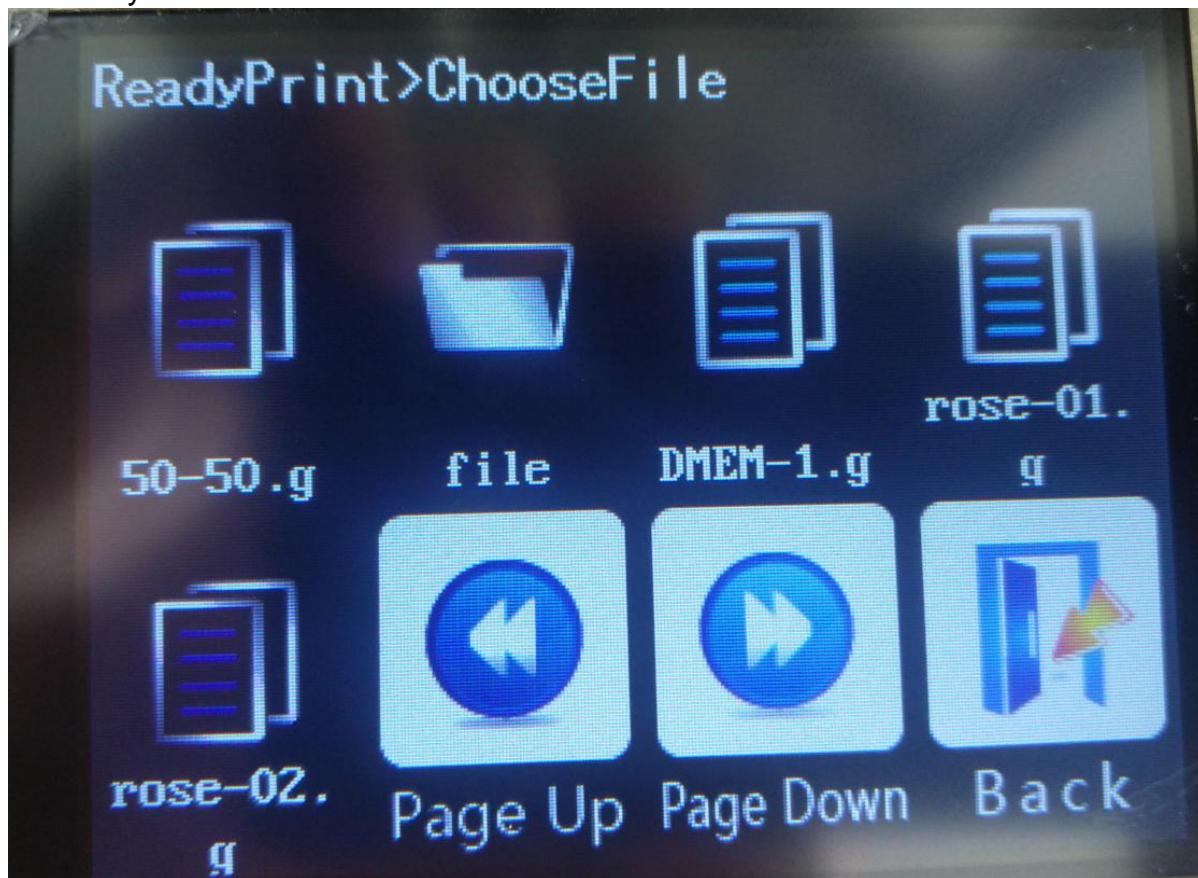
Before auto-level Must heat nozzle to setting temp (200 degree),then input g28 go home and g29 to auto-level.



Then click printing



Choose your model file and click it



Then click ok to print

