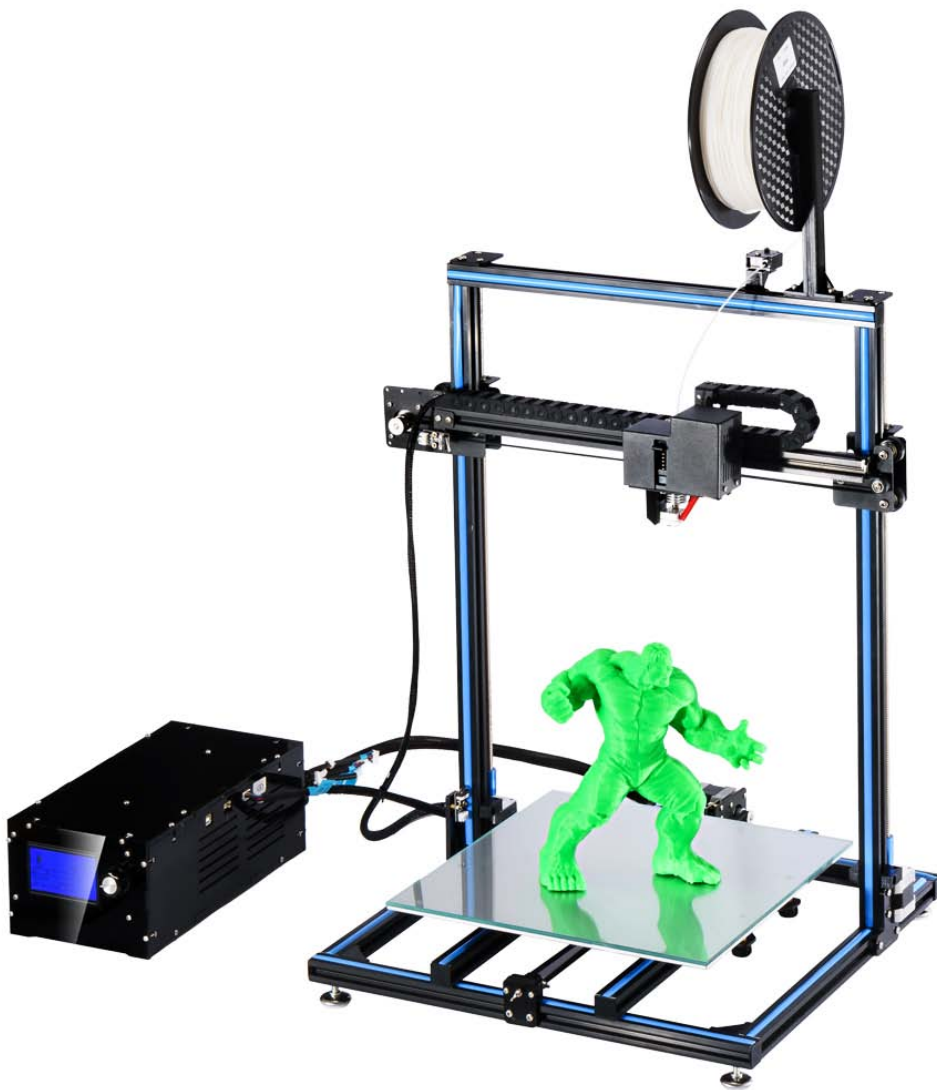


# User Guide

## ADIMLab-gantry 3D printer



Version V1.3.2

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## 一、 Overview

Thank you for your support of our company's products, the guidelines only apply to ADIMLab-gantry 3D printer. This guide is based on Win7 operating system.

Chapter 1: Introduction of architecture, settings, and other preparatory work

Chapter 2: Introduction of software and printing step

Chapter 3: Introduction of actual printing operation and the print methods

Chapter 4: Technical support and guidance

**Please read carefully before using the printer ADIMLab-gantry as following:**

- \* Before you run the printer, please ensure its grounded to protect the printer from electrostatic interference.
- \* When doing maintenance for the printer, please turn off the power and unplug the power cord.
- \* Do not leave the printer running in the absence of probation conditions.
- \* Do not touch the nozzle under heating , and above 60 °C printplatform.
- \* Some printing supplies at high temperatures melt will produce a slight odor, please use the printer in a well-ventilated conditions.
- \* First adjust the machine before printing platform parallel with the print nozzles to prevent nozzle rub internet.

\* Place the printer on a flat solid platform

## 二、 Thanks and Commitment

### Thanks

Thanks for your purchase and support for ADIMLab-gantry 3D printer .

You may also purchased our other 3D products or well understand 3D printing technology. But we still want you to read this guide, it contains a lot of important information about the use of the product so that customers get a better 3D experience. By reading and understanding of the operation, you can immediately start your first print.

### Committed

We are a professional 3D printer technology and service team, we know very well the importance of after-sales support services for the product. Especially for this emerging technology products, but also it is a challenge. You can get VIP after-sales service, quickly and efficiently solve problems you encounter during the use. 3D printing for most people is an emerging technology, therefore, We willing to guide you into the wonderful world of 3D printing. Dream is not just a simple imagination, but can be materialized, touch, and ADIMLab-gantry can help you complete. The magic of 3D printers is that change the idea into reality by printing layer by layer, we are much honored to invite you to join us to experience this miracle.

### 三、What is 3D Printer?

In short, 3D printers are used to three-dimensional computer model into real objects can be touched. The most common 3D printing technology is called FDM (Fused Deposition Modeling), namely melting precipitation manufacturing technology, ADIMLab-gantry belong to this one. The way it works is melted on the printing platform supplies plastic called high temperature. After cooling supplies curing, this process occurs at the instant it from the print head is pushed out . Three-dimensional objects layer by layer is superposed by supplies formed.

#### 3.1 3D printing steps

3D printing involves three steps:

- 1) 3D modeling;
- 2) Slice and output 3D models;
- 3) Printing;

#### 3.2 3D Modeling

(1) Self-designed 3D models

You can use the powerful 3D graphics software design 3D models, such as AutoCAD, SolidWorks, Pro-E and other 3D graphics software, the modeling method is applicable to professional design engineers, mapping software or above a certain understanding of the user.

(2) Downloaded from the network

Currently available 3D models of the most popular and most convenient

way is to download from the website, which allows registered users to upload 3D models of their own design.

### (3) 3D Scanner

Scanning the object is an alternative method of 3D modeling. 3D scanners to digitize items, collected its geometric data, then save it as a file stored on your computer. Install the appropriate App on your mobile device can be realized 3D scanning.

### **3.3 Slice output 3D model**

Slice software can translate 3D models into G-code that 3D printer can read. Slice software ADIMLab-gantry used is the most common type of Cura, Repetier-Host (PS:Cura is quick and easy Slice software with fast speed, short printing time and easy to operate; Repetier-Host as a fine slice software, requires many kinds of setting about the parameters, representing more suitable for fine print, it needs to have a certain understanding, it is a good software to adjust the fine print).

ADIMLab-gantry by dividing into a 3D model of a plurality of layers in the form of g-code file output format of this file can be read by

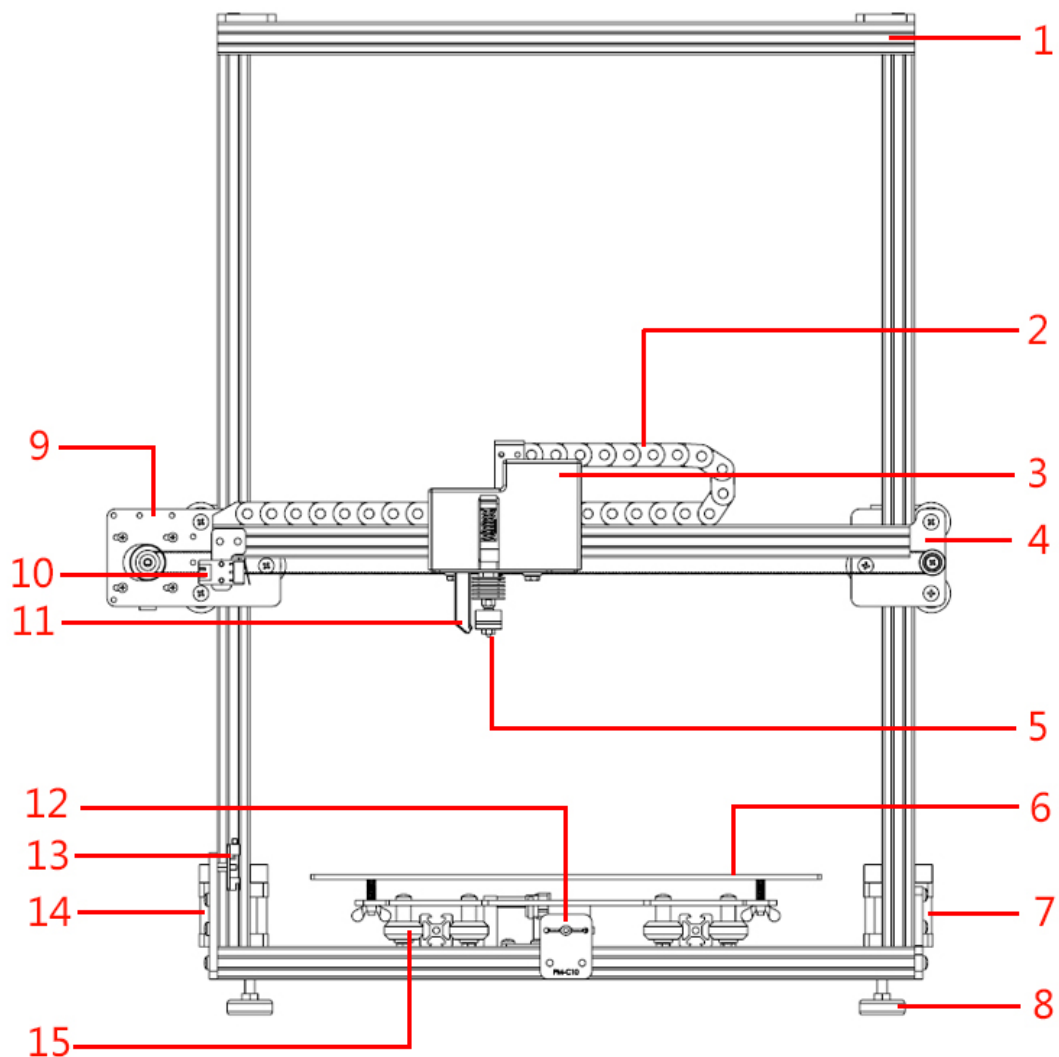
ADIMLab-gantry. Files can be in the form of a USB cable, SD card, then transferred to ADIMLab-gantry for printing operation.

## **四、 Printing**



Once the input file begins to run in ADIMLab-gantry, and it begins to pile up layer by layer so as to print the 3D model into an actual entity.

#### 4.1ADIMLab-gantryArchitecture:





## 4.2 Assembly and wiring

(Please reference SD card file contents [“2.Assembly and debugging tutorial”](#) [“HCmaker7Assembly instruction”](#) 1~2)

## 4.3 First time test the maker7

(Please reference SD card file contents [“2.Assembly and debugging”](#) [“HCmaker7Assembly instruction”](#) 3)

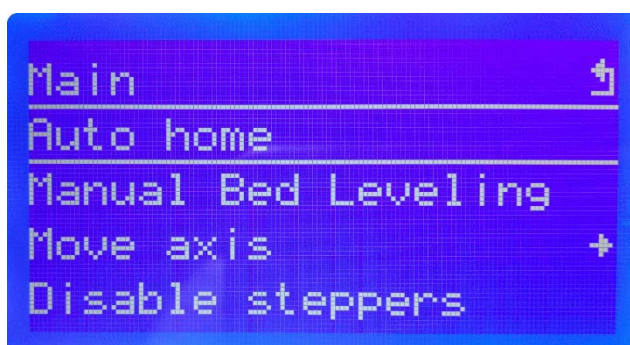
### 4.3.1 Home test:

(1) “Info screen” Press the knob, Rotate select “Prepare” ,

Click OK:



(2) Select “Auto home” in Submenu, Click OK:



Normal, The three axes will return to the home position (lower left corner)。

### 4.3.2 Heating test:

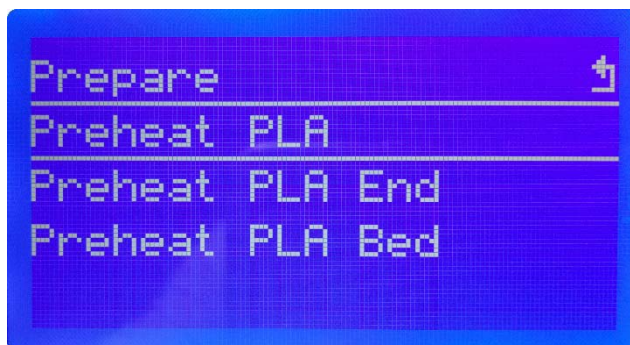
- (1) “Info screen” Press the knob, Rotate select “Prepare”, Click OK:



- (2) Select “Preheat PLA” in Submenu, Click OK:



- (3) Select “Preheat PLA” in Submenu, Click OK:



- (4) If Extruder and hotbed temperature rises, It mean heating working:



#### 4.4 First time prepare printing:

(Please reference SD card file contents [“2.Assembly and debugging”](#) [“HCmaker7Assembly instruction”](#) 4)

##### 4.4.1 X axis Height calibration:

(1) “Info screen” Press the knob, Rotate select “Prepare”, Click OK:



(2) Select “X Height adjustment” in Submenu, Click OK:



(3) Z axis Automatic rise 30mm, use solid glue or print model

test shaft guide distance between the two ends and the base,  
Make the metal parts at both ends of the X-axis guide just touch  
the glue stick or print model.

#### 4.4.2 Leveling Heating Platform:

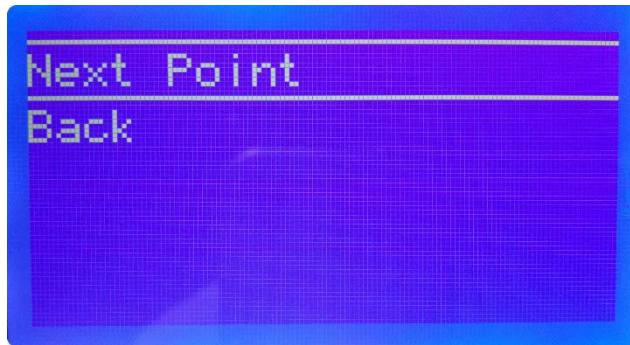
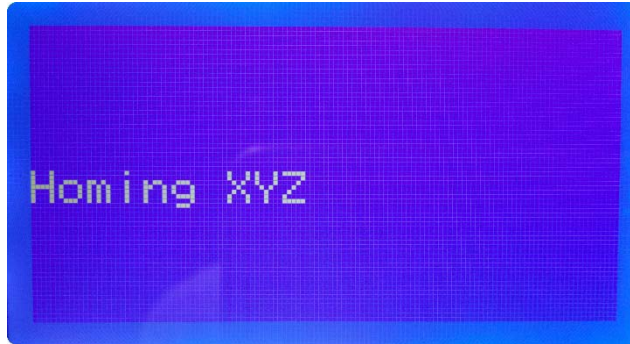
(1) “Info screen” Press the knob, Rotate select “Prepare”, Click  
OK:



(2) Select “Manual Bed Leveling” in Submenu, Click OK:



(3) First printer will Perform homing, Then extruder moves  
to the first adjustment point in the lower left corner of the  
hot bed.



(4) Adjust the hand nut under the platform in turn so that the nozzle just touches the hot bed.

Click after leveling “Back” .



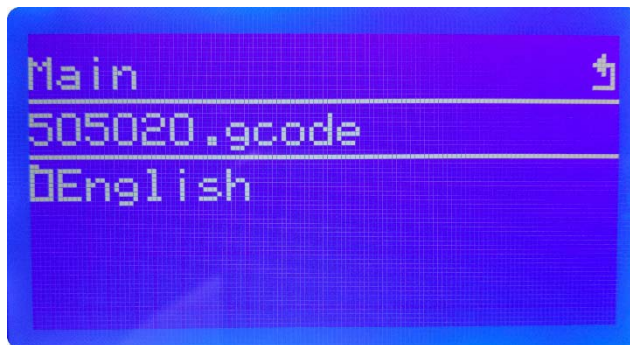
#### 4.4.3 First time test the maker7:

(Please reference SD card file contents “2.Assembly and debugging”  
“HCmaker7Assembly instruction” 5)

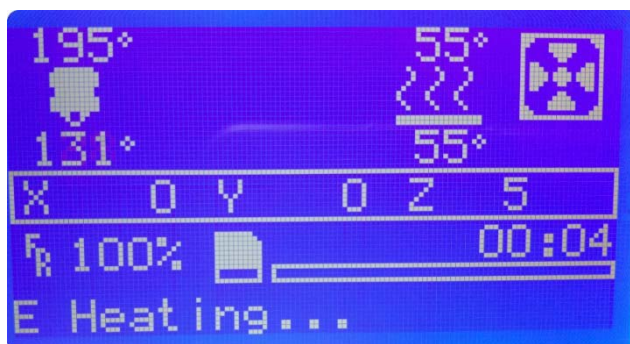
(1) “Info screen” Press the knob, Rotate select “Print from SD” , Click OK:



(2) Select "505020.gcode" in Submenu, Click OK:



(3) Printer Preheating, Pls wait patiently:



(4) Finish preheating, star printing:





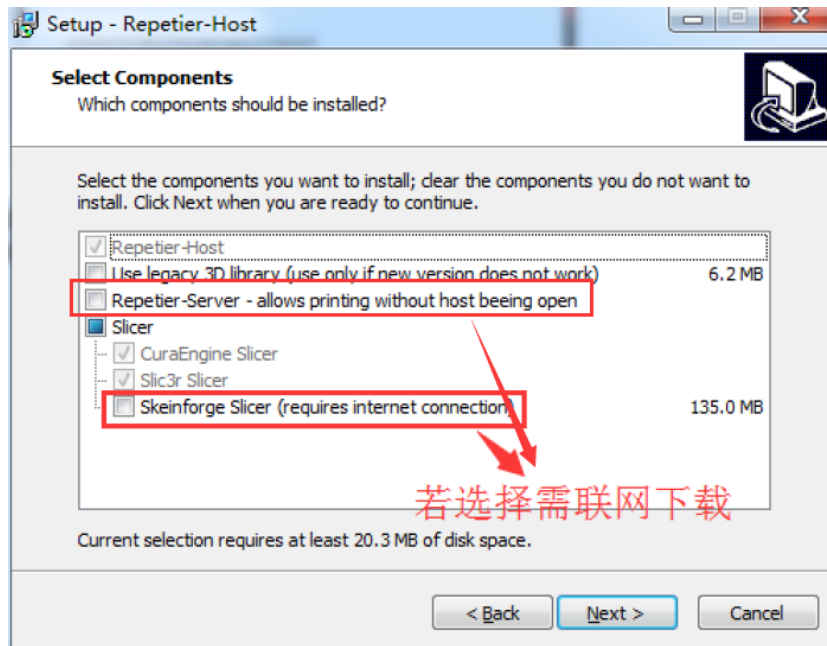
## 五、 Slice software installation and configuration

### 5.1 Software copy

Insert the SD card into the computer, SD card file "4. control software, Repetier-Host installation and introduction", there are various systems Repetier-Host control software installation package, You can copy the required installation to your computer.

### 5.2 Install control software (Take Win7 operating system as an example)

(1) Please unzip the downloaded “setupRepetierHost\_1\_6\_2.exe”, and then follow the prompts to complete the installation. (refer to SD card data4. control software Repetier-Host installation and introduction (when installed, pay attention to the two that do not need to hook, otherwise some of the network cannot connect wire to install.)



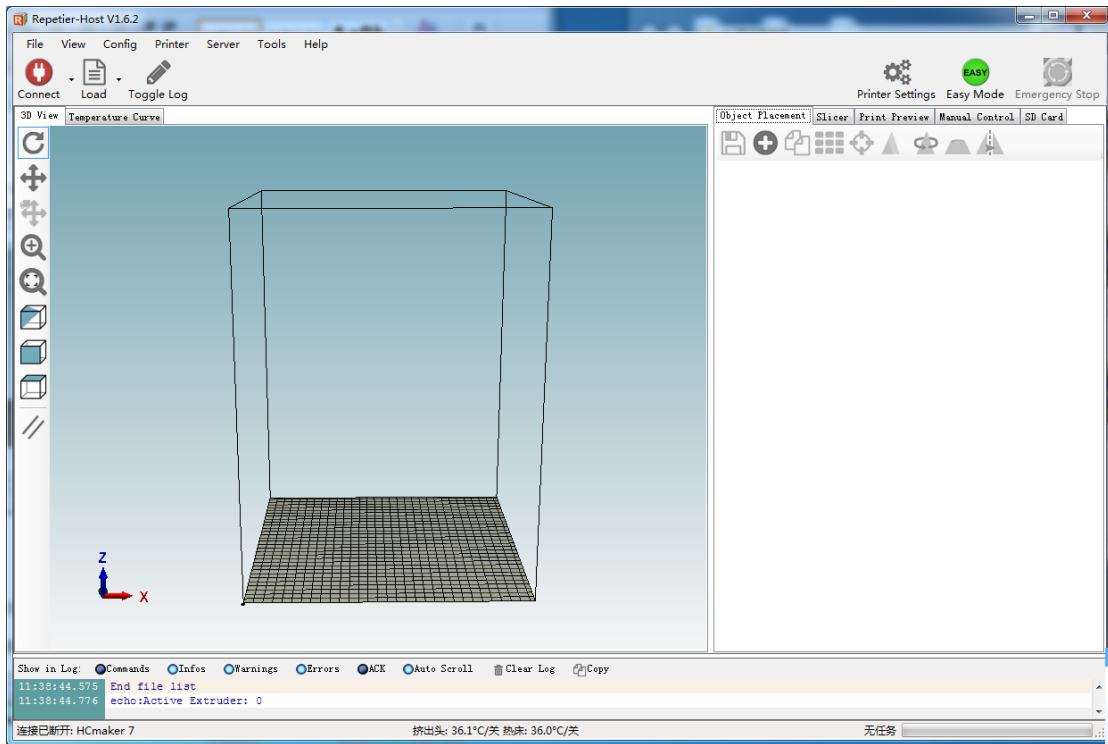
(2) Using the desktop icons or start menu' s shortcuts to start the software .

### 5.3 Setting software:

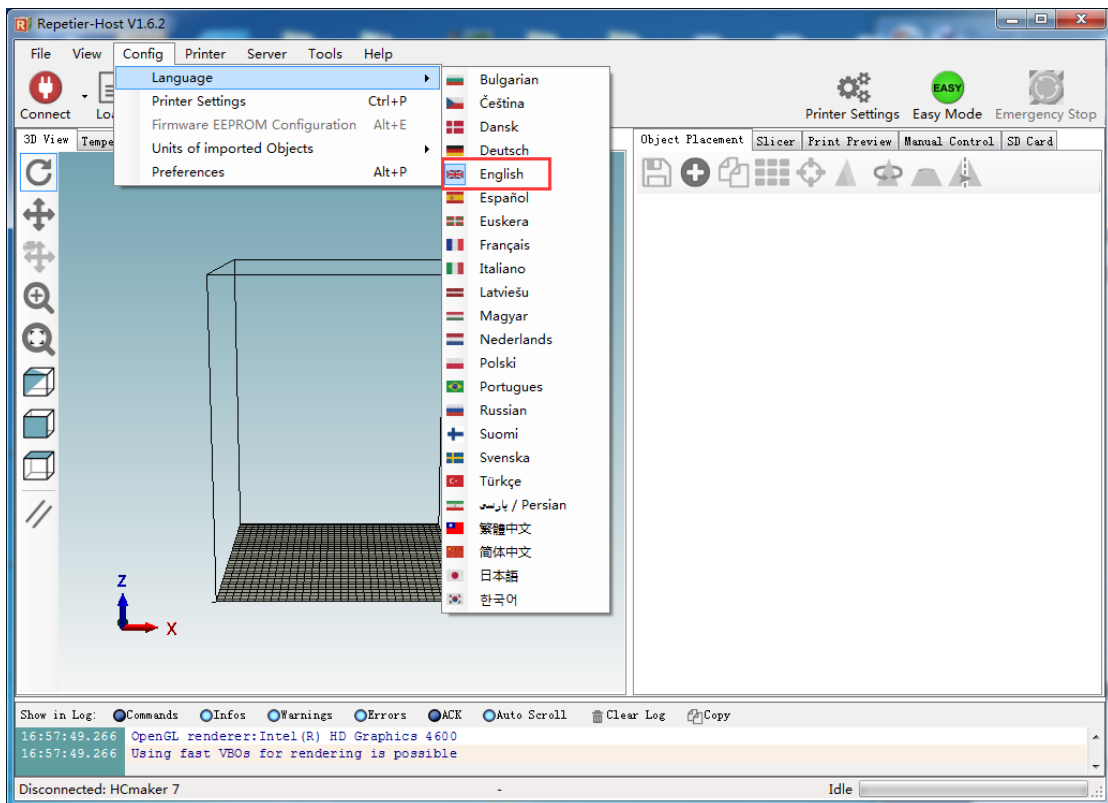
Users can use Repetier-Host software to control ADIMLab-gantry printer to print, you should set up control software, open Repetier-Host.

#### 5.3.1 Printer parameter set :

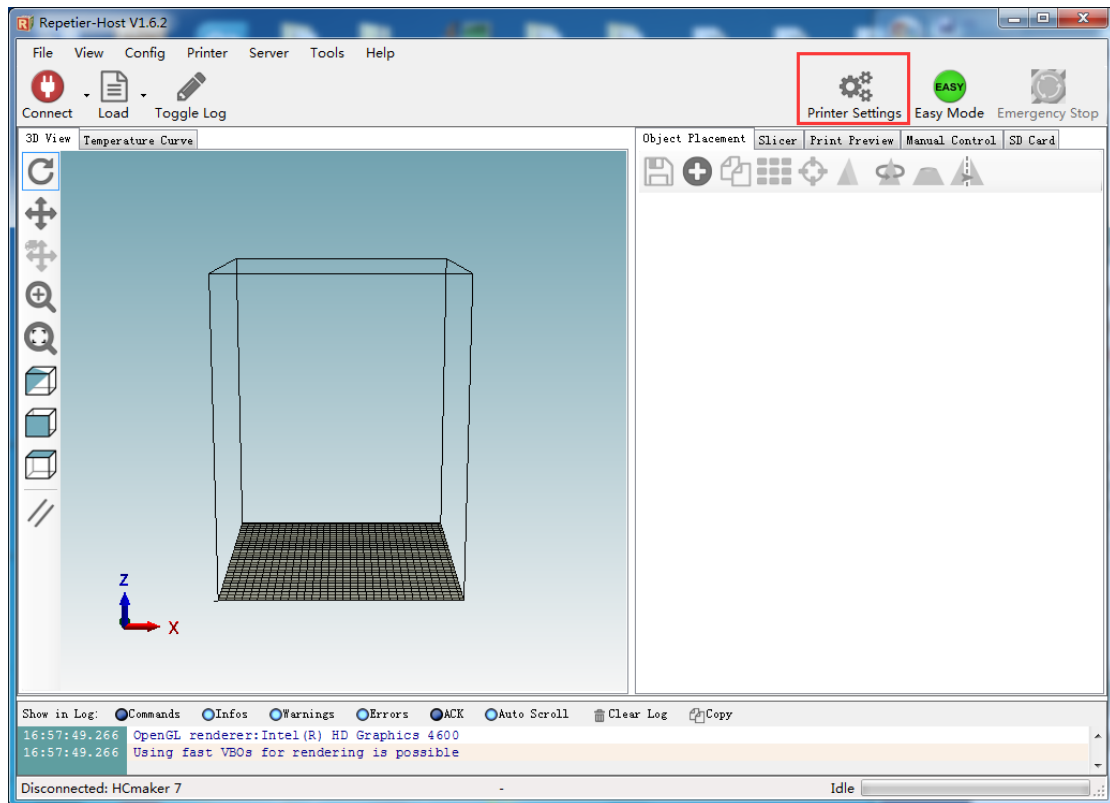
(1)Open Repetier-Host:



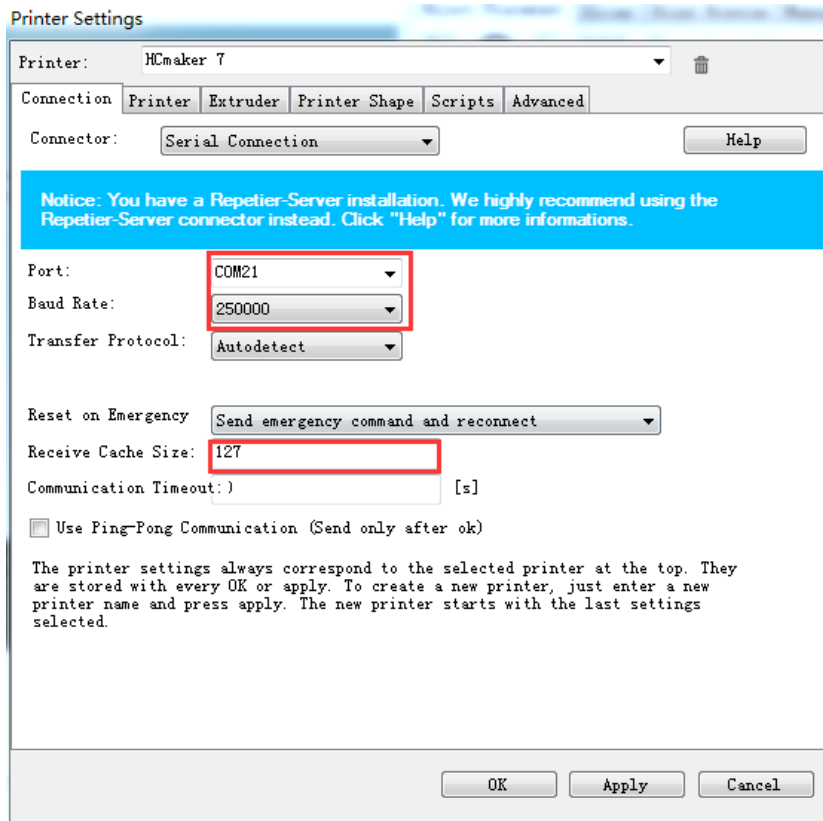
(2) Choose language:



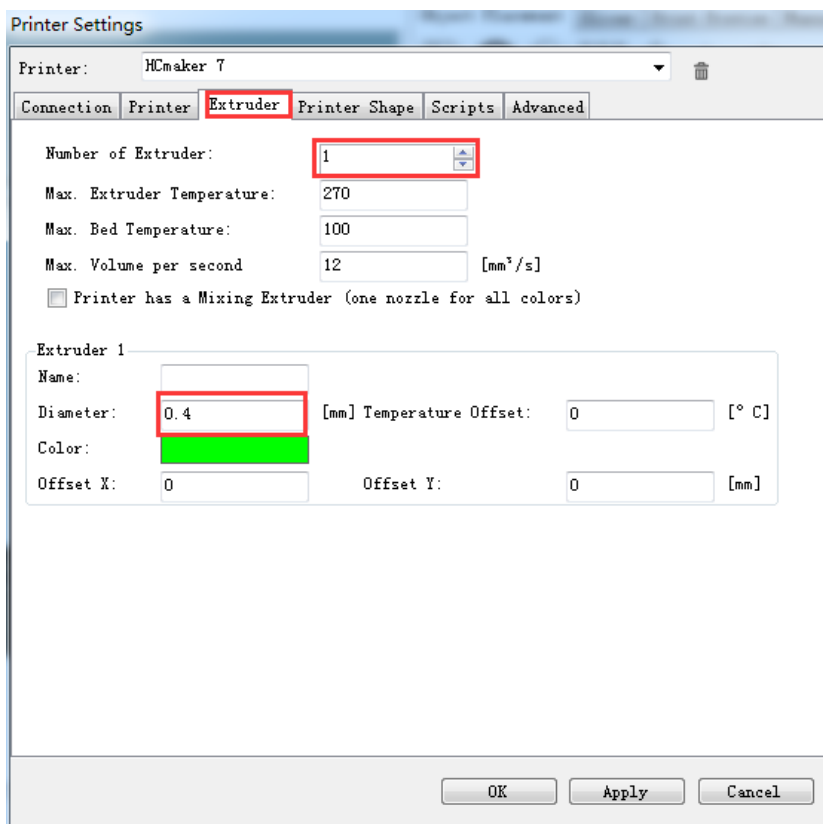
### (3) Select Printer Settings:



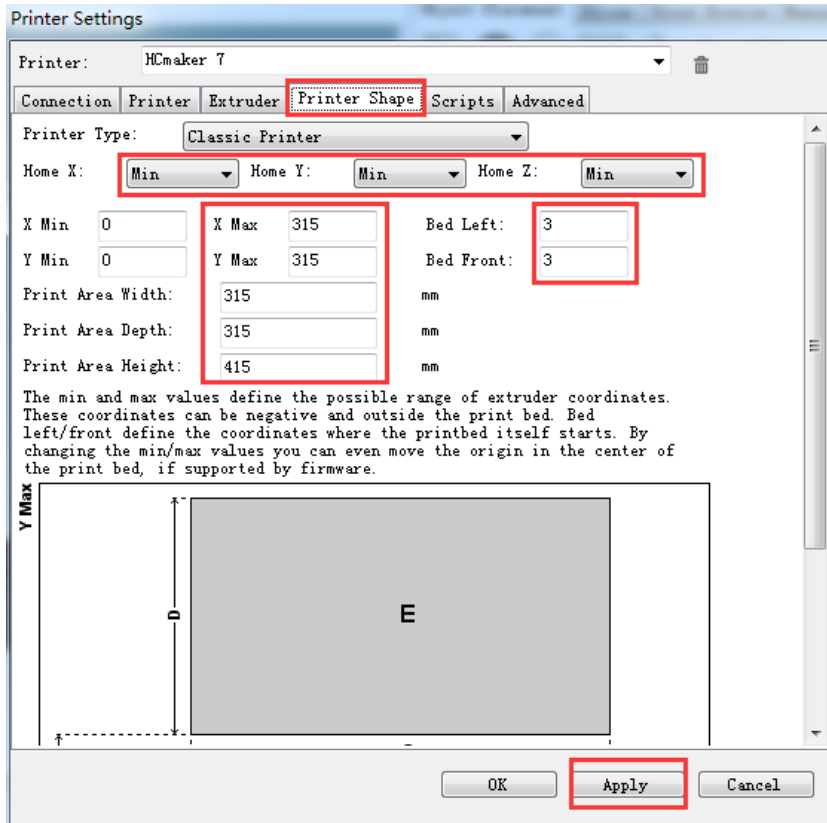
Choose their own corresponding serial port, such as: COM3, COM4 and so on (in the serial drop-down menu selection), in the drop-down menu set baud rate of 250000., Cache size 127, Click apply



Set nozzle number “1” and extruder diameter “0.4” , Click apply”:

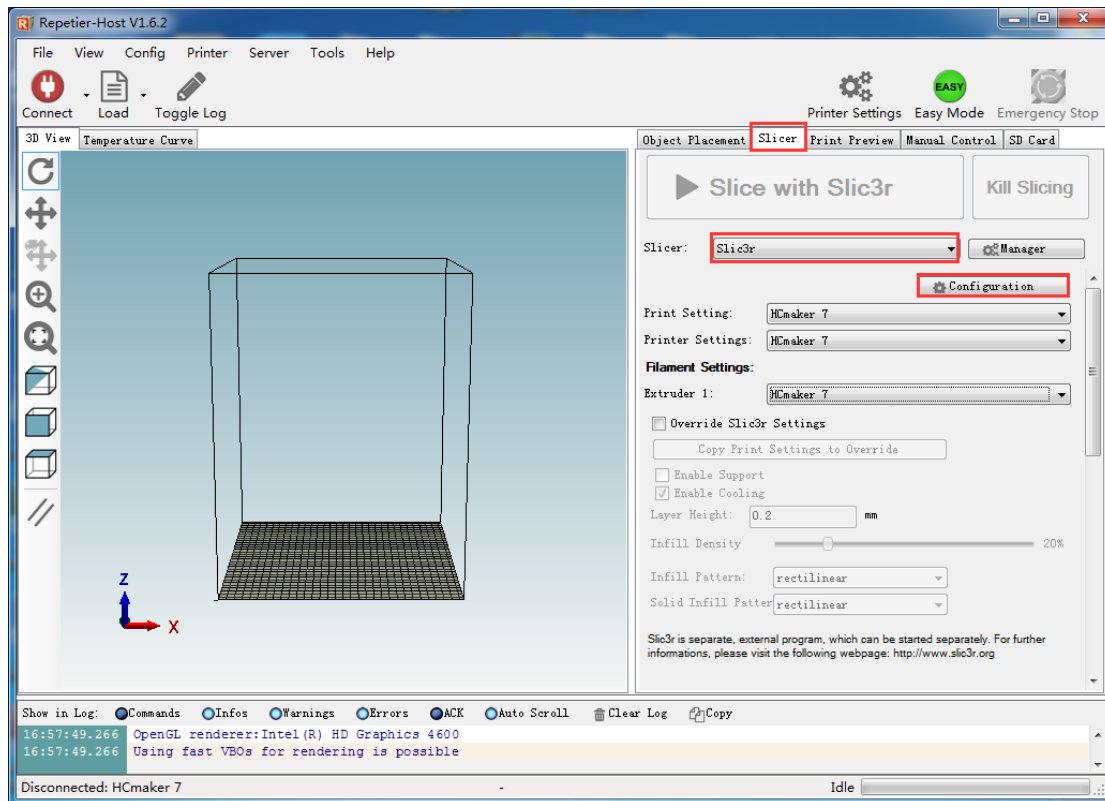


Set printer shape, click “Apply”, “OK” : then close.

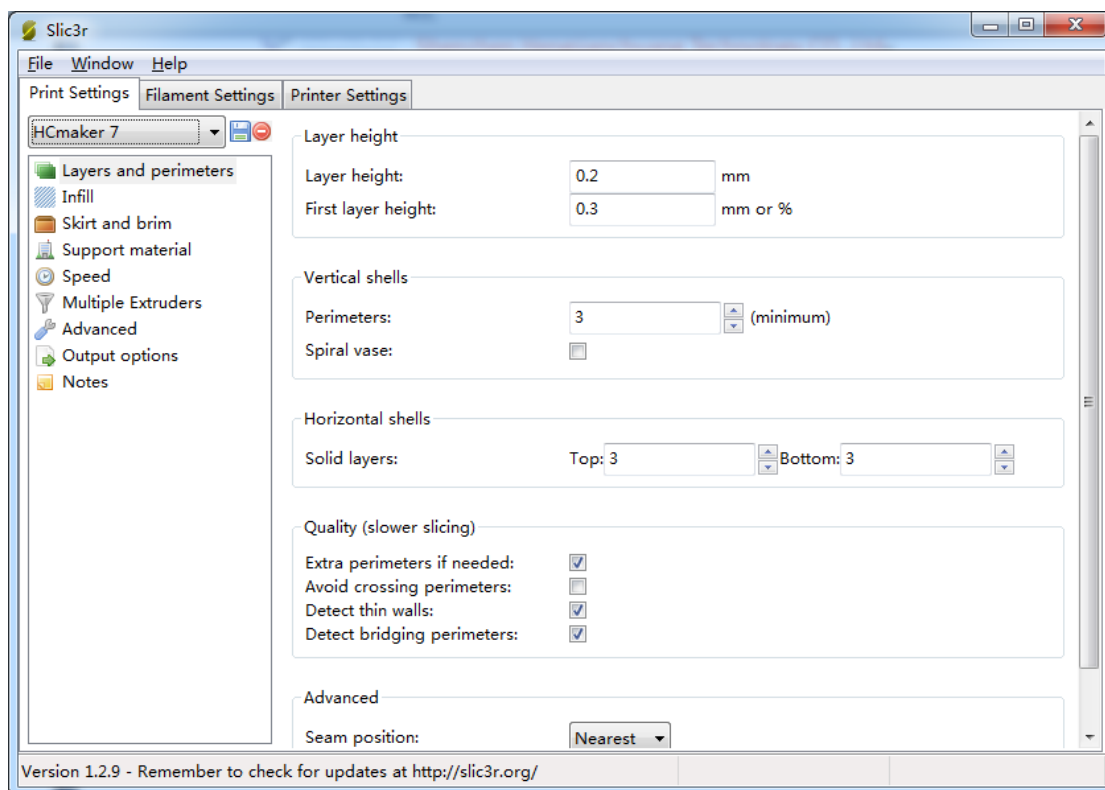


### 5.3.2 Slicer setting:

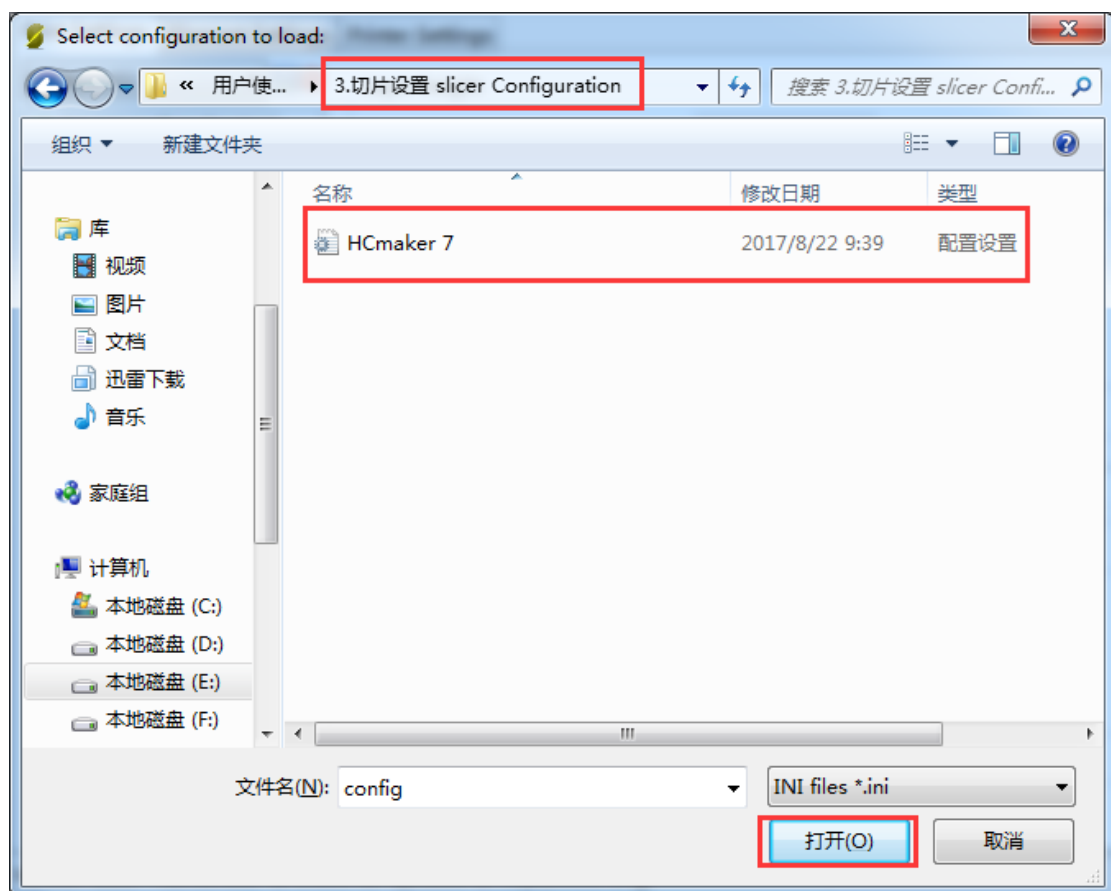
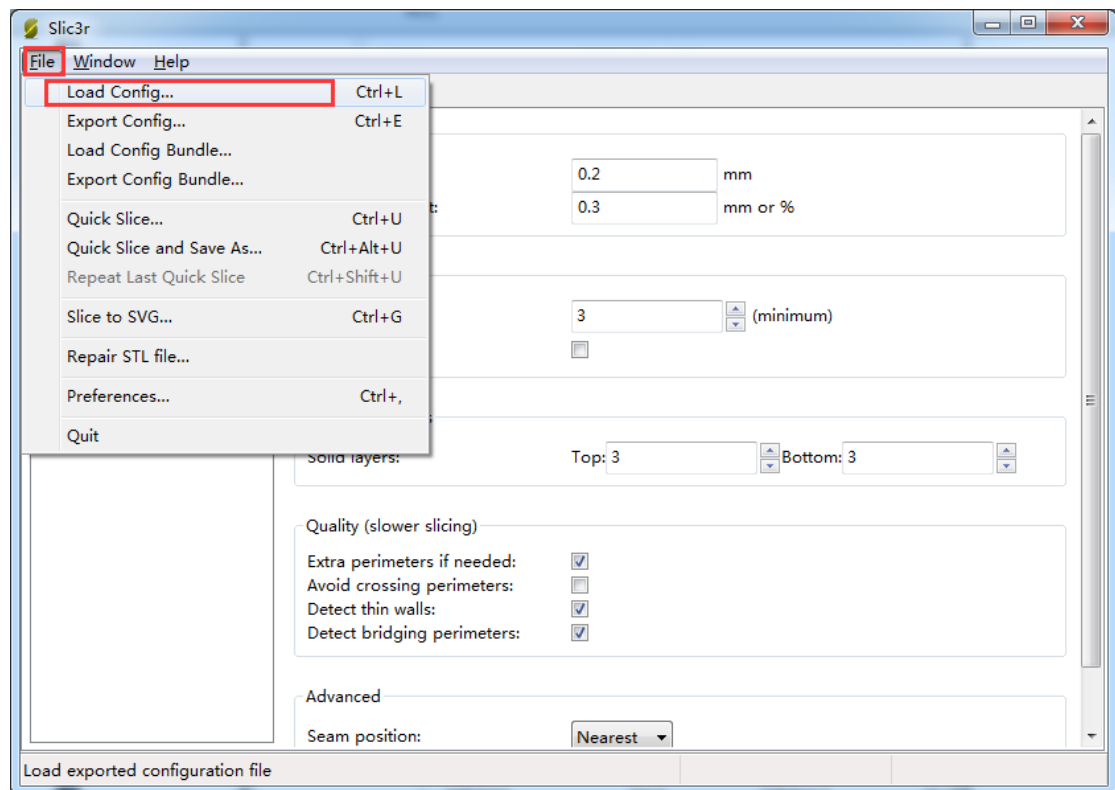
(1) Click “Slicer”, in “Slicer” choose “Slic3r”, click “Configuration:



(2) “Slic3r” Slicing software setting:



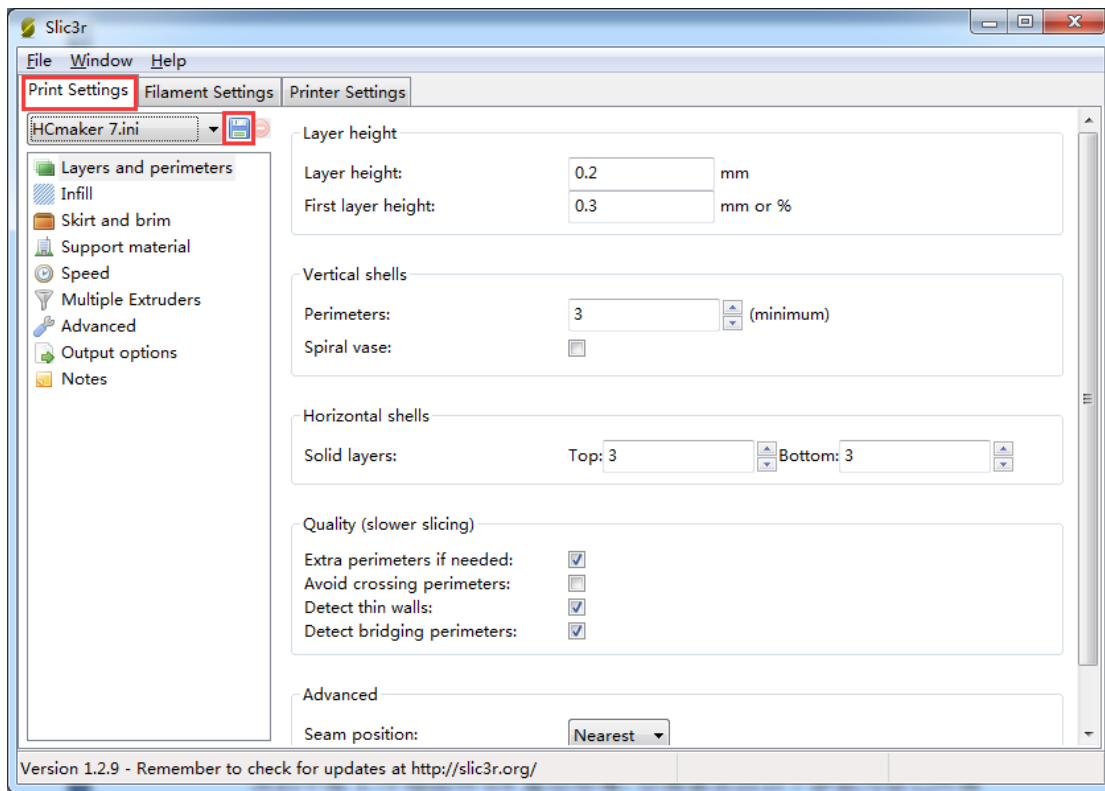
(3) Select file to load configuration (slice settings on SD card 6. slice settings)



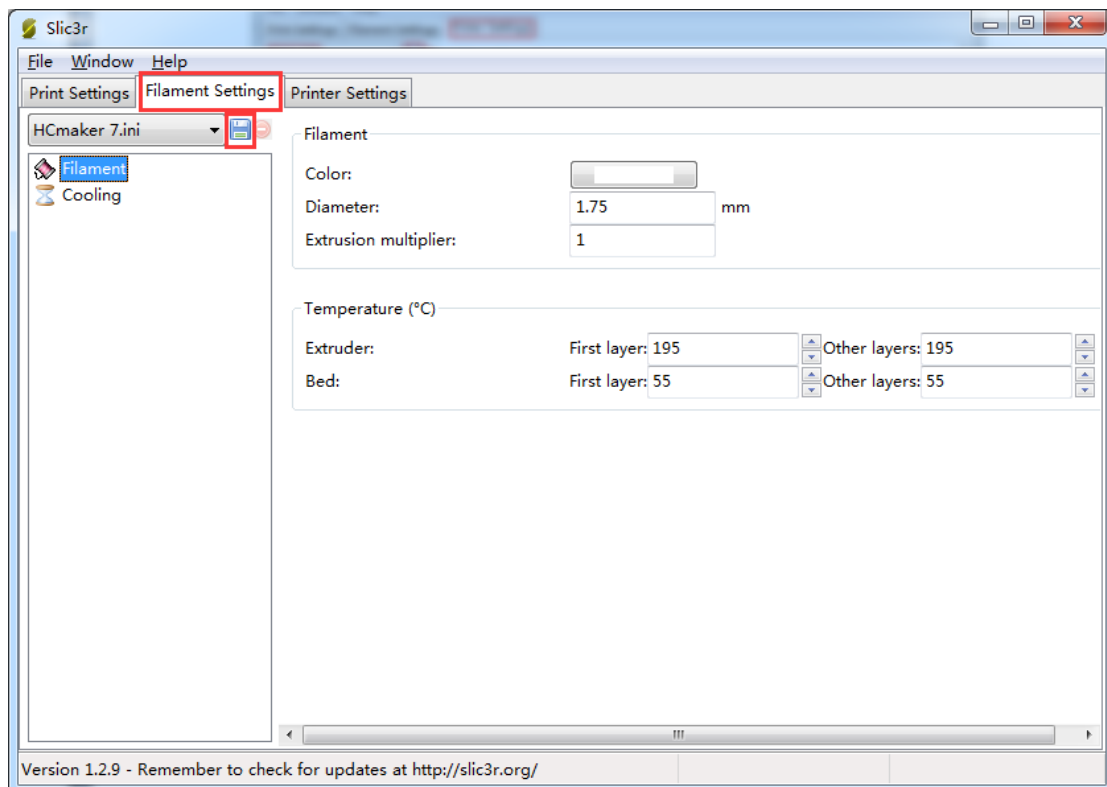


(4) Save configuration (three items need to be saved)

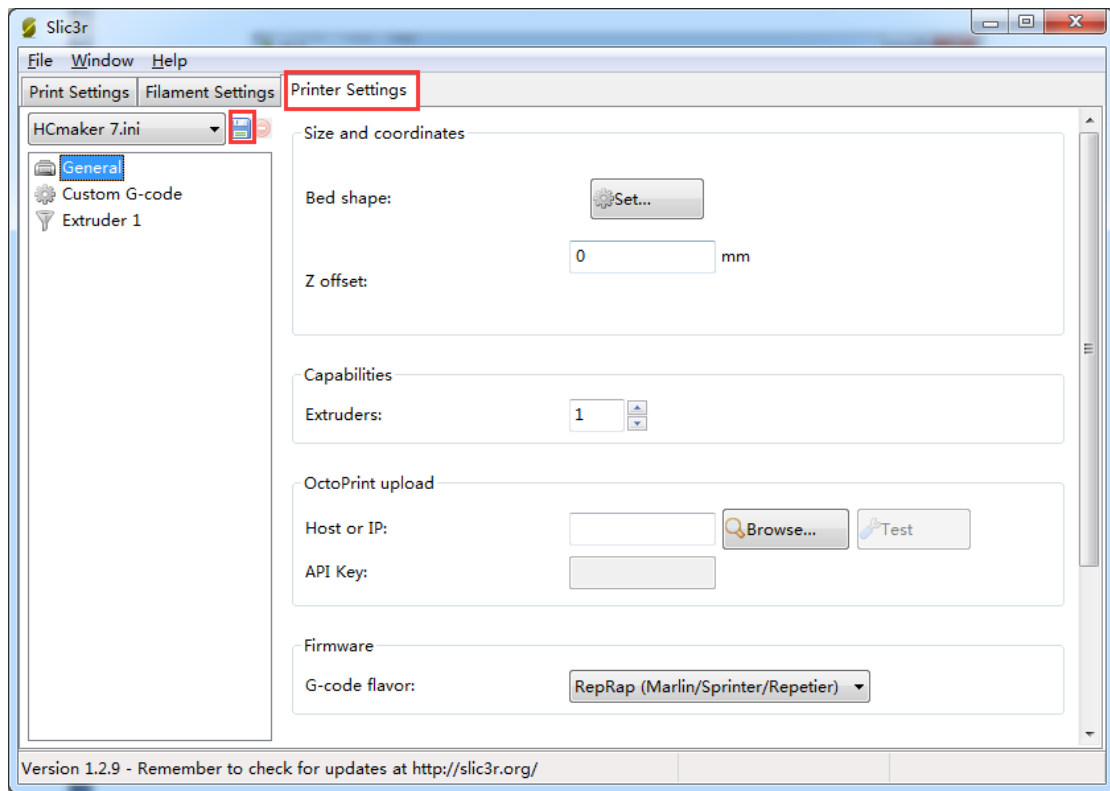
Click "Print Settings", click "Save" button:



Click "Filament Setting", click "Save" button:



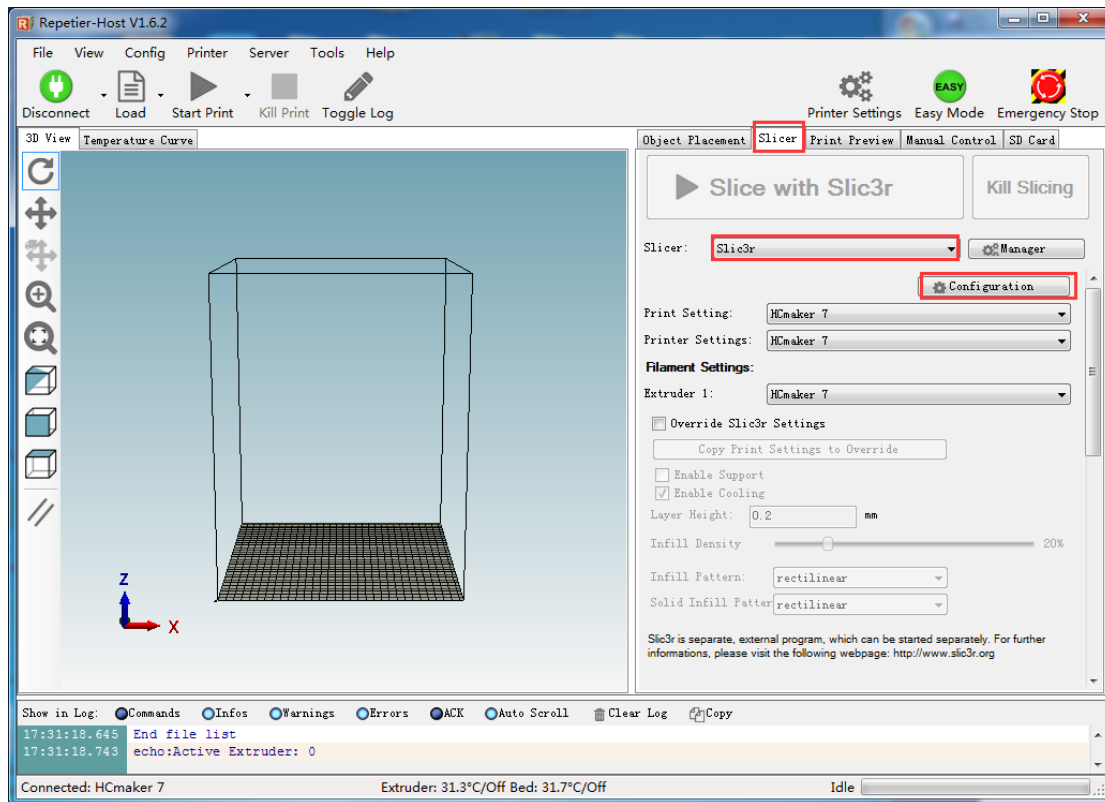
Click” Printer Settings” , Click “Save” button:



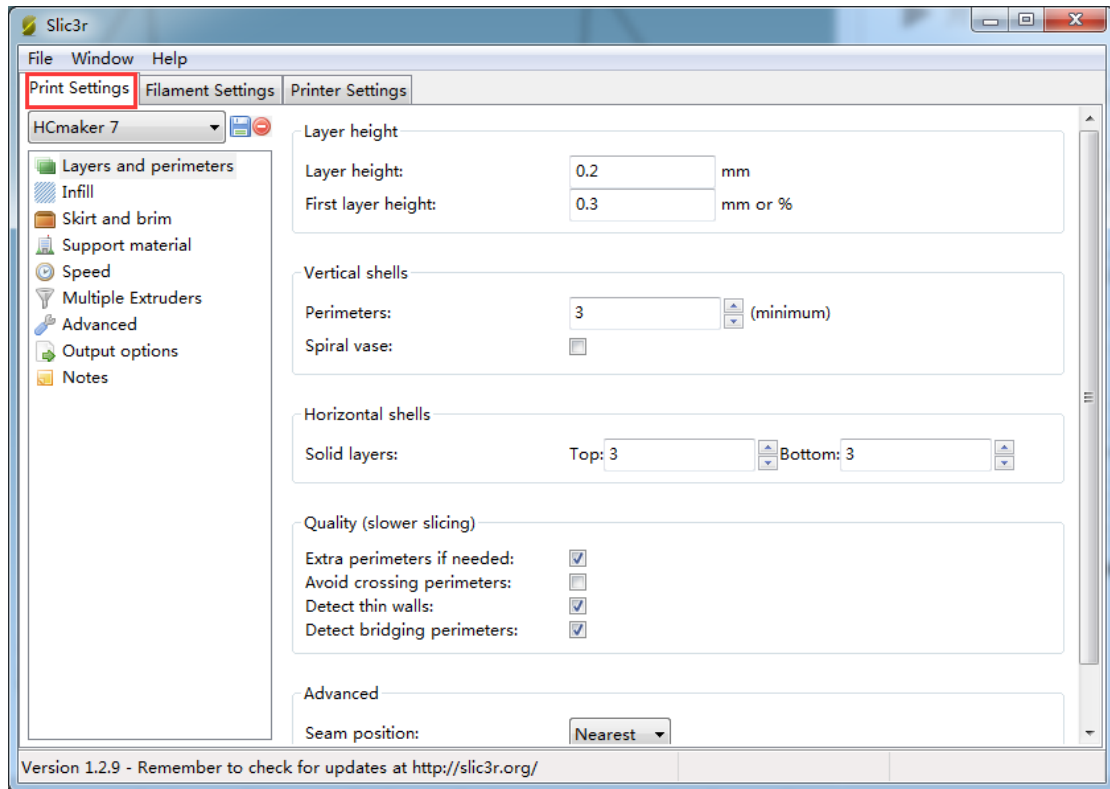
Saved, Close the settings window, Slice setting finish !

## 5.4 Slic3r setting

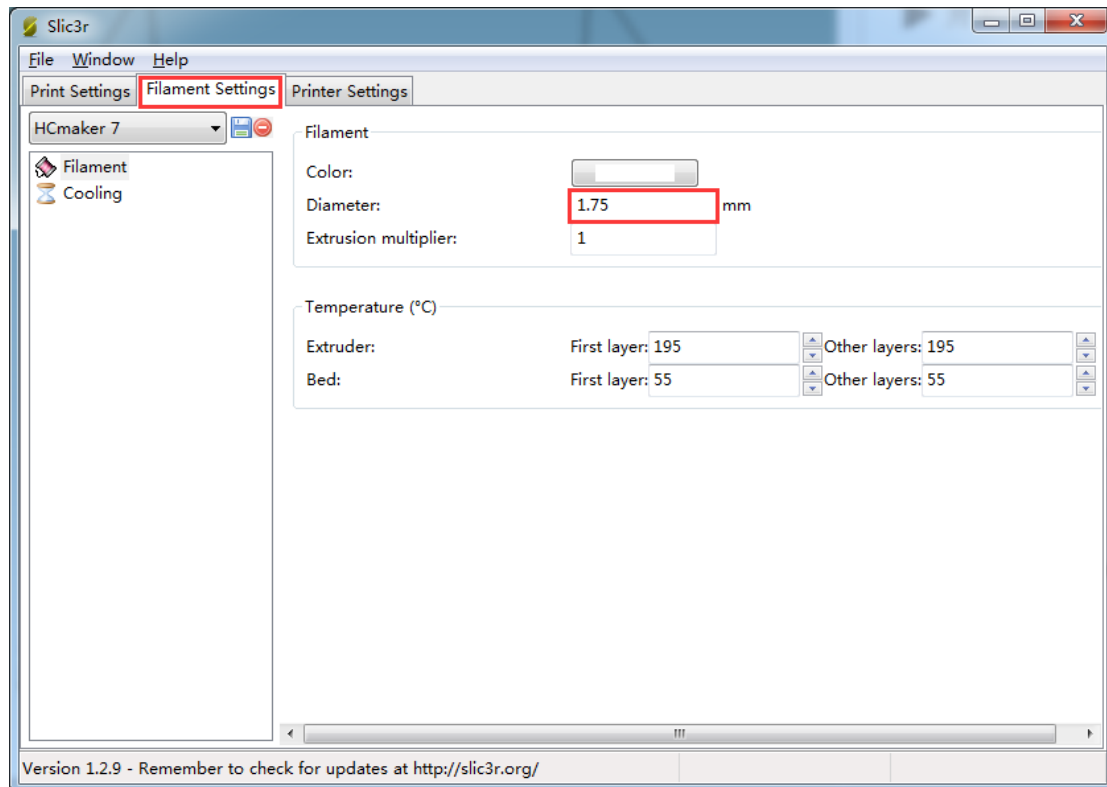
Slicing software basic configuration, here briefly introduces several important configuration (details please refer to SD card 7.slice resolution tutorial)Click slice configuration



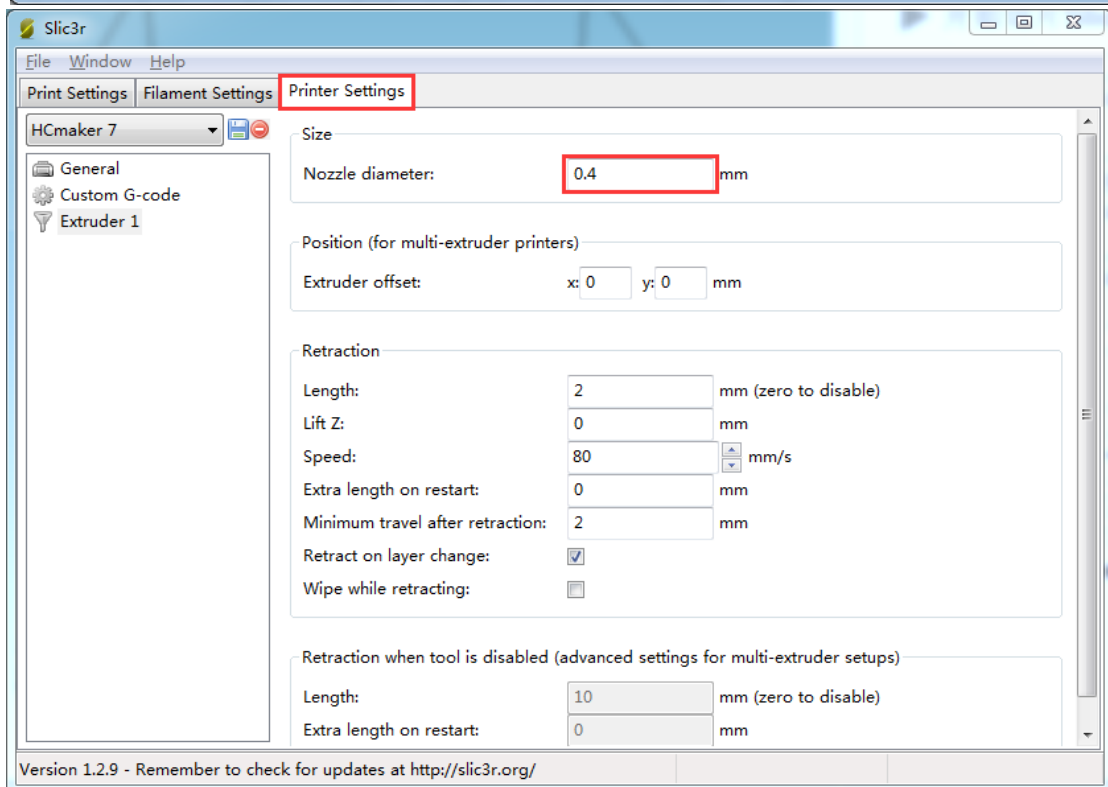
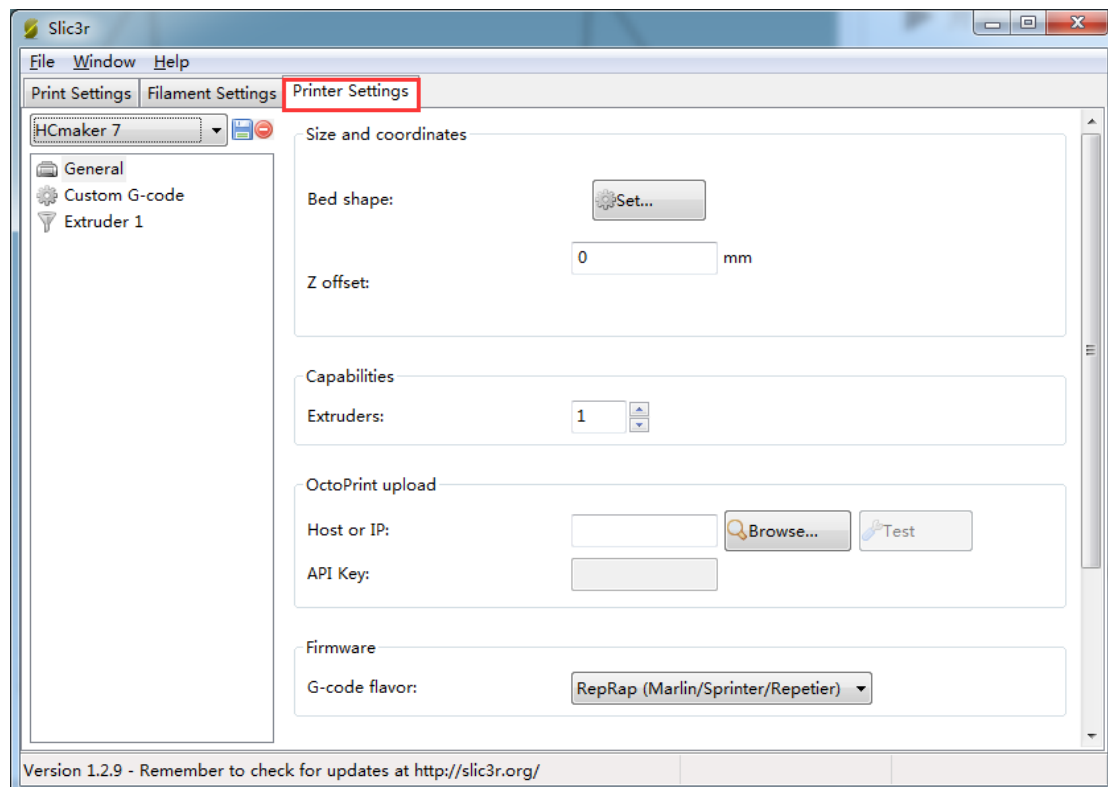
(2) Print Setting:



### (3) FilamentSetting:




### (4) Printer Settings:

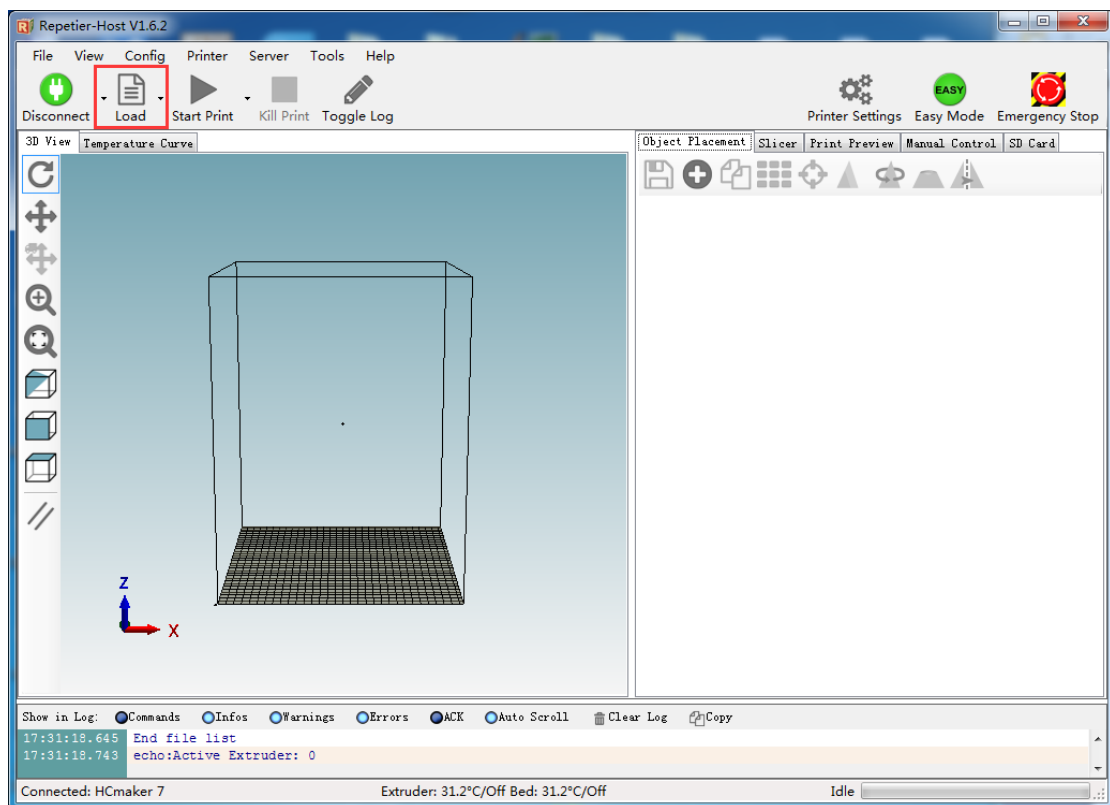


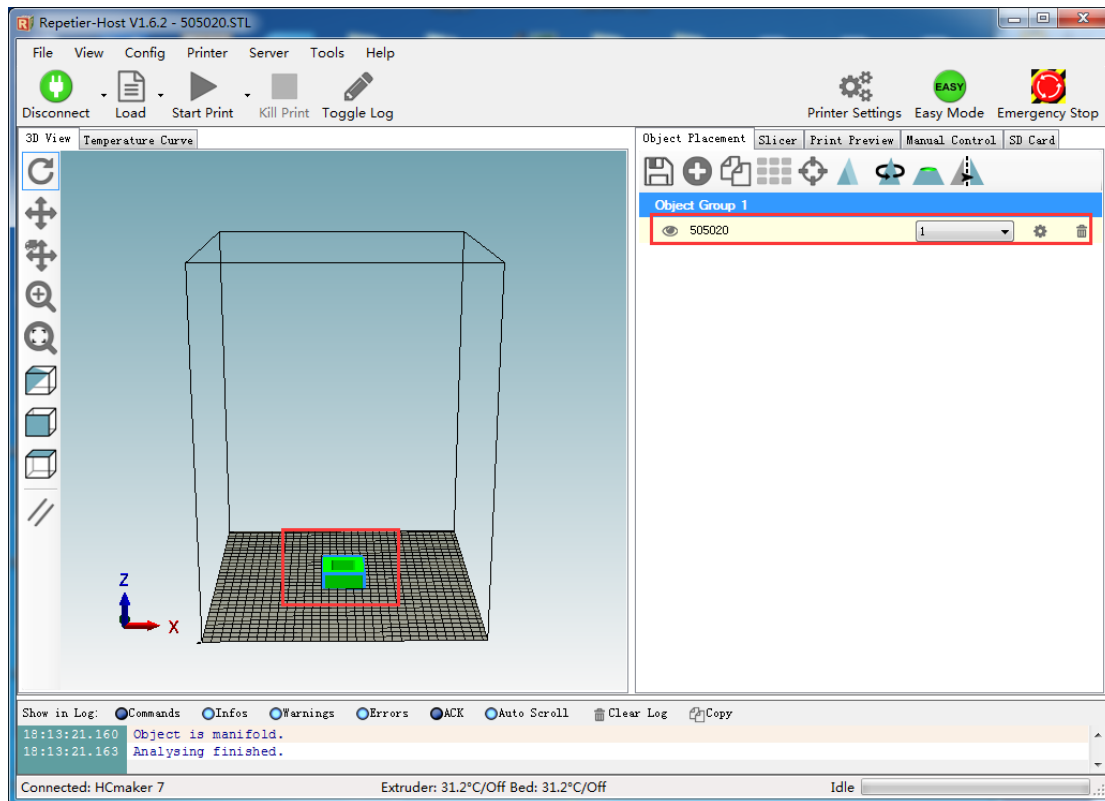
## 六、 Start printing

6.1 Get print model (common ways to download online and their own modeling, file formats, such as STL, AMF, etc.)

## 6.2 Model slice:

(1) Open the software , click "Load", selection model, click "Open", The model appears in the 3D window:





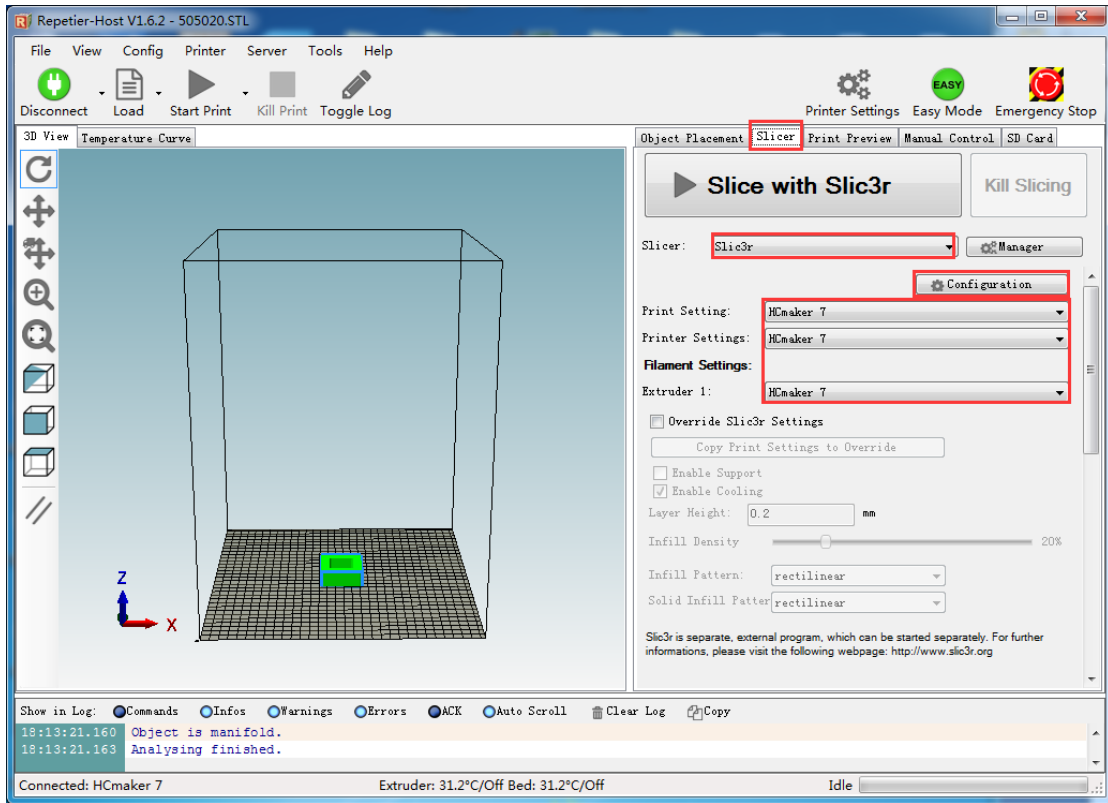
(2) Setting ADIMLab-gantry slice parameter:

click “Slicing software “button, select “Slic3r”

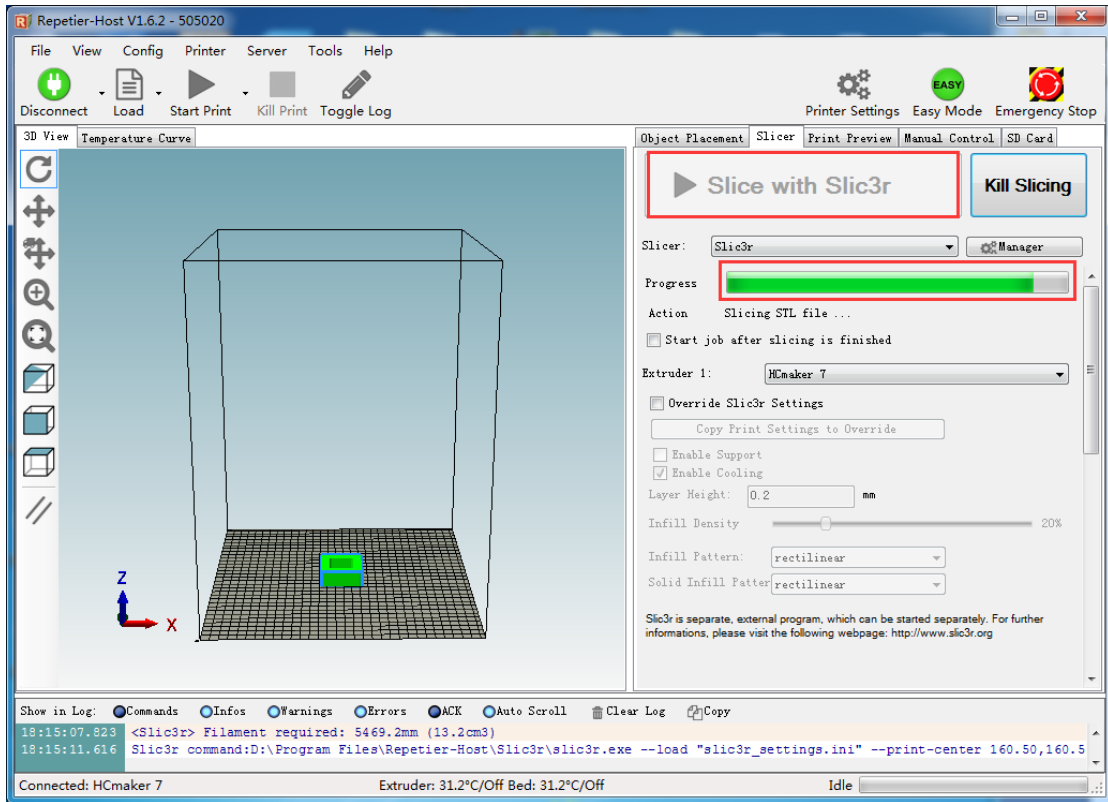
Print setting: select “HCmaker7”;

Printer setting: select “HCmaker7”;

Filament setting: select “HCmaker7”;

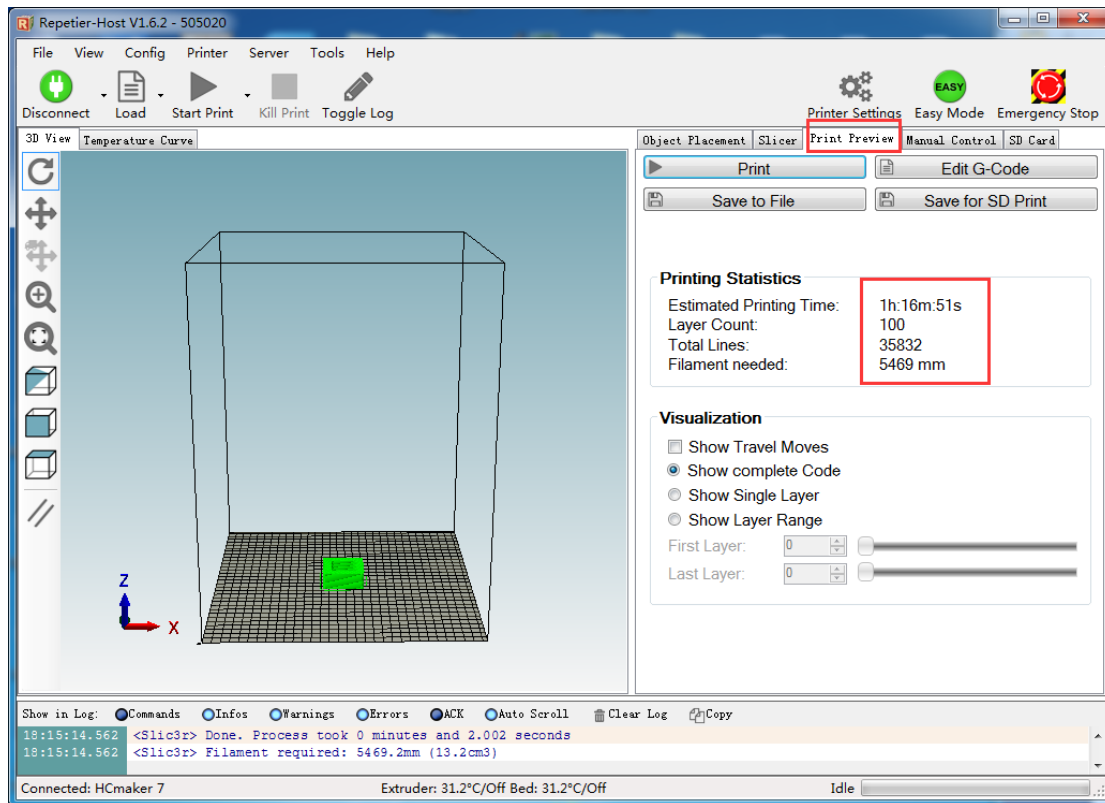


(3) Click “Slice with Slic3r” button:





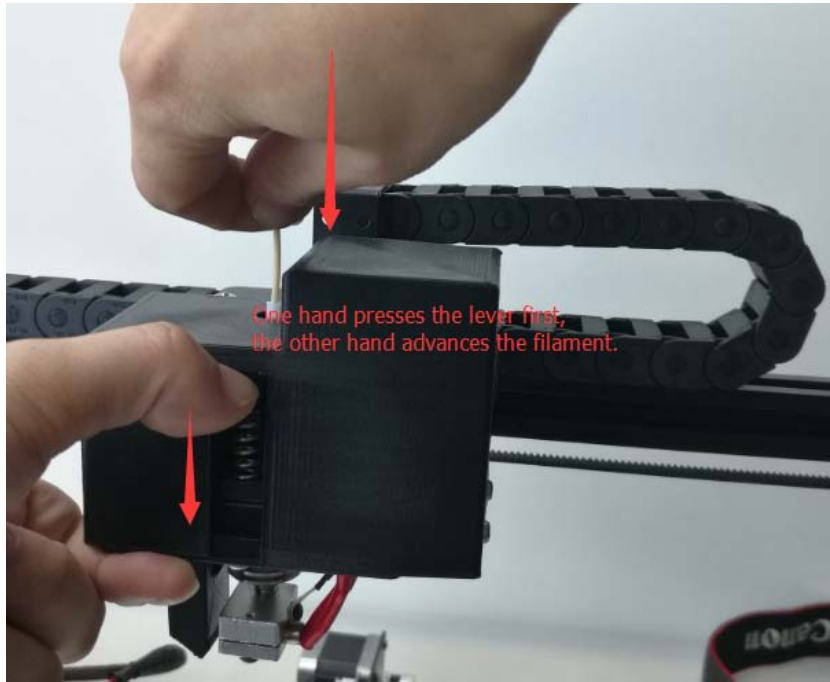
#### (4) Slicing completed:



### 6.3 Install filament:

One hand presses the lever first, the other hand advances the material.

Note: consumables head can not be larger than the wire diameter, front end straightened, easier to insert supplies, supplies need to push to the bottom.

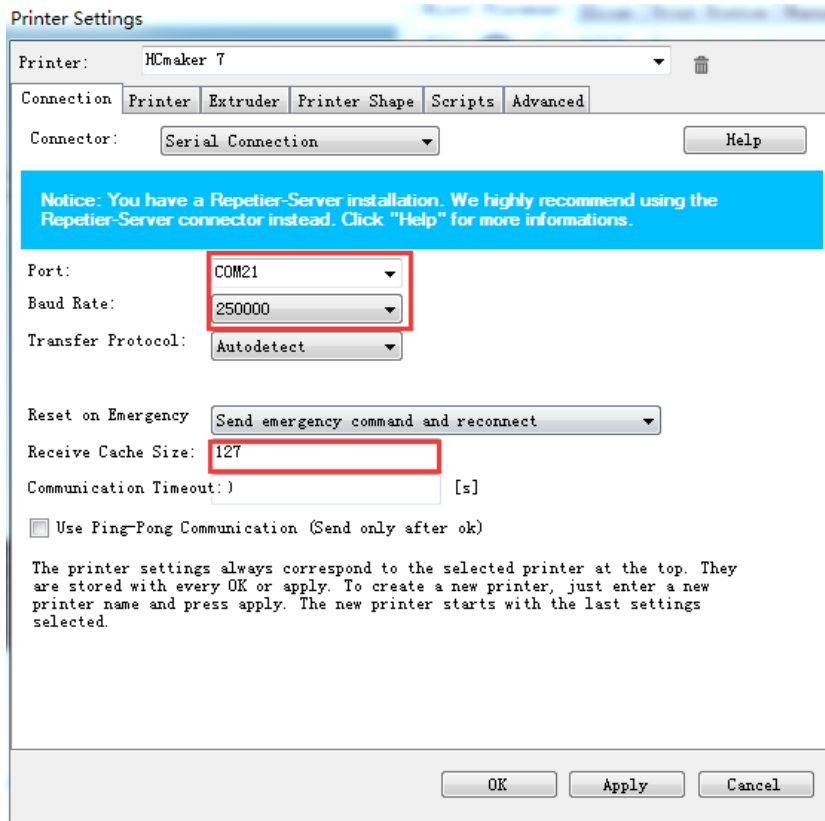


## 6. 4Choose print method: online print or SD card offline print

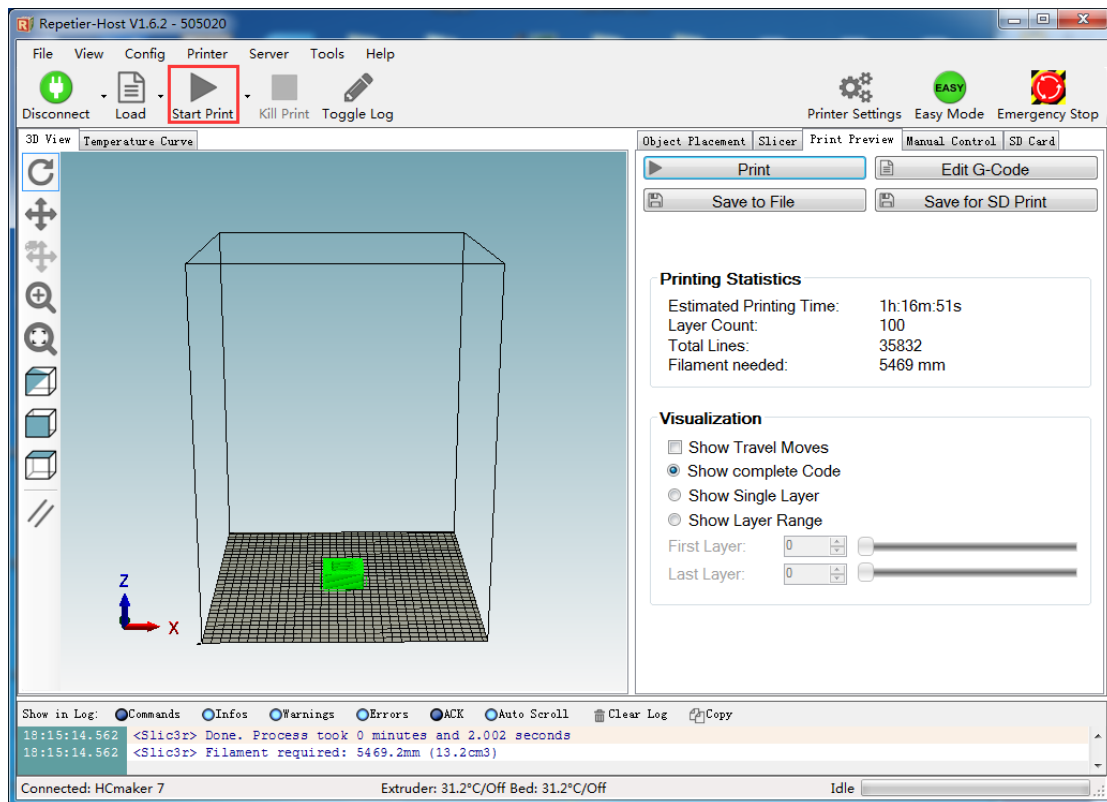
### **(recommended offline printing)**

6.4.1Online printing: (not recommended, easily affected by the computer)

(1) Use USB connect printer and computer, click “Printer Settings” , select “Connection” , In “Port” select(COM3), “Device Manager” click “Apply” 。

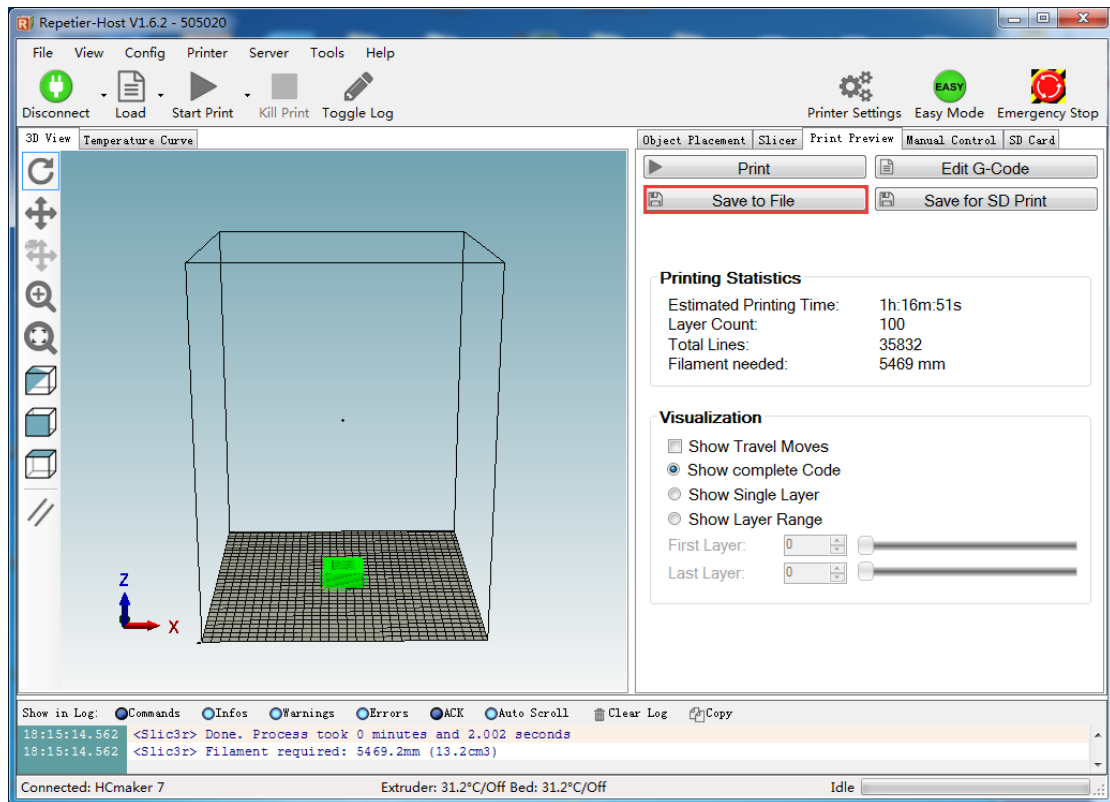


(2) Click “Connect”, become green, It mean succed, click “Start Print”, star printing:

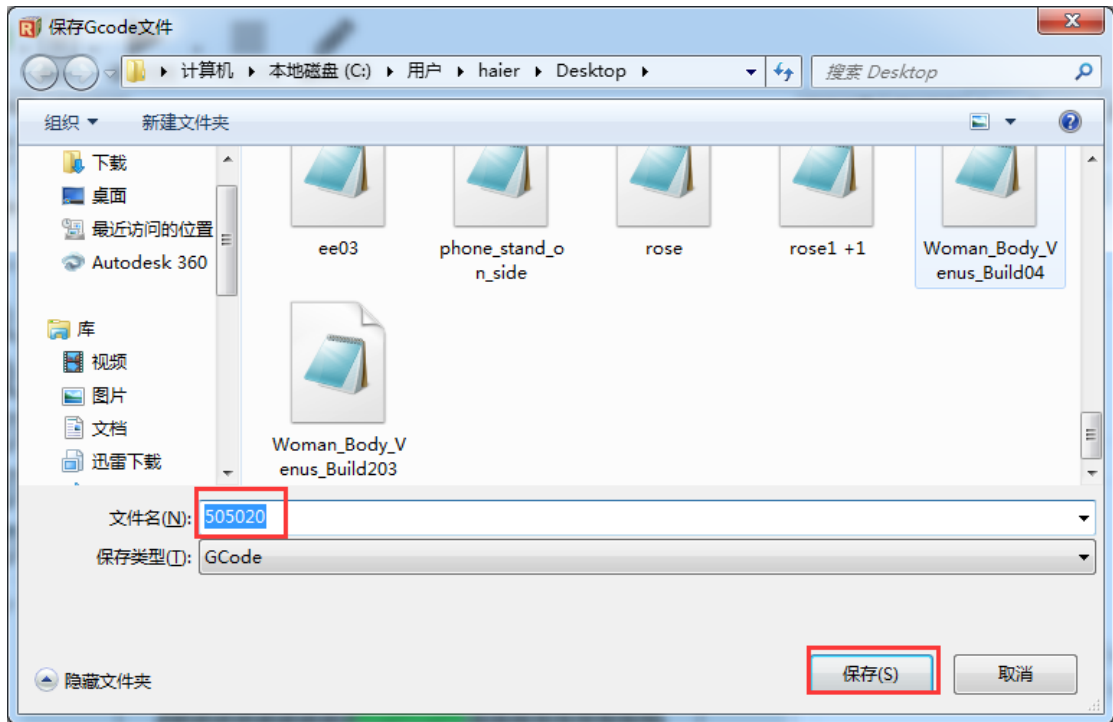


## 6.4.2 Offline printing:

(1) Save file (Note: file names need to be saved as English letters or numbers)



(Recommended to save the file to the computer first then copy it to the SD card.)



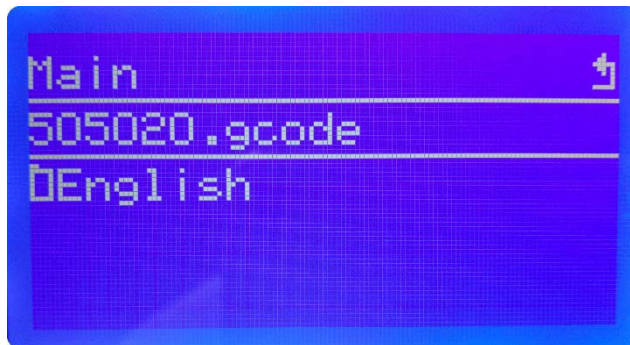
(2) Slice file copy to SD card, Plug in the printer:



(3) “Info screen” click button, select “Print from SD”, click ok:



(4) Select Slice file in Submenu, click ok:



(5) Printer need preheating , pls waite be patient:



(6) Preheating ok, star printing:



### 6.5 Printing finish, take the model:

After finish printing, waiting platform cooling, take the model (Lateral output makes it easier to remove the model) Observe, measure

## 七、Printer operating:

### 7.1 Replace filament:

Please refer to the following steps to standardize the operation

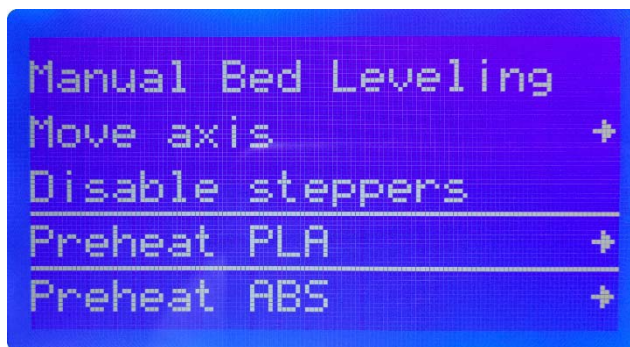
Note: need to be heated to the melting temperature of the printer

supplies replacement supplies (such as PLA need to be heated to 200 DEG C), and then press the lever supplies downward after a period of pull out, prevent the residual material supplies card to the channel, and print out material inserting effect. The ejector pin of the machine is used for dredging the runner.

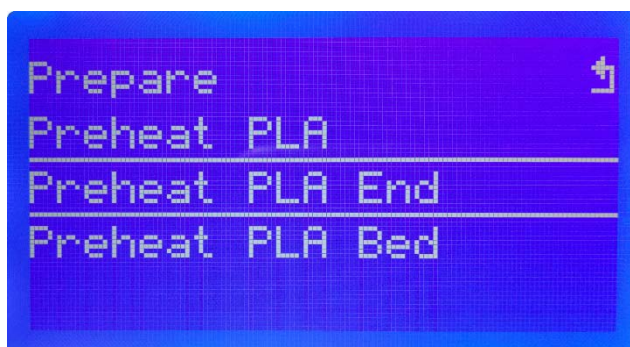
(1) “Info screen” Press the button, rotate the button, and select the ready



(2) Press the button, rotate the button, and select the ready

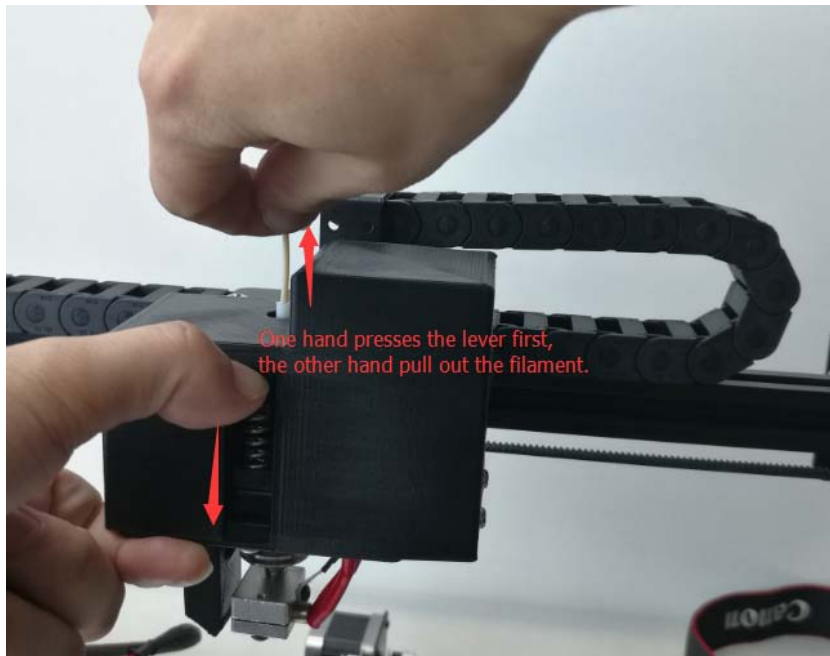


(3) Rotate the button, drop the menu, and select preheat PLA:



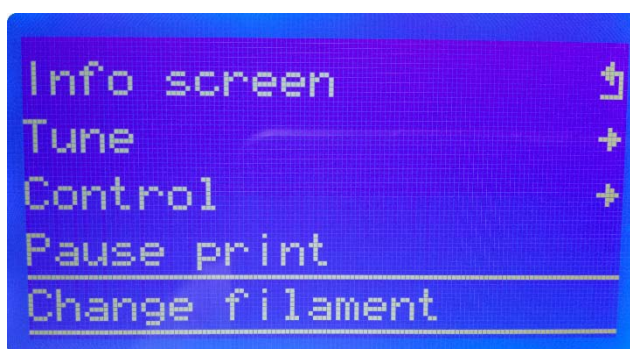


- (4) Preheat to a specified temperature (e.g., 195°C), Follow the steps below to replace filament.

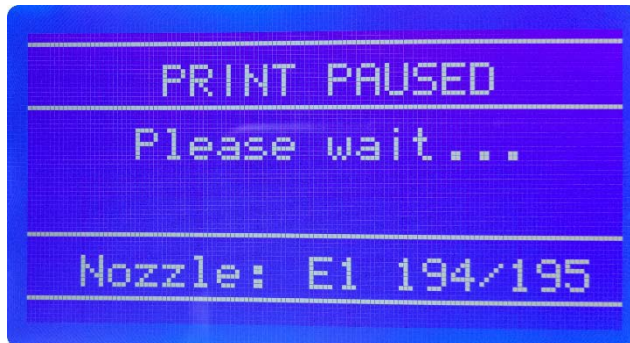


## 7.2 Replace filament during printing:

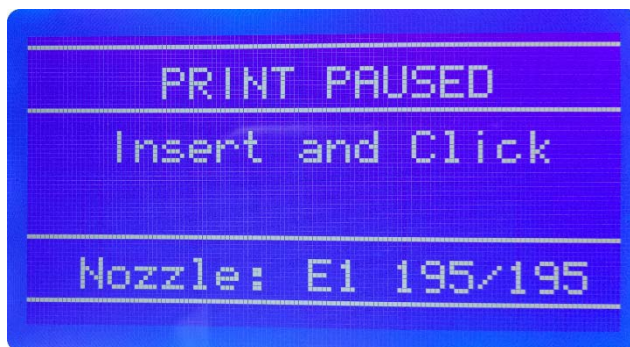
- (1) “Info screen” , select “Change filament” , click ok:



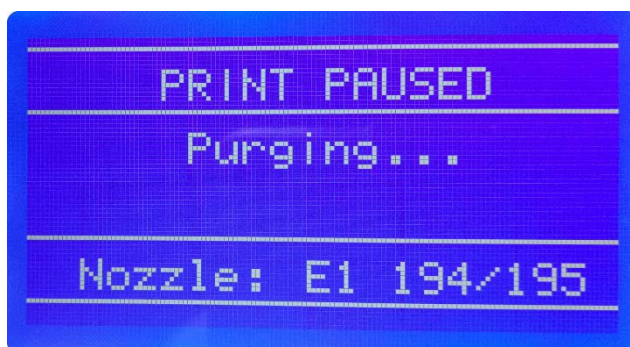
(2) Print paused, Nozzle move to the left-back position:



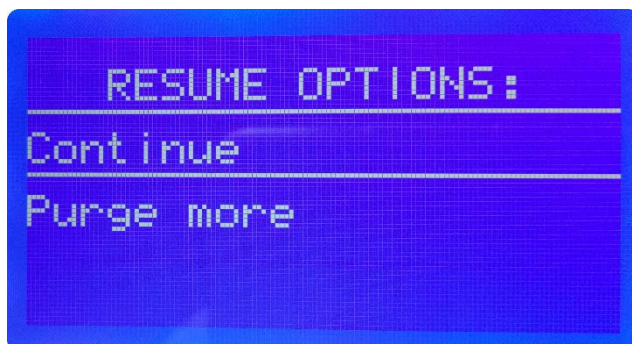
(3) Press the lever to push the filament down one step and pull it out, reinsert the new consumables, click:



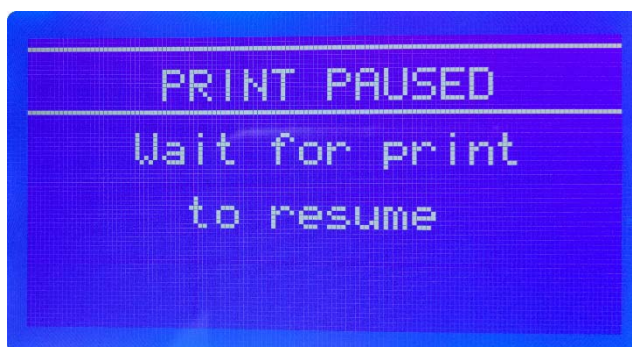
(4) Extruder automatically extrude a piece of filament.



(5) click “Continue” :



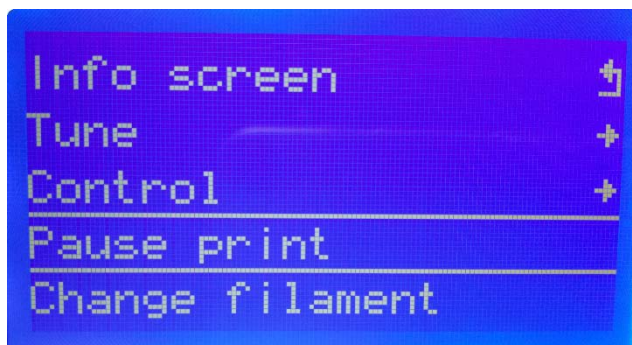
(6) Extruder back the printing position, continue printing:



### 7.3 Pause and resume printing:

#### 7.3.1 Pause printing:

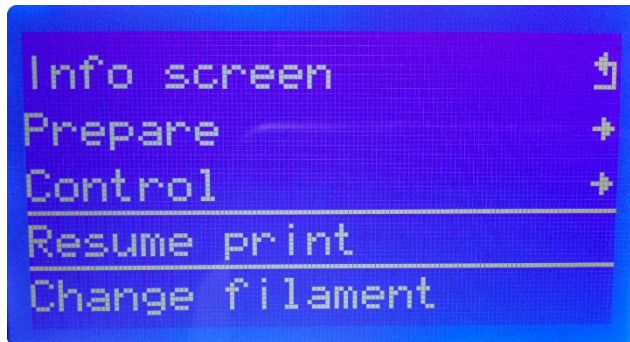
(1) “Info screen” click button, select “Pause print” ,click:



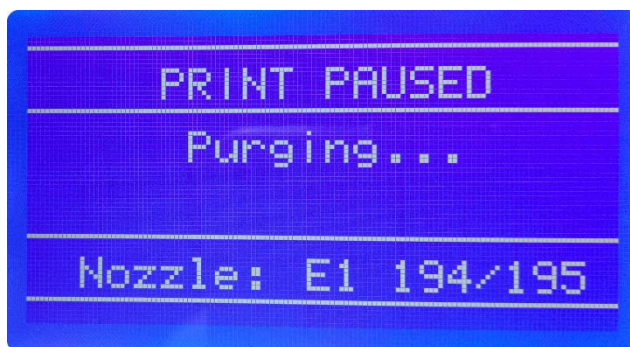
(2) Pause printing, Extruder moves to the left-back position.

### 7.3.2 Resume printing:

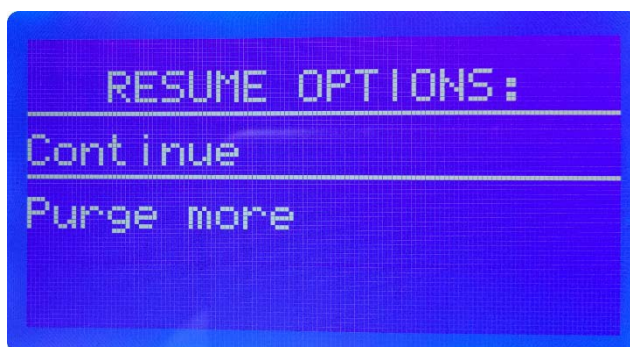
- (1) “Info screen” click, select “Resume print”, click ok:



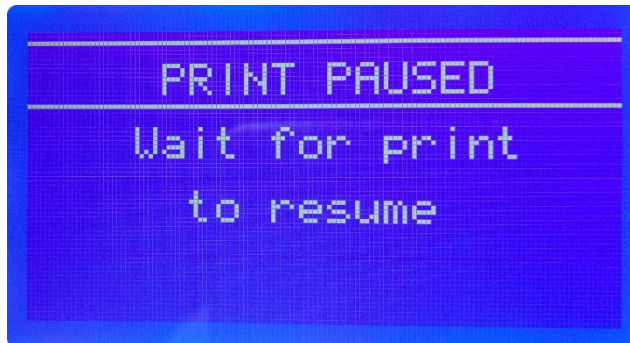
- (2) Extruder automatically extrudes a piece of filament:



- (3) click “Continue” :

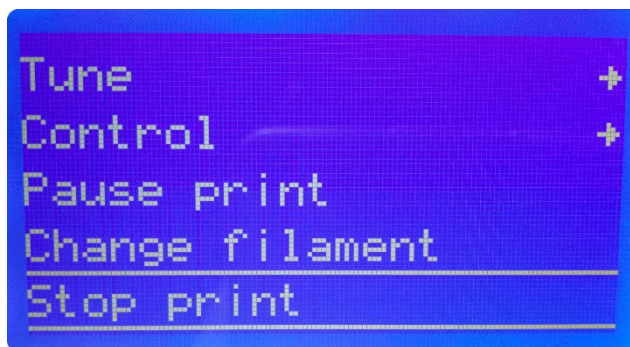


(4) Extruder back the position and continues printing:



#### 7.4 Stop printing:

(1) “Info screen” click, select “Stop print” ,click ok:

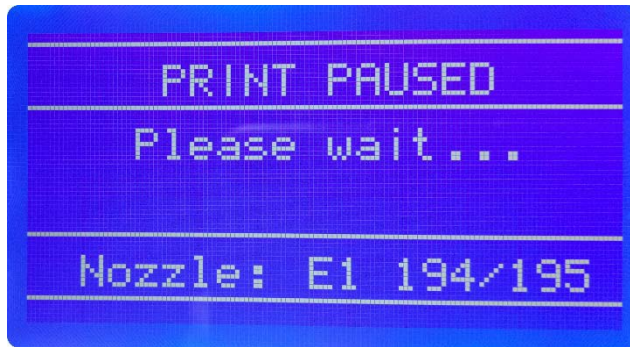


(2) “Info screen” show “Print aborted”

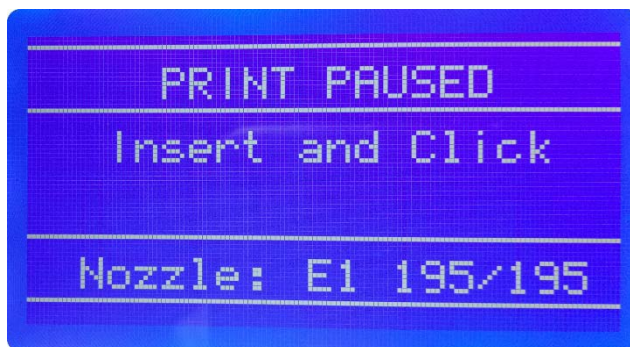


#### 7.5 Filament detector:

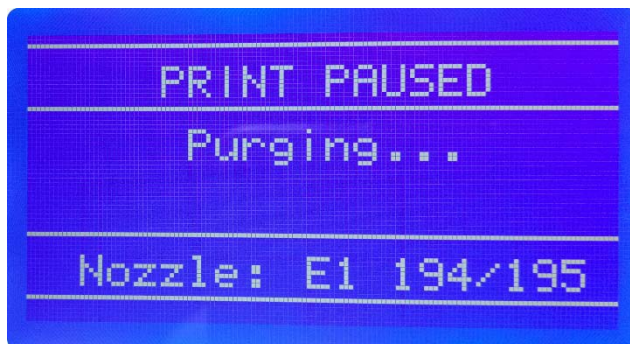
(1)The filament detector module detect filament discontinued or filament run out, printing pause waiting, The extruder moves to the left-back position:



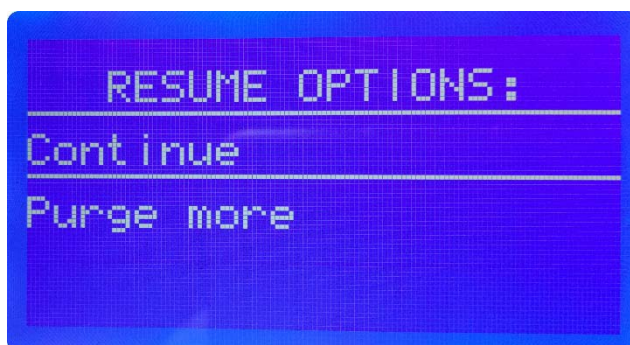
- (2) Press the lever to push the filament down one step and pull it out, reinsert the new filament, and click



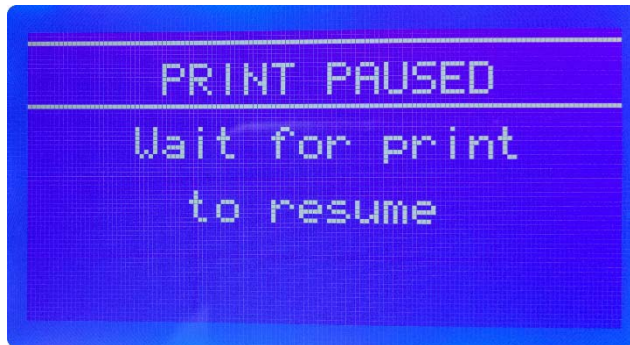
- (3) Extruder automatically extrudes a piece of filament:



- (4) Click "Continue" menu:

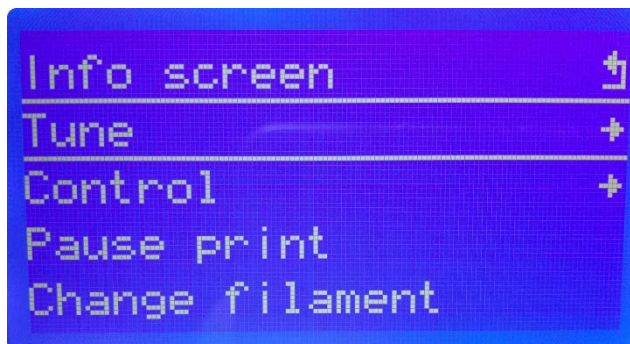


(5) Extruder back the printing position and continues printing:

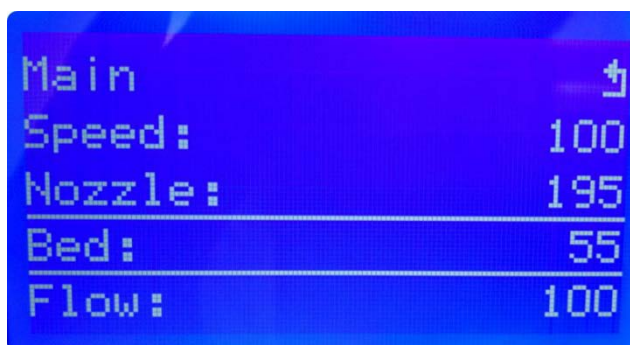
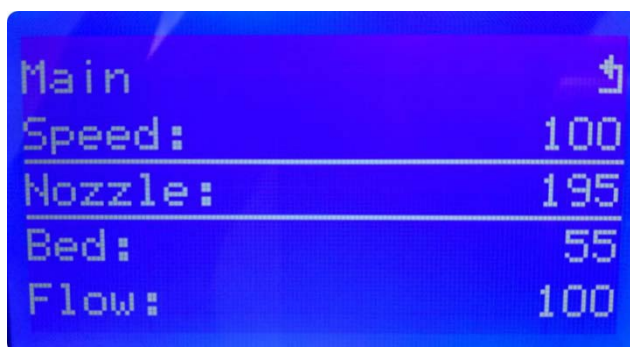


## 7.6 Adjust printing temperature :

(1) “Info screen” click, select “tune”, click ok:



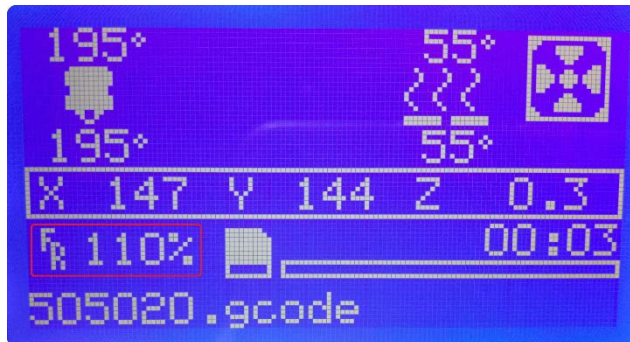
(2) Select “Nozzle” or “Bed” in Submenu, click ok



(3) Setting nozzle or hotbed temperature, click ok

## 7.7 Adjust printing speed:

(1) “Info screen” rotate the knob, adjust speed:



## 8, Problem Solutions

### 8.1 Analysis common problem:

(Please reference SD card file “9.Analysis common problem [FAQ](#)”

“[Common problem solutions](#)” )

### 8.2 Protect heating:

(Please reference SD card file “9.Analysis common problem” “Protect heating” )



## 9 Support and service

Our all the staff will by your side all the time and we are happy to solve any problems you encountered in the use of ADIMLab-gantry process. If you can't find the answer from the user's guide or technical card, you can enter into our official website to search for the solution, by the way, you can contact us by phone or facebook group. You can contact the maintenance team of the buildup team on Monday through Friday from 8:30 a.m. to 6:00 p.m. by Skype(**ADIMLab 3D Printer**) and facebook to solve the problem for you. If you happen to contact us at work hours, we will give you feedback at the first day of the next working day, and we will be very sorry for the inconvenience.

Technical data:

1. Control software Repetier-Host installation and introduction
2. Full resolution liquid crystal display
3. Analysis of common problems FAQ
4. Slice resolution
5. Routine maintenance and maintenance of machines

The end

Youtube video:

Our channel: ADIMLab 3D Printer