

ME CREATOR 2

Desktop 3D Printer

— USER MANUAL —



TERMS

Please be advised of the following terms (the “Terms”) regarding this User Manual (this “Manual”):

All information in this Manual is subject to change at any time without notice and is provided for convenience purposes only. Geeetech reserves the right to modify or revise this Manual in its sole discretion and at any time. You agree to be bound by any modifications and/or revisions. Contact the Geeetech Support Team for up-to-date information.

DISCLAIMERS

Neither Geeetech nor any of our affiliates warrants the accuracy or completeness of the information, products, or services provided by or through this Manual, which are provided “as is” and without any express or implied warranties of any kind, including warranties of merchantability, fitness for a particular purpose, or non-infringement of intellectual property. To the fullest extent permissible by the applicable law, we hereby disclaim all liability for product defect or failure or for claims that are due to normal wear, product misuse or abuse, product modification, improper product selection, noncompliance with any codes, or misappropriation. To the fullest extent permissible by the applicable law, we hereby disclaim any and all responsibility, risk, liability, and damages arising out of death or personal injury resulting from assembly or operation of our products. Geeetech assumes no responsibility, nor will be liable, for any damages to, or any viruses or malware that may infect, your computer, telecommunication equipment, or other property caused by or arising from your downloading of any information or materials related to Geeetech products.

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SAFETY INSTRUCTION

Do read all the instructions and cautionary markings in this manual before operating your Me Creator.



Me Creator2 printers contain heated moving parts. Never reach inside the printer while it is in operation or before it has cooled down.



Never leave your Me Creator2 printer unattended while powered on or printing.



Disconnect your Me Creator printer from the power supply and computer when not in use.



Do not print using materials that have not been approved by GEEETECH for use with the MeCreator2.



Only operate your Me Creator printer in a well-ventilated space away from moisture and heat sources with a working smoke/fire alarm.

ABOUT MECREATOR2

MeCreator2 makes solid, three-dimensional objects out of melted Filament such as PLA or ABS. First, use software to translate 3D design files into instructions for the MeCreator2. Then transfer those instructions to the MeCreator2 via USB drive, USB cable. The MeCreator2 will melt filament such as PLA or ABS and squeeze it out onto the build plate in thin lines to build your object layer by layer. This method of 3D printing is called fused deposition modeling(FDM).

MeCreator 2 is our new desktop 3D printer with half-opened and box-type design and 160x160x160mm building volume. It is optimized and improved based on the previous MeCreator, bringing MeCreator 2 with more exciting features.

Like MeCreator, MeCreator 2 will be delivered after assembly as well, which saves you from the trouble of assembling. Get a MeCreator 2 now, and welcome to the wonderful world of 3D printing!



1 Extruder 2 Y Axis Motor 3 X Axis Motor 4 building platform 5 heat bed



6. LCD 2004 screen

7. Reset button

8. knob

9. USB port

10.power input port

11.power switch



PREPARING WORK

1. Opening

Step1. Open the box, taking out the foam box containing your MeCreator 2.



Step 2 Remove the Me Creator 2 from foam box and set it down on a stable surface.



Step3 Remove the zip tie that prevent the extruder from moving during shipping.



2. Checking accessories



Filament holder



Filament spool



Tape



Power cord



USB A-B cable



Starter filament

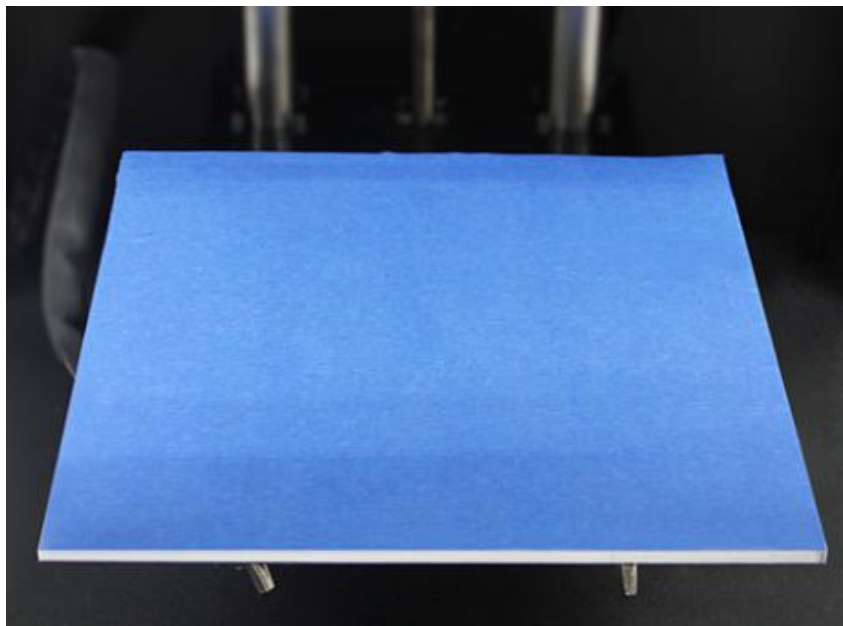
3. Assemble the filament holder

Assemble the filament holder together with the M3 bolt and nut.



4. Paste the tape

Peel off the back of the tape and past it on the building platform smoothly. Make sure the platform is completely covered.



1. Check Power Supply

The power supply unit and control board of Me Creator 2 are installed in the bottom of the printer, saving space, as well as lowering the gravity center of the printer to provide stable support for printing. The printer uses DC12V, 29A power supply, choose 110V or 220V according to national power using standard. Please make sure that the voltage of the power supply conforms to current national power using standard. You can check the power identifier on the shell of the printer to confirm it.

2. Software Resources

2.1 Repetier-Host

The Repetier-Host is a simple to use host software, which is be compatible with most firmwares around. You can add and position your STL files on the simulated print bed and slice them all together. For slicing you can use the built-in Slic3r slicer . Just call "Slice & Load" and the job gets delegated to the current slicer, showing its output in the log window.

Download the [Repetier host V 1.6.0 here](#).

For detailed information of Repetier Host please refer to our [wiki](#).

For detailed using methods of the slicing software, slic3r, which comes with Repetier Host, please also refer to our [wiki](#).

2.2 Arduino IDE

The open-source Arduino Software (IDE) makes it easy to write code and upload it to the board. It runs on Windows, Mac OS X, and Linux. The environment is written in Java and based on Processing and other open-source software.

This software can be used with any Arduino board.

Download [Arduino-1.0.1- here](#).

2.3 Firmware

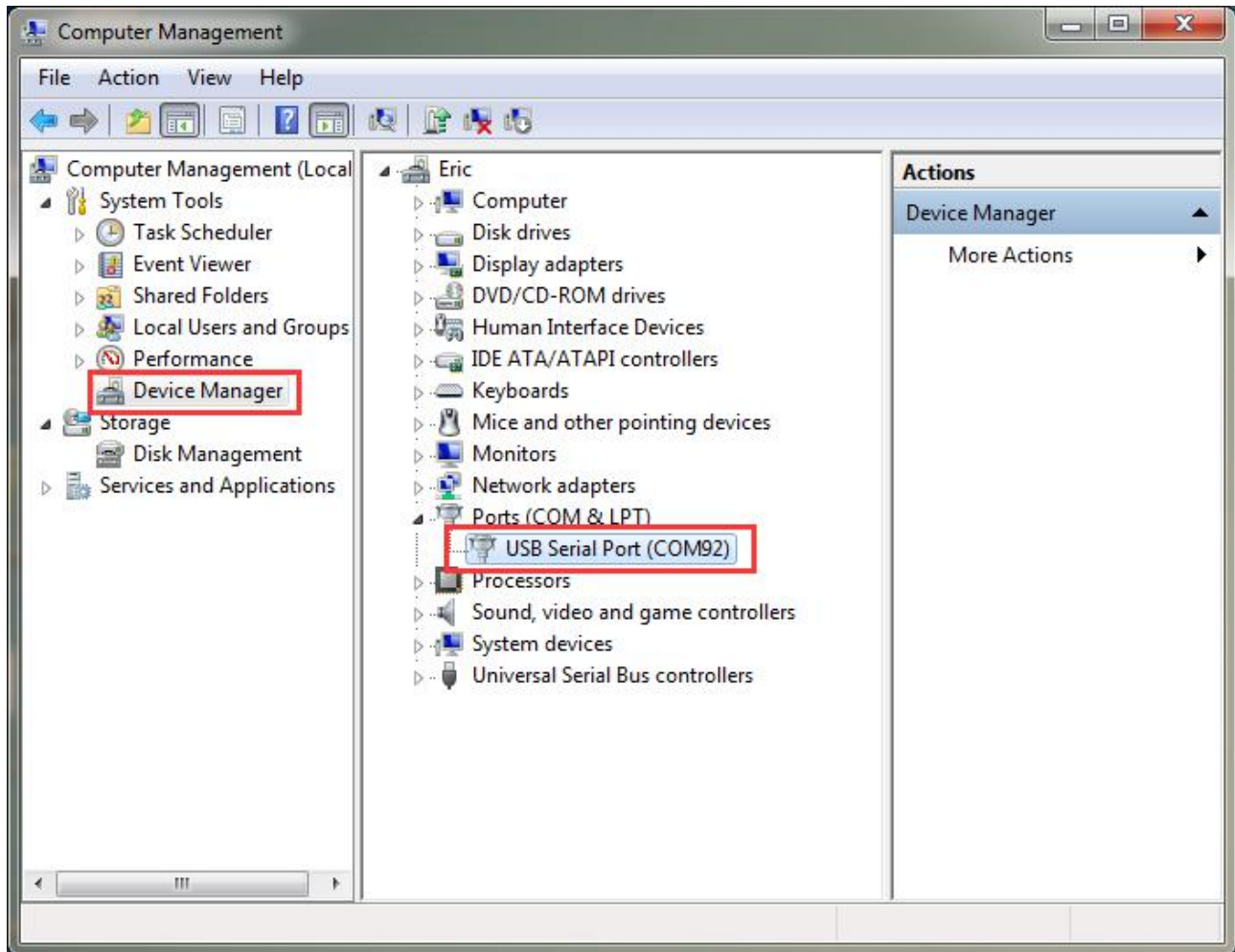
MeCreator 2 uses GT2560 control board, you can download the corresponding firmware [here](#).

To know how to upload the firmware, [please refer to FAQ](#).

3 USB Driver Installation

3.1 USB Driver Installation for Win7 OS

Power the MeCreator 2 up and connect it to computer with the USB cable, the driver will be installed automatically. After installation, please enter Device manager and find the USB Serial Port which is the communication port for the printer and computer.



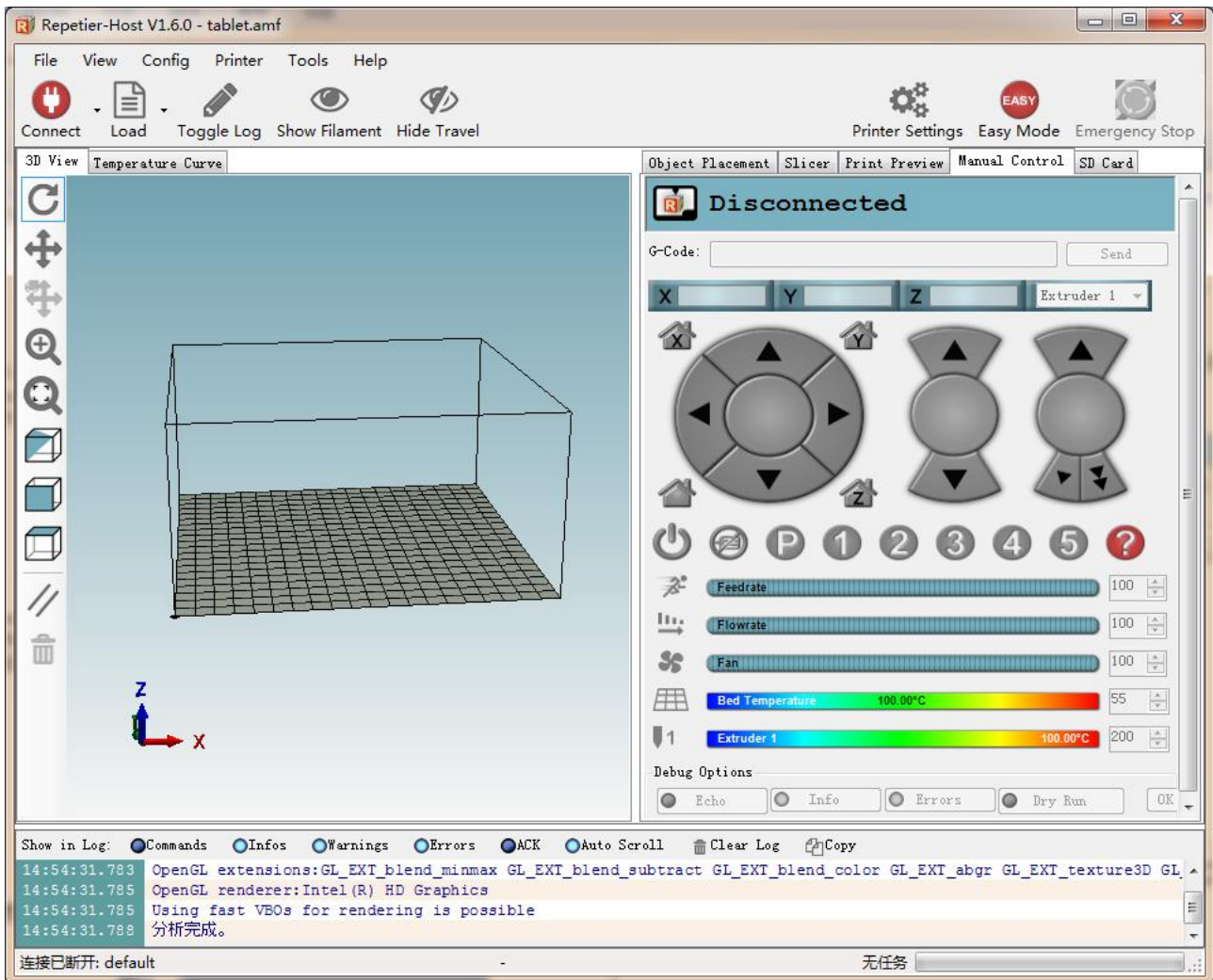
If the driver can not be automatically installed, please please download the [USB driver here](#) and manually install it.

3.2 USB Driver Installation for Mac OS

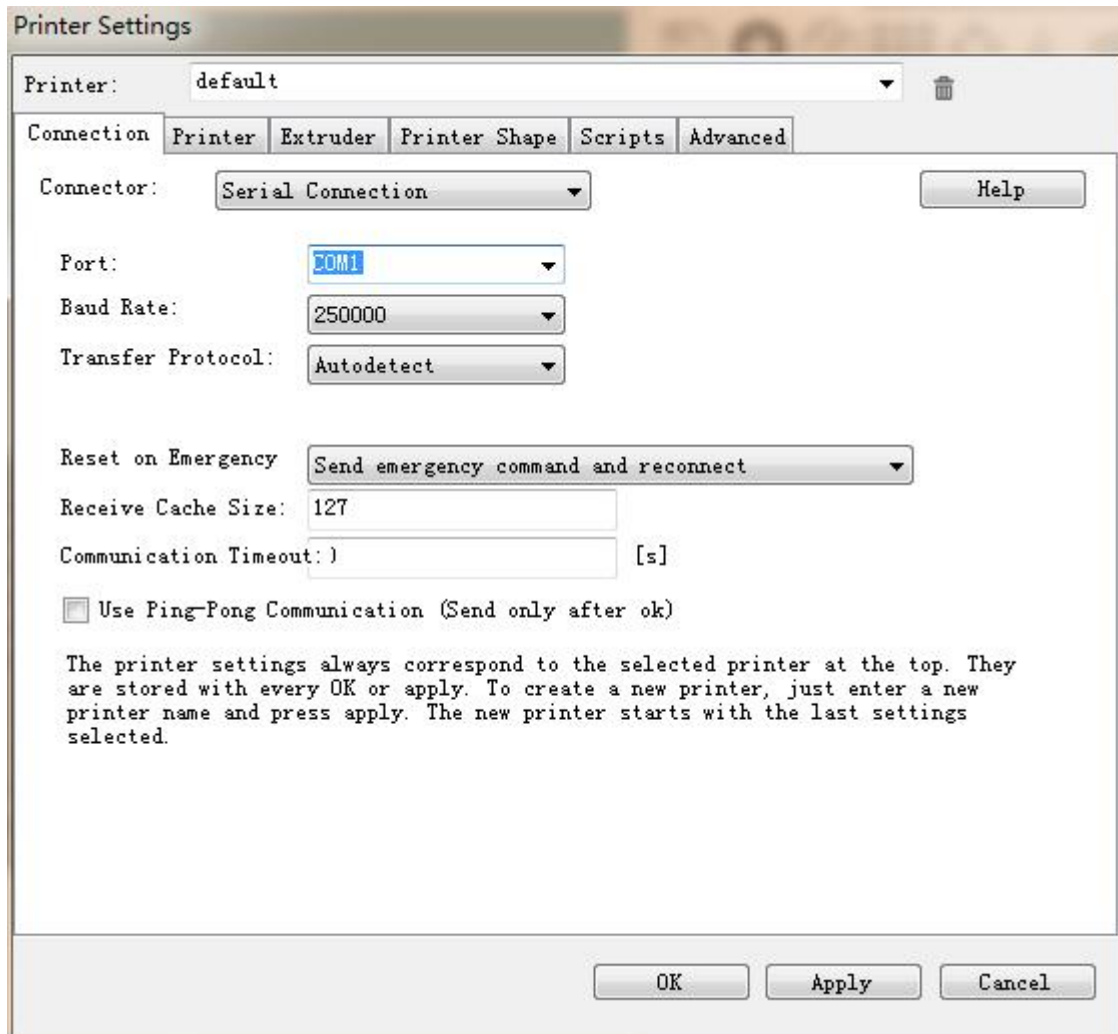
For installing the driver and uploading the firmware in Mac OS, [please refer to FAQ](#).

4. Set up Repetier Host

The next step should be, to configure your printer so you can connect your computer with the host. Open Repetier Host.

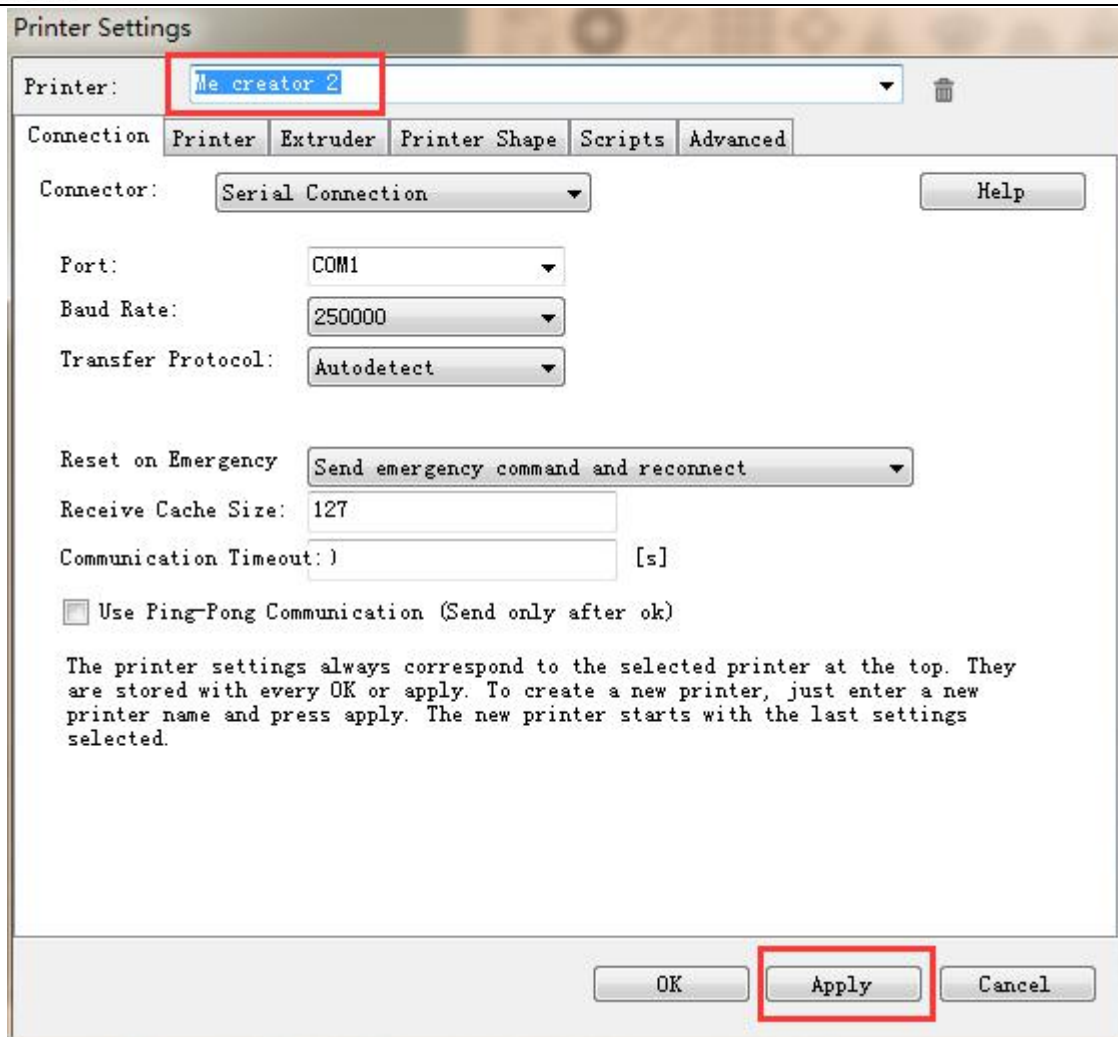


When you start Repetier Host for the first time, you need to set up parameters for MeCreator 2. Click the Printer Settings on the top right corner, you will be presented with the following window.



4.1 Create New Printer

At the top you see a drop down box, with the currently selected printer. At the start you have only the default printer. To create a new printer you only need to change the printer name and press “Apply” . The new printer will start with the same settings as the last selected printer.



There are six tags in Printer settings in total. Detailed configurations of the 4 relevant tags are as follow.

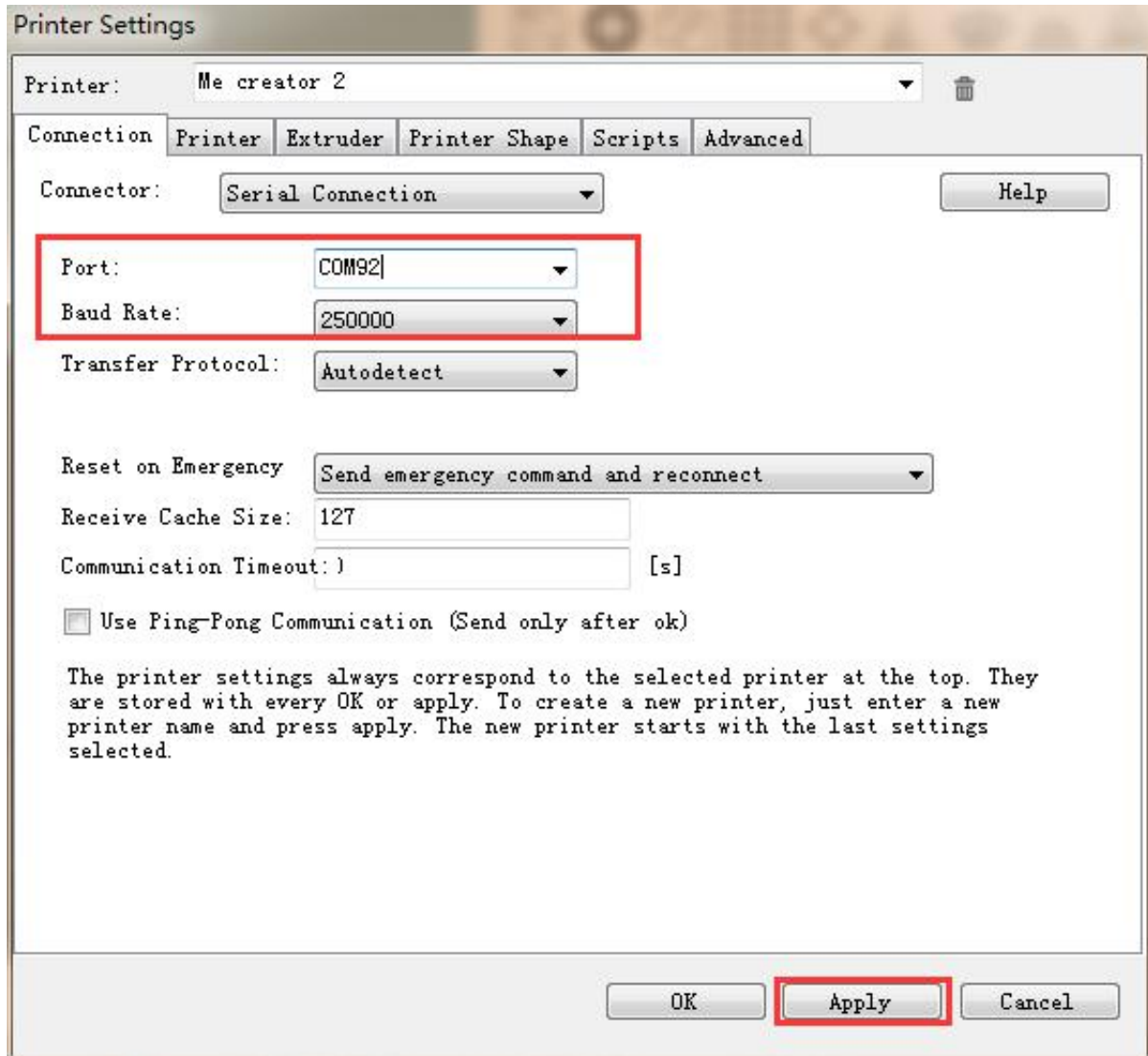
4.2 Connection

In this first tab, you set how to connect with your printer. In “Port” you select the port, where your printer is connected. At the opening of the window, all available ports were scanned and added to the list. If you connect your printer when this menu is already open, click “Refresh Ports” to detect the new port. Select the right one. Then select the baud rate entered into the firmware

Choose right Port and *Baud* Rate. For other parameters please leave them as default, and click Apply.

Port: Get the printer connected to the port of computer, which is corresponding to the USB Serial Port in the Device manager.

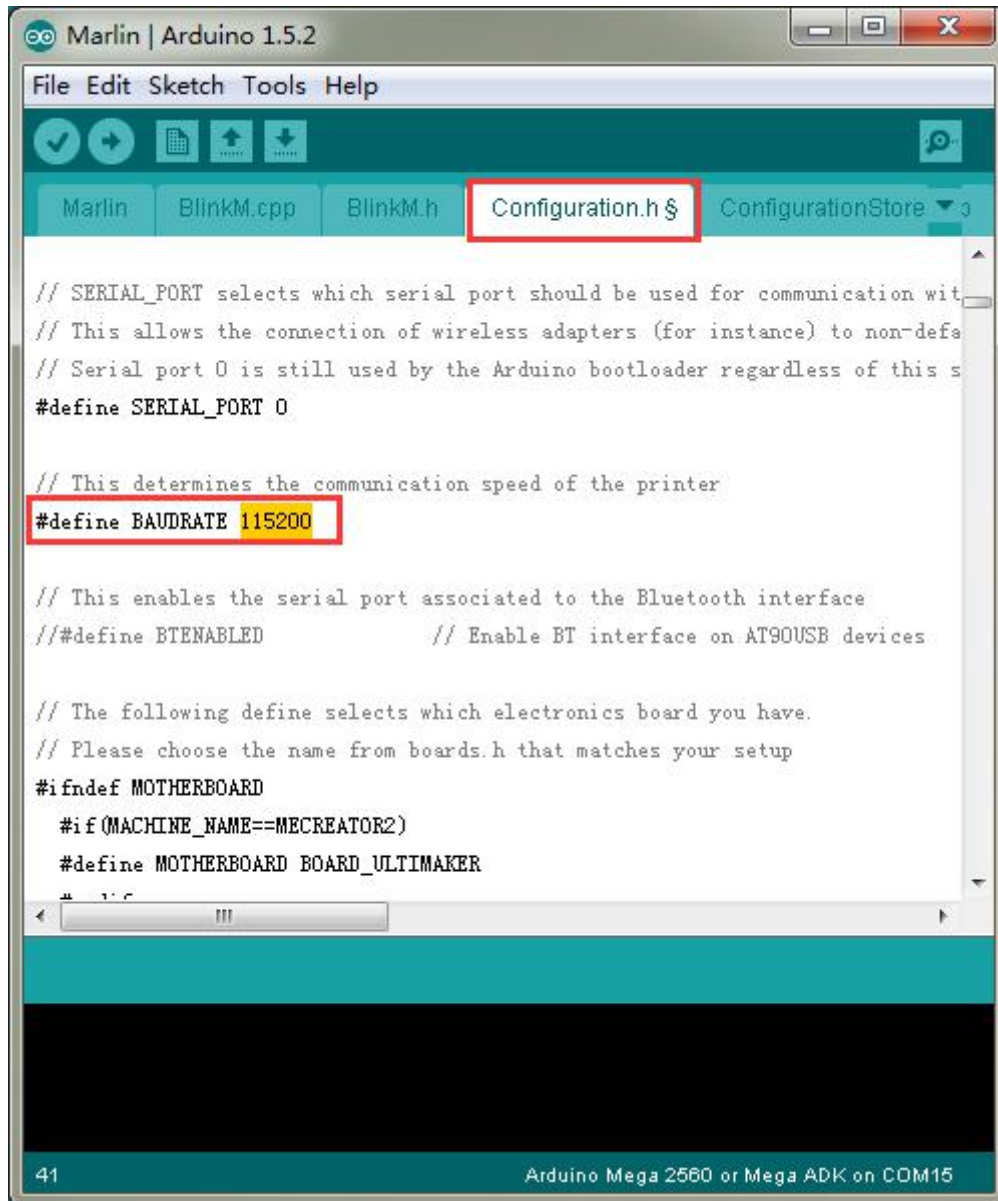
Baud Rate: Corresponding to the Baud Rate in firmware. Generally it is set as 250000.



Note: If the operating system is Mac OS, please set the baud rate of the firmware and Repetier Host as 115200.

Open the firmware in Arduino, and modify the baud rate to 115200 in *Configuration.h*. Shown as following picture.

After modification, re-upload the firmware:



After successfully modifying the baud rate in firmware, change the baud rate in Repetier-Host to 115200 as well.

About how to upload the firmware, [please refer to FAQ](#).

Note: After re-uploading the firmware, you may need readjust the motor direction of the printer. For detailed methods please refer to following [motor testing part](#).

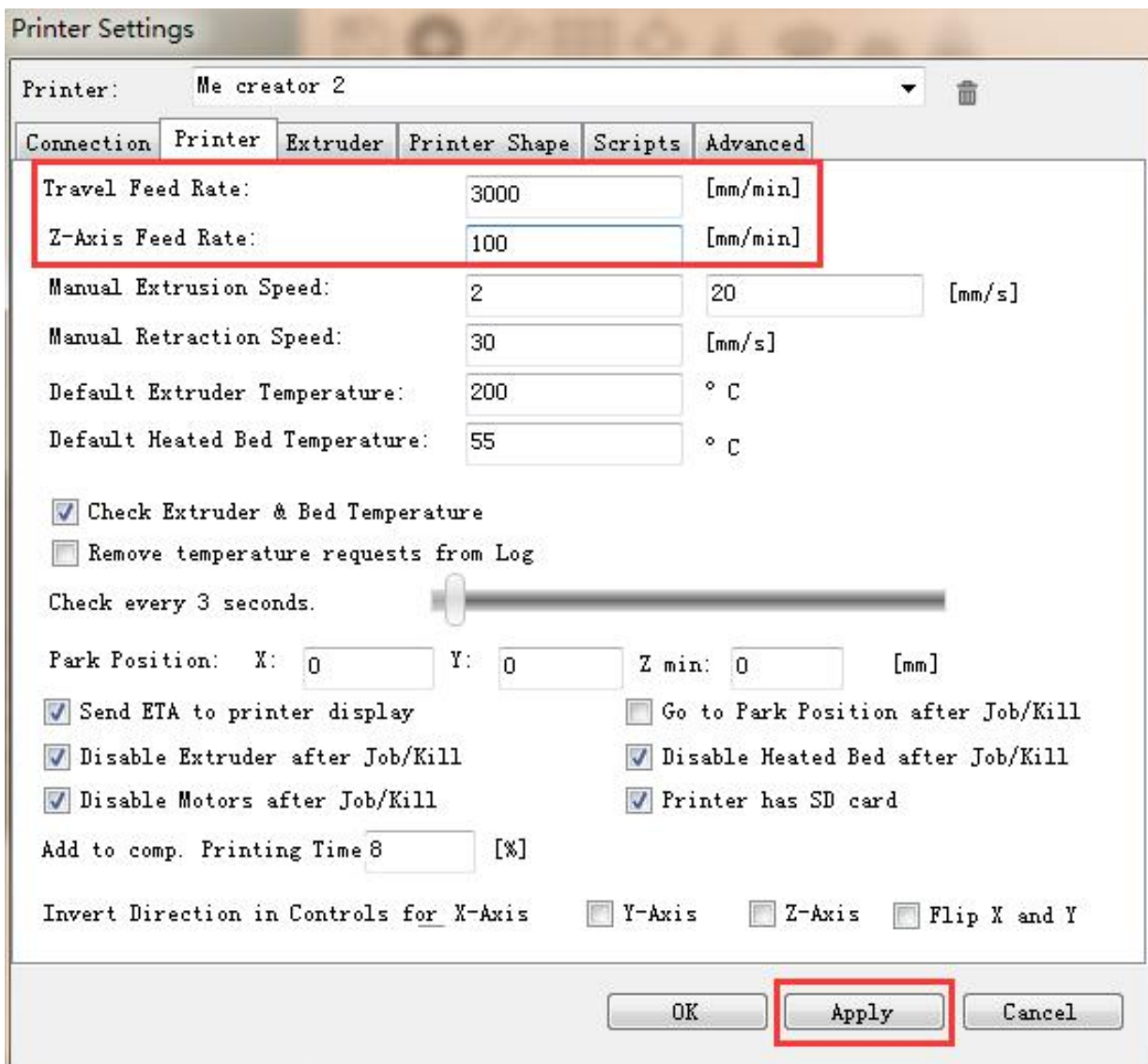
4.3 Printer

The second tab defines important behavior you want. The Travel feed rate and Z-axis feed rate are used, when you move the extruder with the manual controls. The temperatures are set in the manual controls as start values. You can change them there any time.

Set the parameters as shown in the picture

Travel Feed Rate: 3000 mm/min

Z-axis Feed Rate: 100mm/min



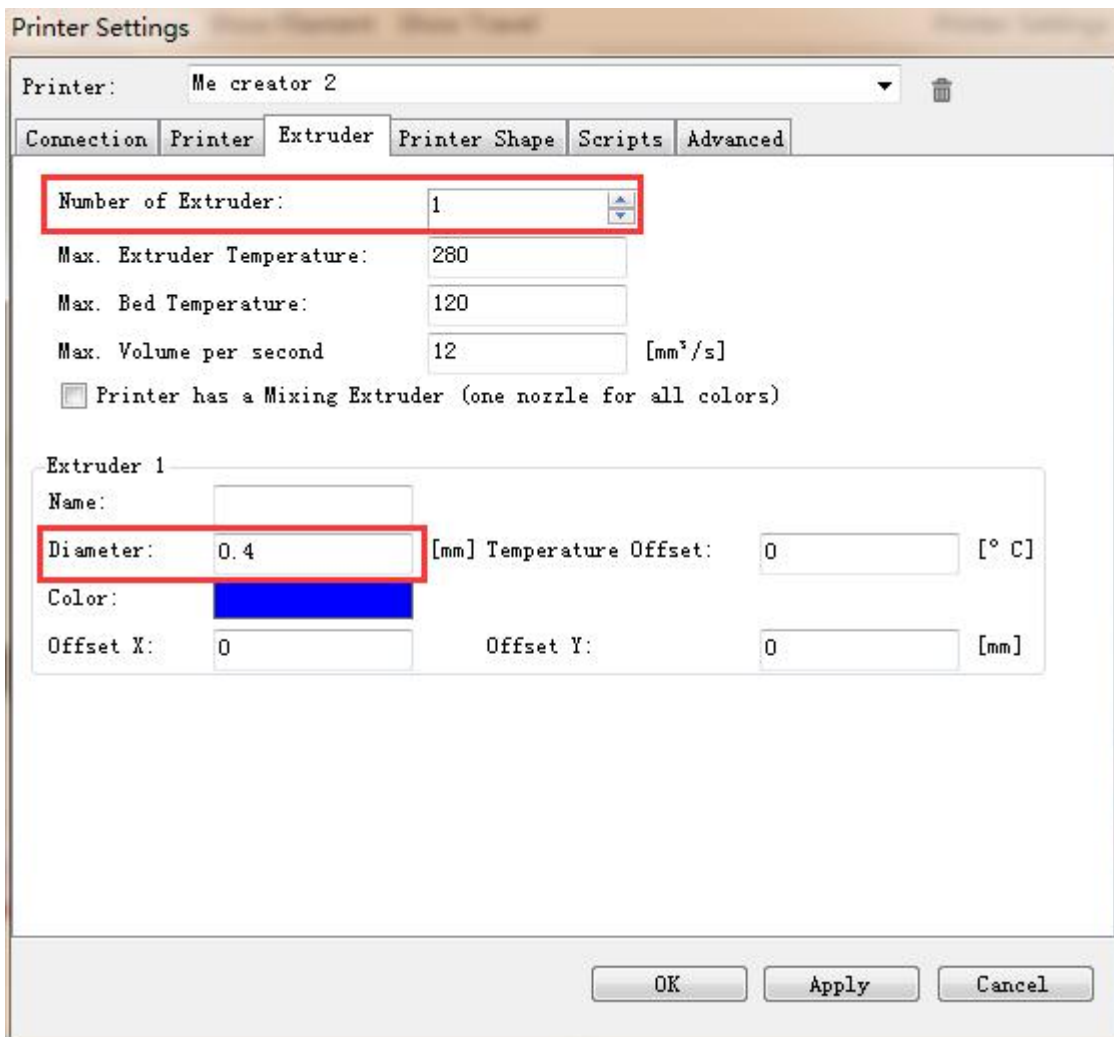
We suggest you to cancel the option of **Go to Park Position after Job/Kill**, or it may cause that the print head impacts the printed model when it moves to starting position after finishing printing.

4.4 Extruder

In the “Extruder” tab you can define the numbers of extruder, the max. temperatures, that are shown in the manual control. The max volume per second defines the maximum amount of filament in mm^3 , the extruder can melt per second.

Number of the extruder: 1

Number of the extruder: 0.4mm



4.5 Printer shape

The “Printer Shape” tab defines your printer shape, or to be more exact the shape of your build area. The host will use this to limit your moves and to check, if your models fit onto the print bed. You can also define the position of the x and y end stop.

Recommended settings:

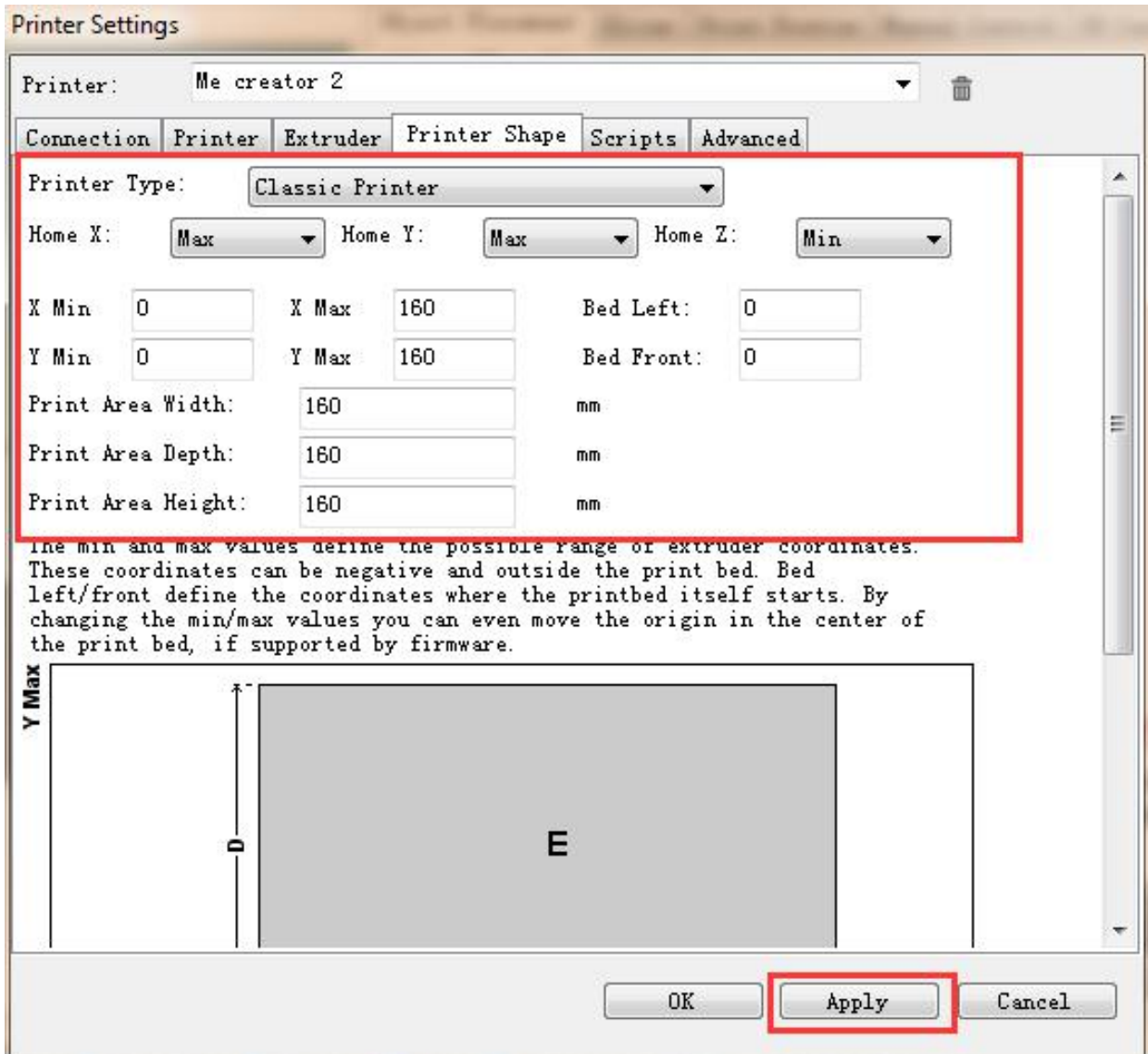
Printer type: Classical printer

Home X: Max **Home Y:** Max **Home Z:** Min

X Min: 0 **X Max:** 160 **Bed Left:** 0

Y Min: 0 **Y Max:** 160 **Bed Front:** 0

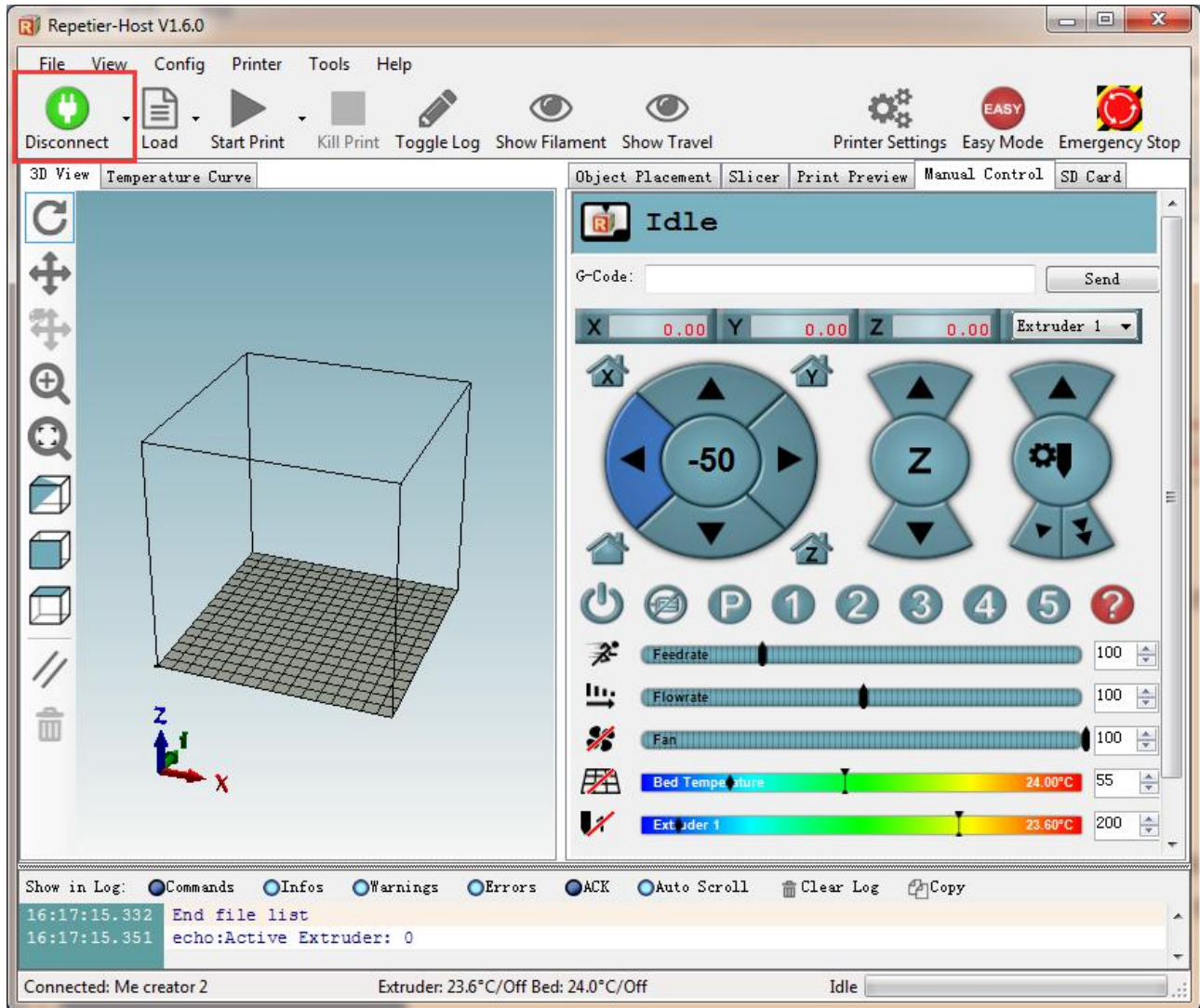
Printing Area: 160 x 160 x 160 (length/width/height)



So far the setting of Me creator 2 is finished.

4.6 Connect the Printer

After setting, click the connect button on the top left corner of main interface. When the button turns green, the connection is successful.



Watch the video [here](#).

5. Function Testing


The firmware of Me Creator 2 is already uploaded based on Windows 7 operating system, and we have done debugging to make sure that every part of it can work normally. However, there may be unpredictable factors during transportation . Please do the following simple test before using it.

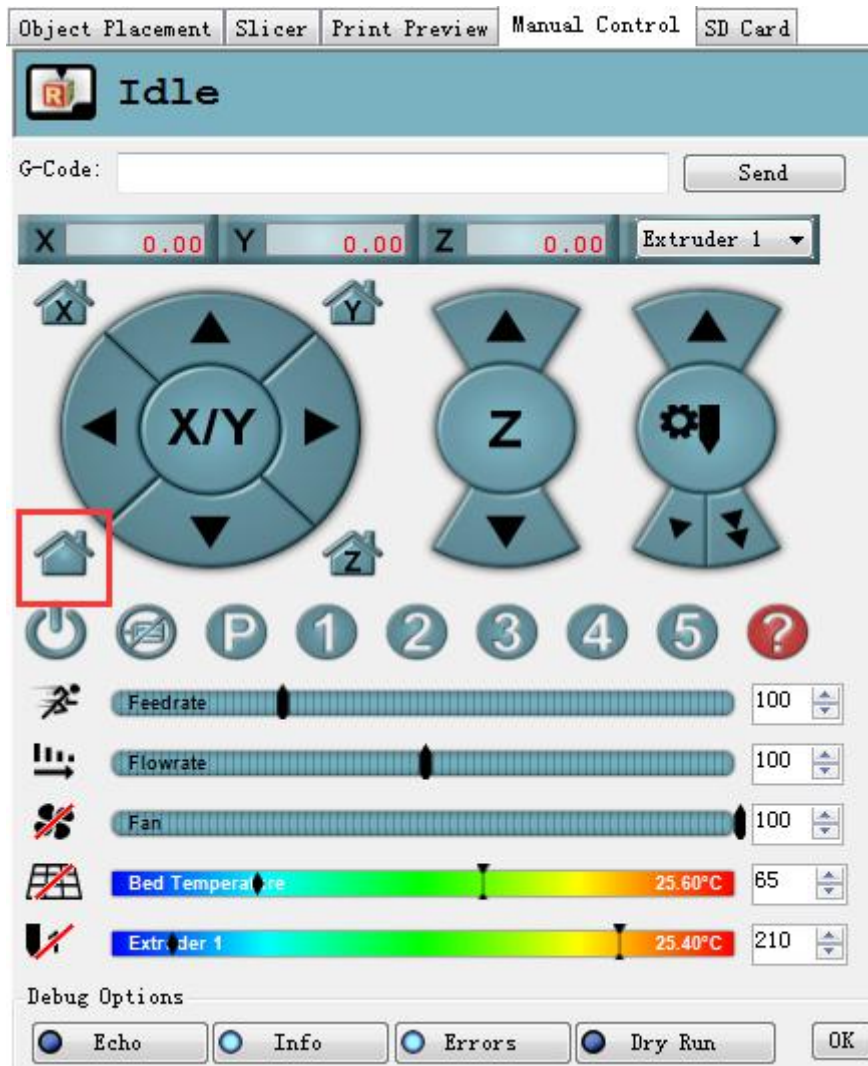
5.1 Repetier-Host Test

5.1.1 Motor Test

Before the test, manually set the motors of X / Y / Z axis at the intermediate position of each axis to avoid accidental collision occurring during the test. There is emergency stop button on the top right corner , or you can cut off the power directly if anything went wrong. Be prepared for emergency stop.

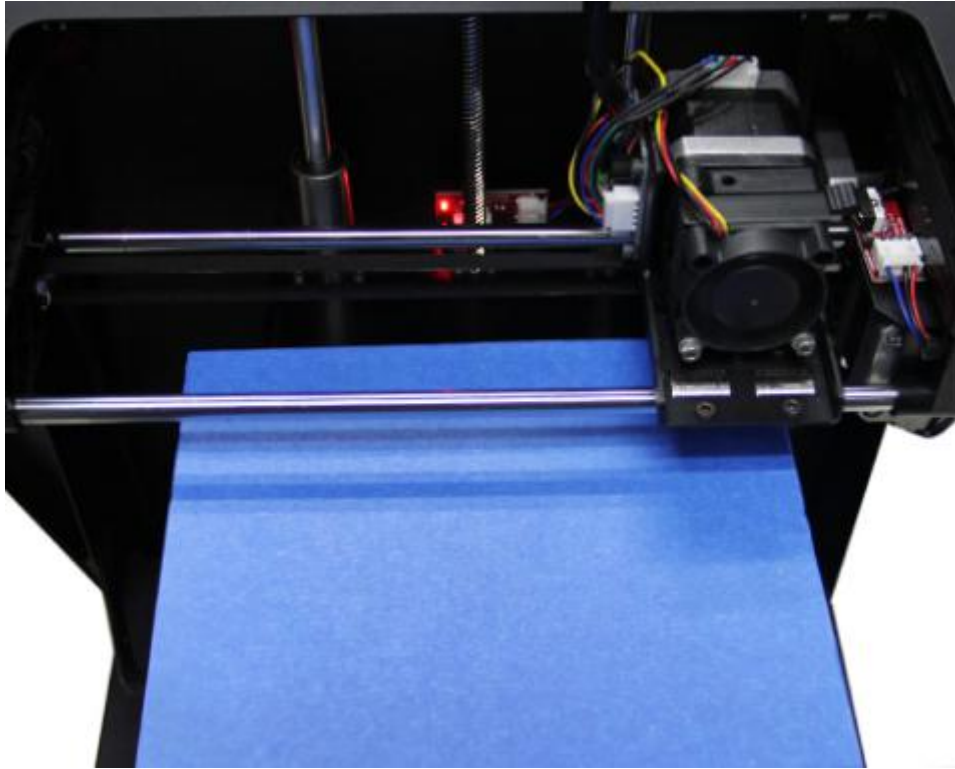
Open Repetier host and connect the printer. Turn on the power supply. Connect the printer.

Click Home button  , then the three axes will move towards the endstop in turn . After they touch the endstop they will move back for a short distance and then stop the movement.

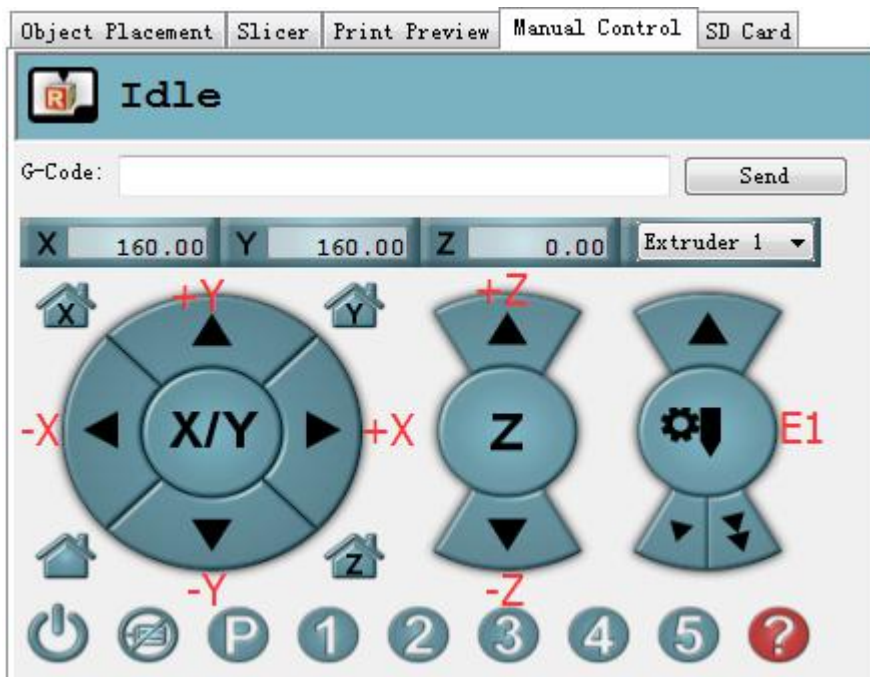


Home position is in the **right back corner** of the printing platform.

Check the video [here](#).

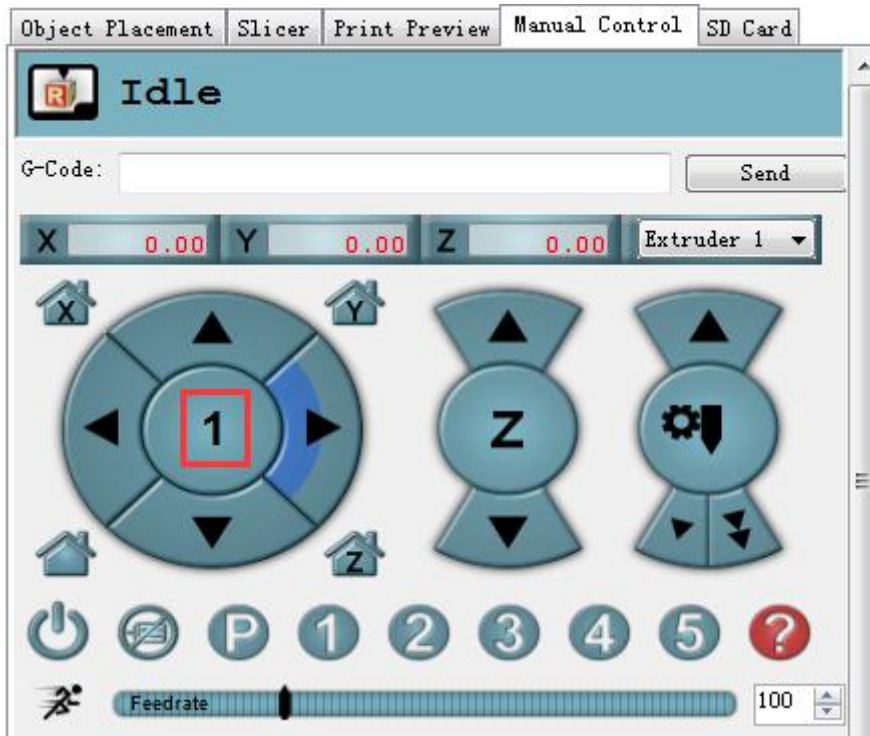


Note: the origin point is the left front corner of the platform when printing. So when the printer is at home position, the coordinates of X/Y axis are: X=160mm, Y=160mm, Z=0mm. As a result:





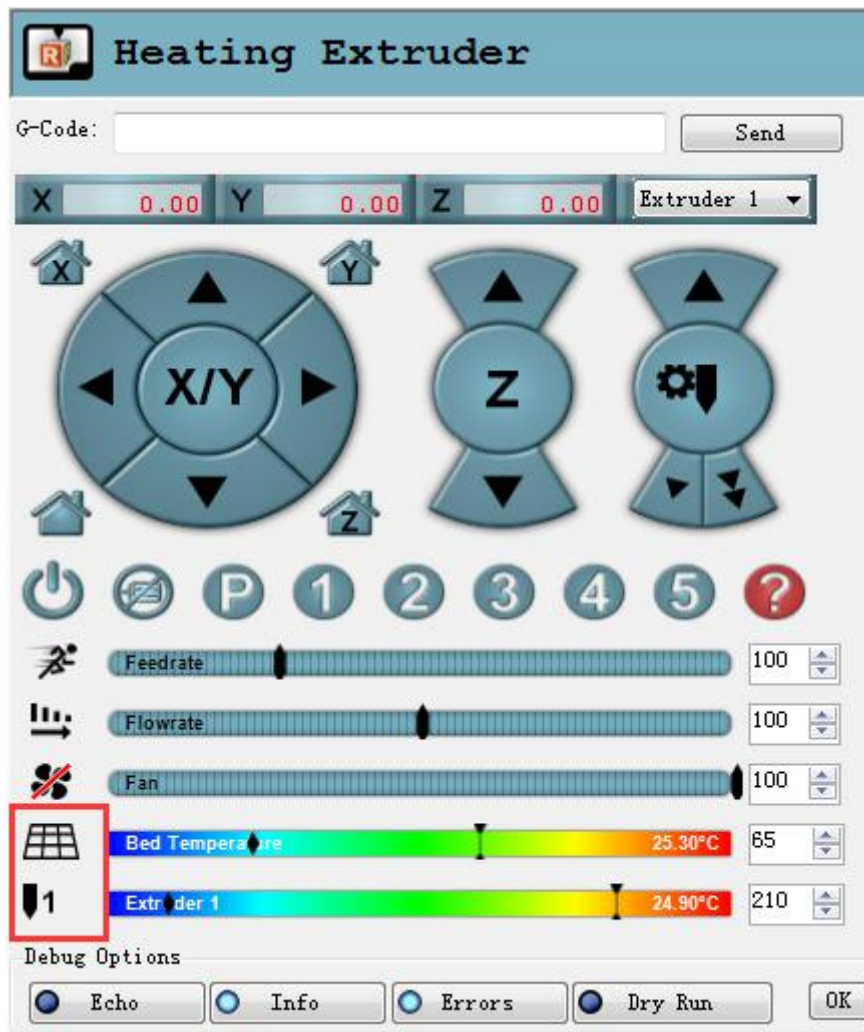
If the moving direction is reverse, you can alter the direction in the firmware. [Please refer to FAQ.](#)

Tips: In manual control, the high-light part of the panel stands for the current selected direction, and it moves 1mm every click. You can also choose to move 10mm or 50mm every click, but here we choose **1mm** in order to avoid possible incorrect operation.



5.1.2 Heating Test

Click the heating button of the hot bed  and the extruder . When the slash disappeared as shown below, it indicates the heating is ongoing and you can see the value rise up.



Meanwhile you can see the temperature at the bottom status bar of Repetier Host.

5.1.3 Extruder test

Please note: It is set in the firmware that the extruder will not work before the temperature reaches above 170 °C . Therefore, please heat the extruder above 200 °C before testing the extruder. Otherwise motor will not have any response.

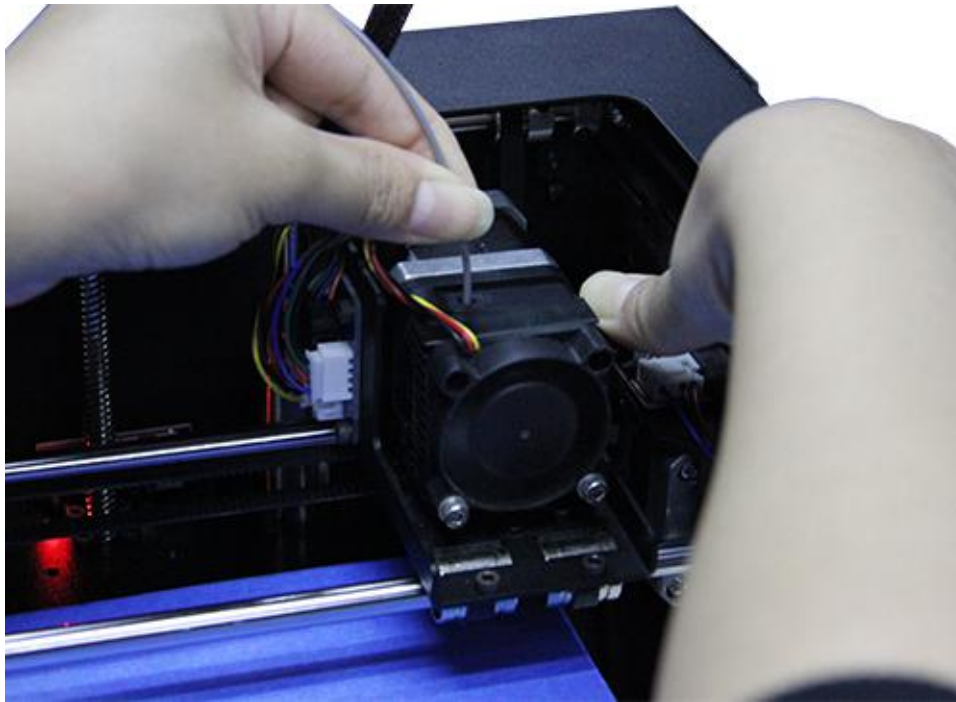
Watch the video [here](#).

1. Heat up the extruder.
2. While wait for the extruder to heat, cut the end of your filament to create a clean edge.
3. When the extruder is fully heated, grasp the top of the extruder assembly and push the free end of

filament into the loading tube. Keep pushing on the filament and click the loading filament arrow on manual control until you feel the extruder pulling it in.

4. Wait until you begin to see plastic emerging from the extruder nozzle. then you can stop.

5. Wait a moment for the extruded plastic to cool, then pull it away from the extruder. Do not touch the nozzle; it may still be hot.



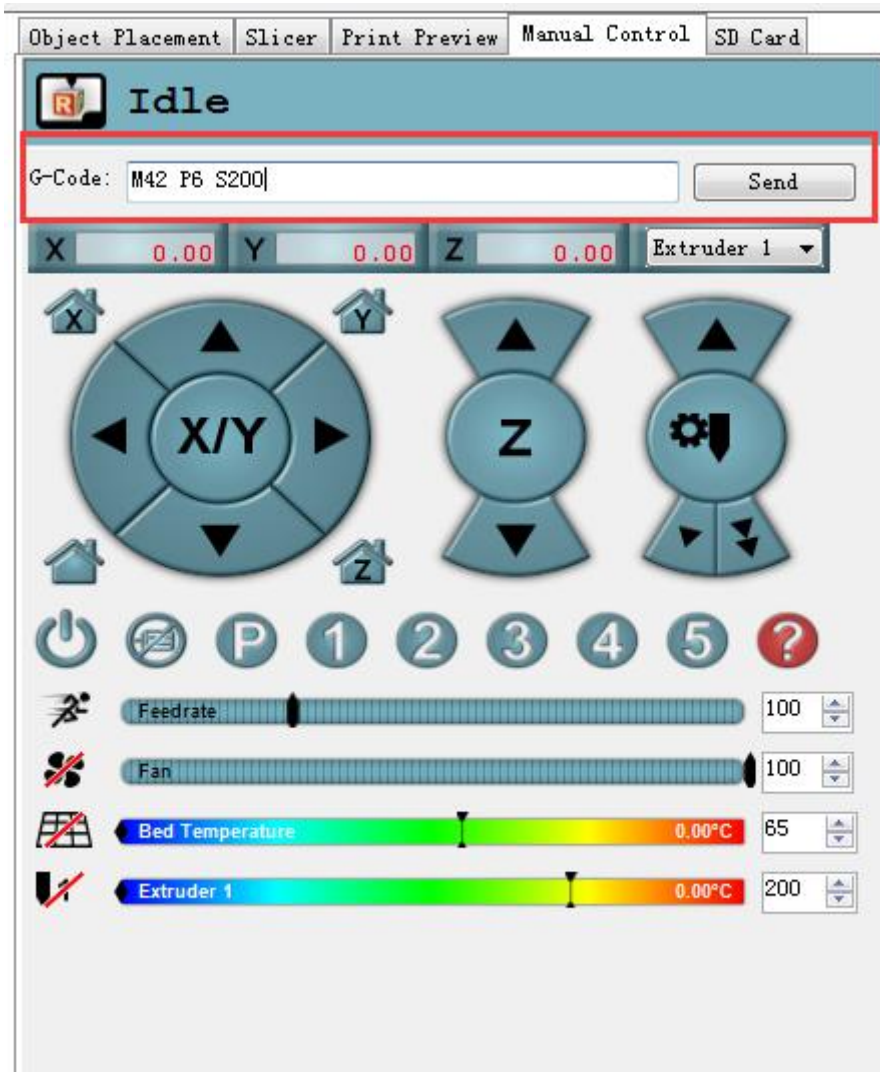
If the extruder can not work normally or the extrusion is not fluent, [please refer to FAQ](#).

5.1.4 LED Light Test

There is an LED strip in the MeCreator2, you can control the light by sending corresponding command.

Turn on: M42 P6 S255 (any number between 1-255, the greater the number is, the lighter it will be)

Turn off: M42 P6 S0



5.2 LCD Controller Test

5.2.1 LCD Menu Introduction

Functions of LCD rotary knob:

1. Press the knob: confirm or enter sub-menu
2. Rotate the knob: roll to choose options or change parameters

LCD homepage:

1. Extruder temperature: current temperature/target temperature
2. Hotbed temperature: current temperature/target temperature
3. Current coordinate of X/Y/Z
4. Feed rate: current printing rate
5. Current rate of printing process

Note: Rotate the knob during printing will change the feedrate in real time.



Press the knob to enter the next level menu:

1. Prepare: preparing work before printing
2. Control: setting of temperature and motion parameters of the printer
3. Status display of SD card



Main functions of Prepare menu:

1. Disable steppers: unlock the motor so that you can move them freely.
2. Auto home: automatically homing of each axis
3. Preheat PLA: manually preheat the hotbed and the extruder before printing PLA
4. Preheat ABS: manually preheat the hotbed and the extruder before printing ABS
5. Move axis: manually move each axis and each extruder





Main functions of Control menu:

1. Temperature: You can change the temperature of the hotbed and the extruder in real time in printing process. Meanwhile you can set the temperature of Preheat PLA and Preheat ABS.
2. Motion: setting of the motion parameters in the firmware. You need choose store memory to save after altering the setting.
3. Store memory: to save the altered parameters.



For other detailed functions please read the following introduction of function tests.

5.2.2 Use LCD for Motor Test

After understanding the functions of LCD, press the knob on LCD to enter the sub-menu, and choose

Prepare:



Choose **Auto home** in menu to do home operation:



If you want to move the motor, choose **Move axis**:



Choose **Move 1mm**:

Note: only 10mm and 1mm are available for the printer, and 0.1mm invalid. We recommend you to use move 1mm to test each axis.



Choose the axis you need to move: **Move X/Y/Z/E**. Rotating the knob can make each axis move.

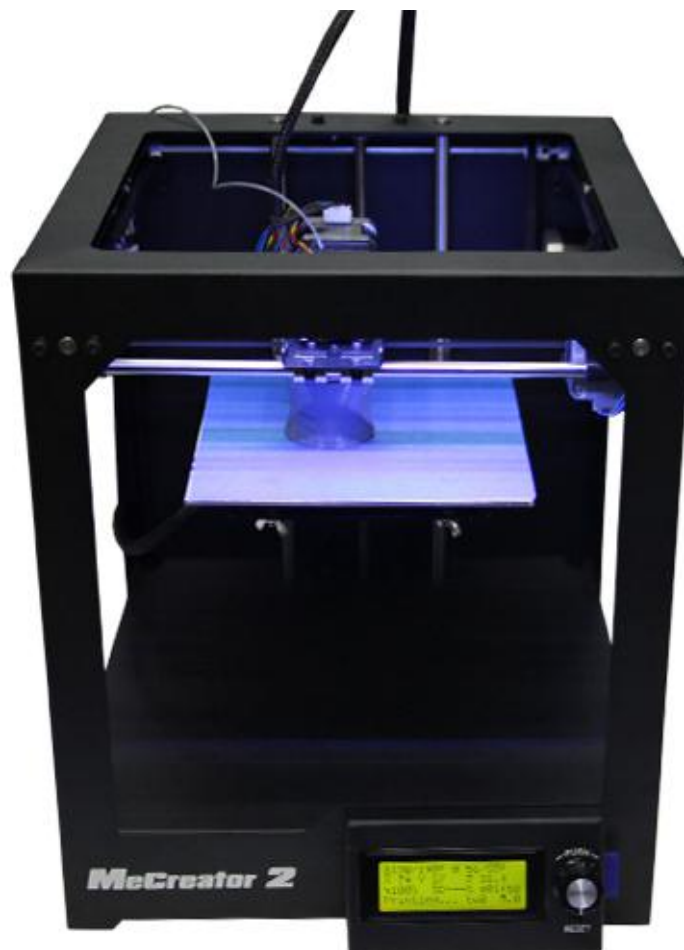


After testing each axis, if you want to unlock the motors, choose **Prepare>Disable steppers**:



5.3.3 LED Light Test

You can control the LED light on the LCD controller. But you cannot control the light strength here.





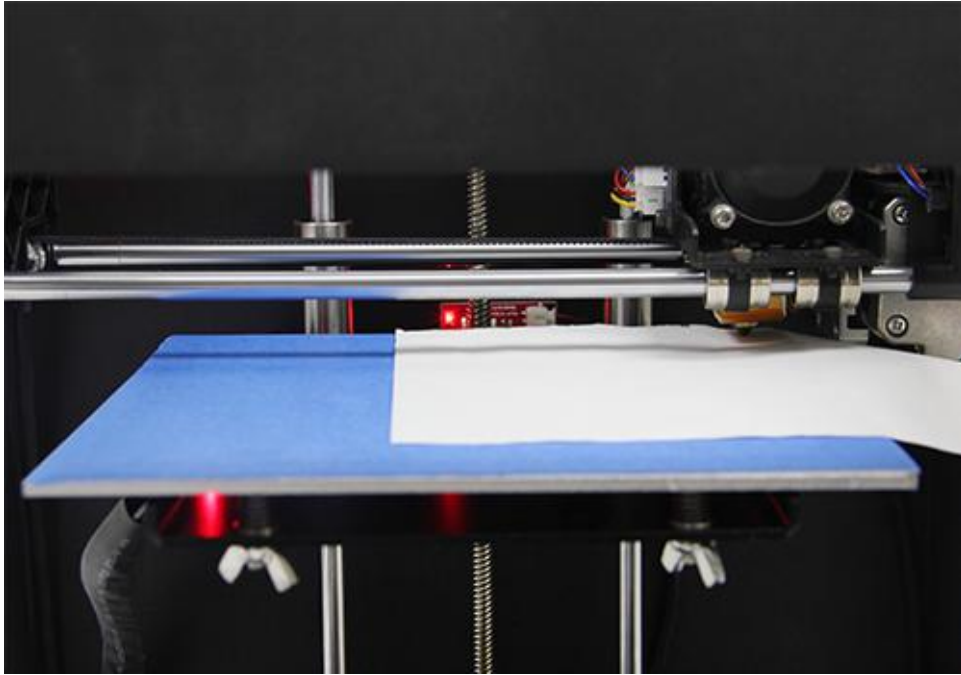
6. Build platform Leveling

Before printing, please check whether the moving path of the extruder is parallel with the heatbed or not, which is called leveling. We need make sure the distances from the nozzle of the extruder to the four cornered of the heatbed are the same, and only in this way can we get good printing quality.

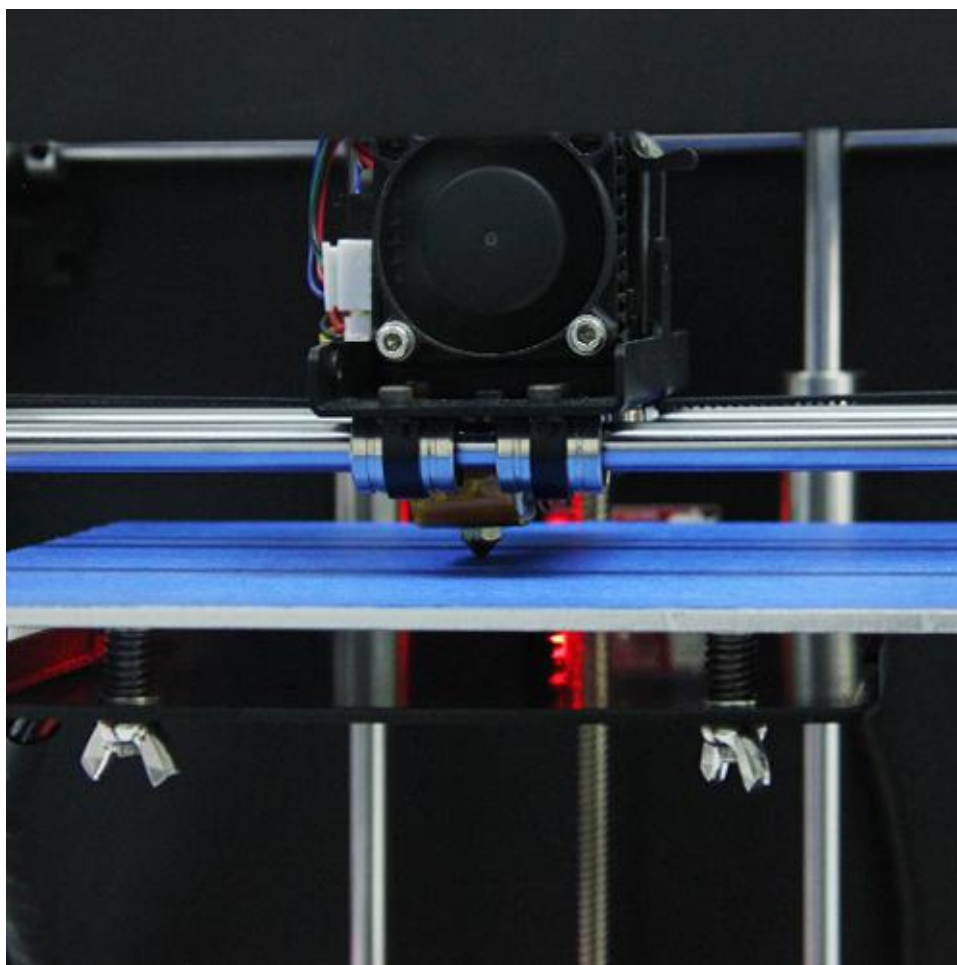
You can check the level of the heated platform by using a piece of paper to check the gap under the nozzle. It' s best to do this with the platform heated to account for any change due to expansion.

Put the paper under the nozzle near one of the front screws and raise the bed .1mm at a time using the manual controls in the software interface while sliding the paper back and forth. Stop when you feel the nozzle start to grab a little bit.

Watch the video [here](#).

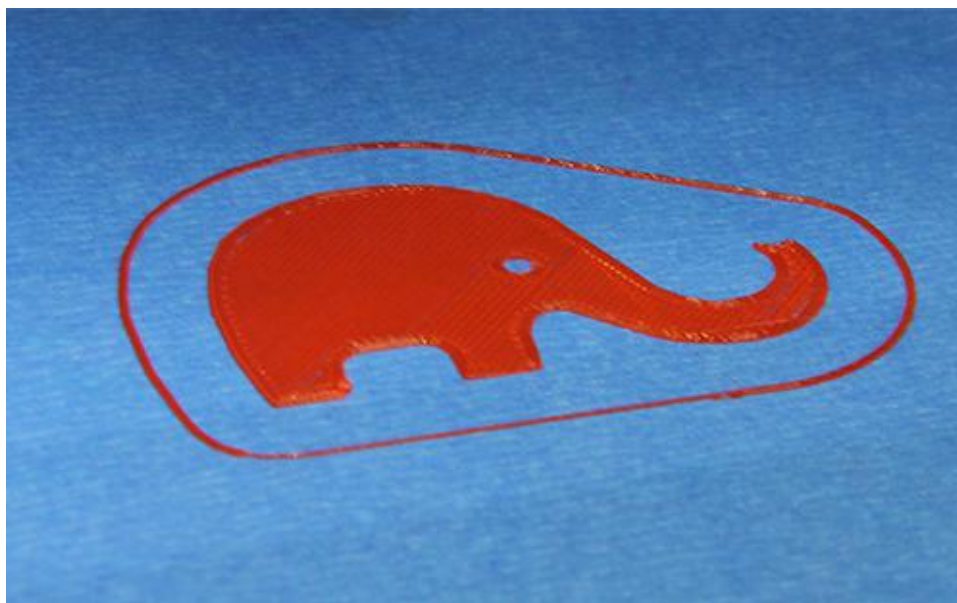


Move the nozzle to the other front screw and adjust the screw until you get the same amount of friction as you felt with the first one. Then adjust the back screw the same way.



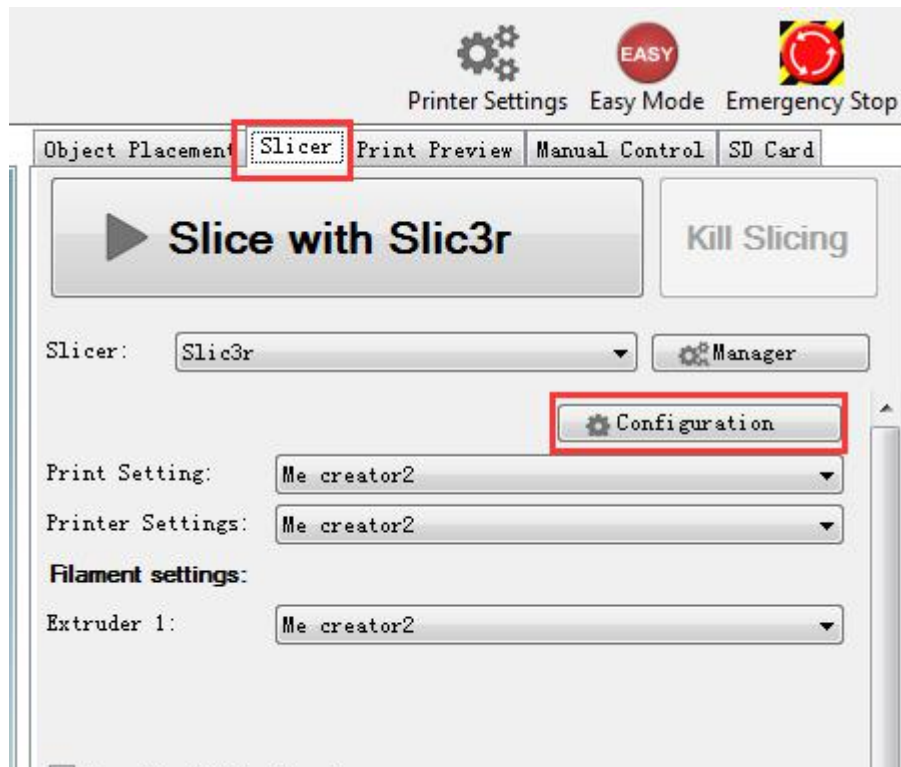
Once you have adjusted each of the three screws, go back and check each one again, since adjusting one screw can affect another. You shouldn't need to go around the bed more than twice.

The proper printing effect of the first layer is like following picture:

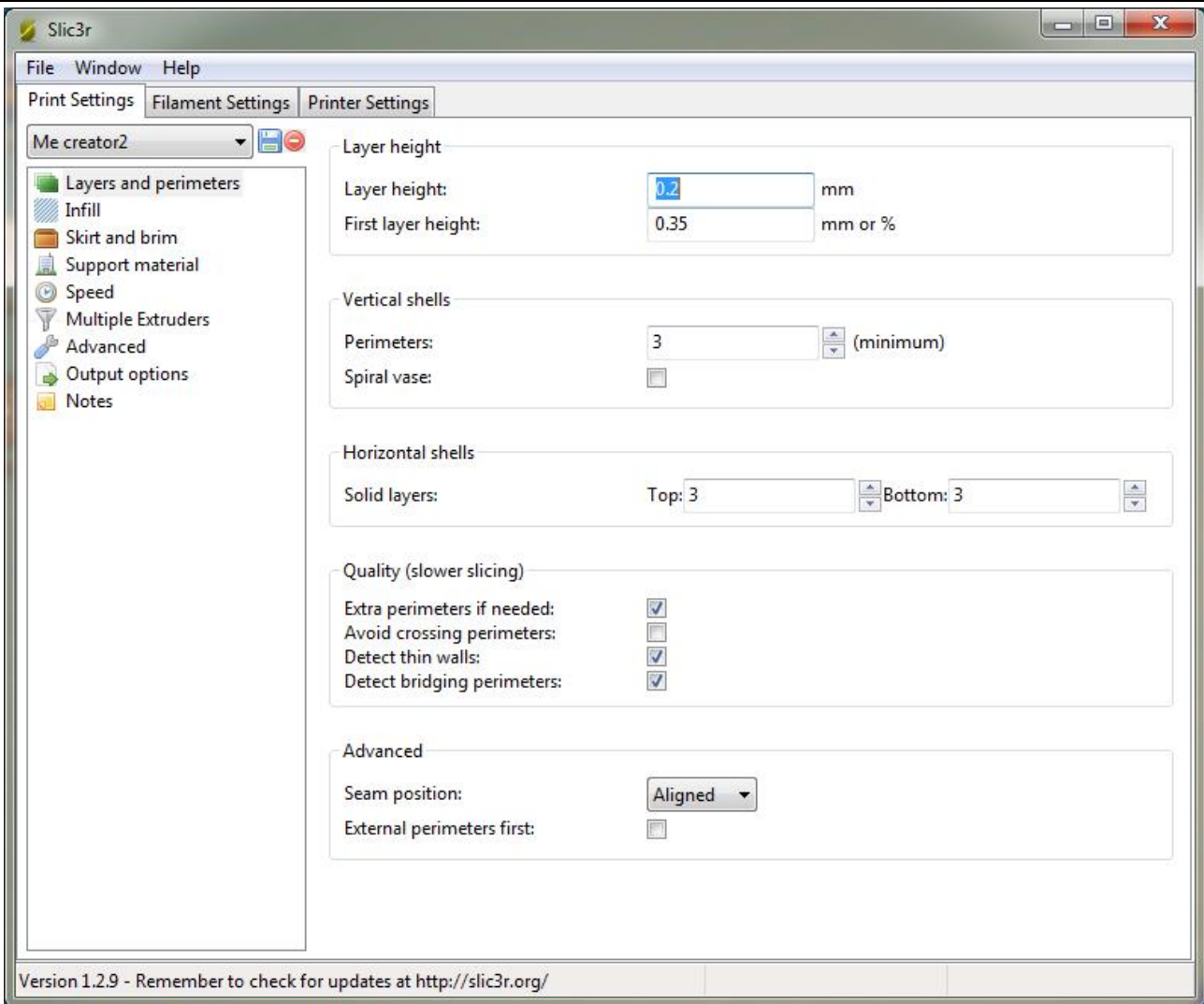


7 Slic3r Setting

So far we can begin printing. But in order to achieve better effect, we need set the slicing parameters such as the diameter of the filament, speed, layer height. Open the slicing software, slic3r, which comes with Repetier host. Shown as below:

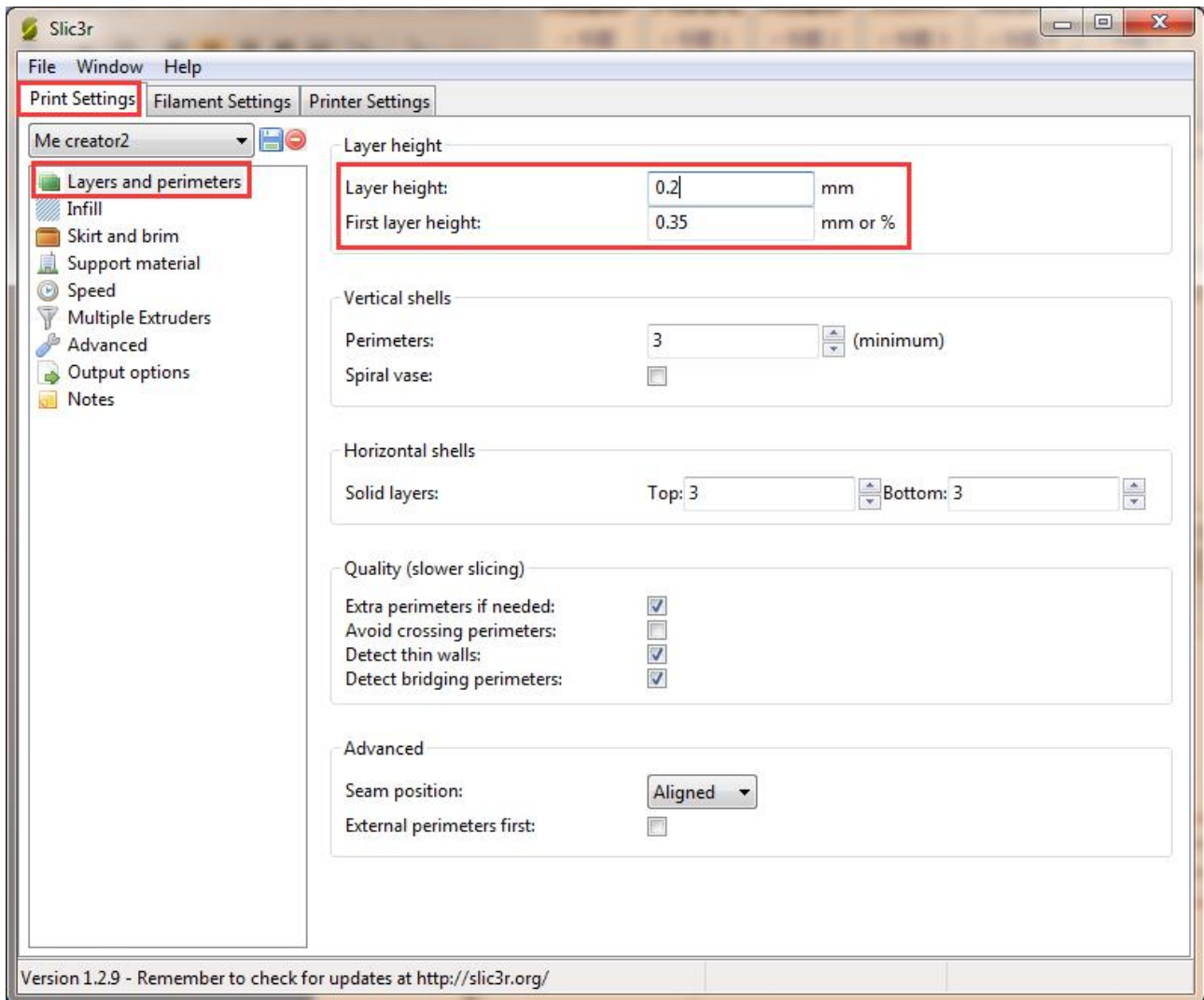


The following interface will appear:

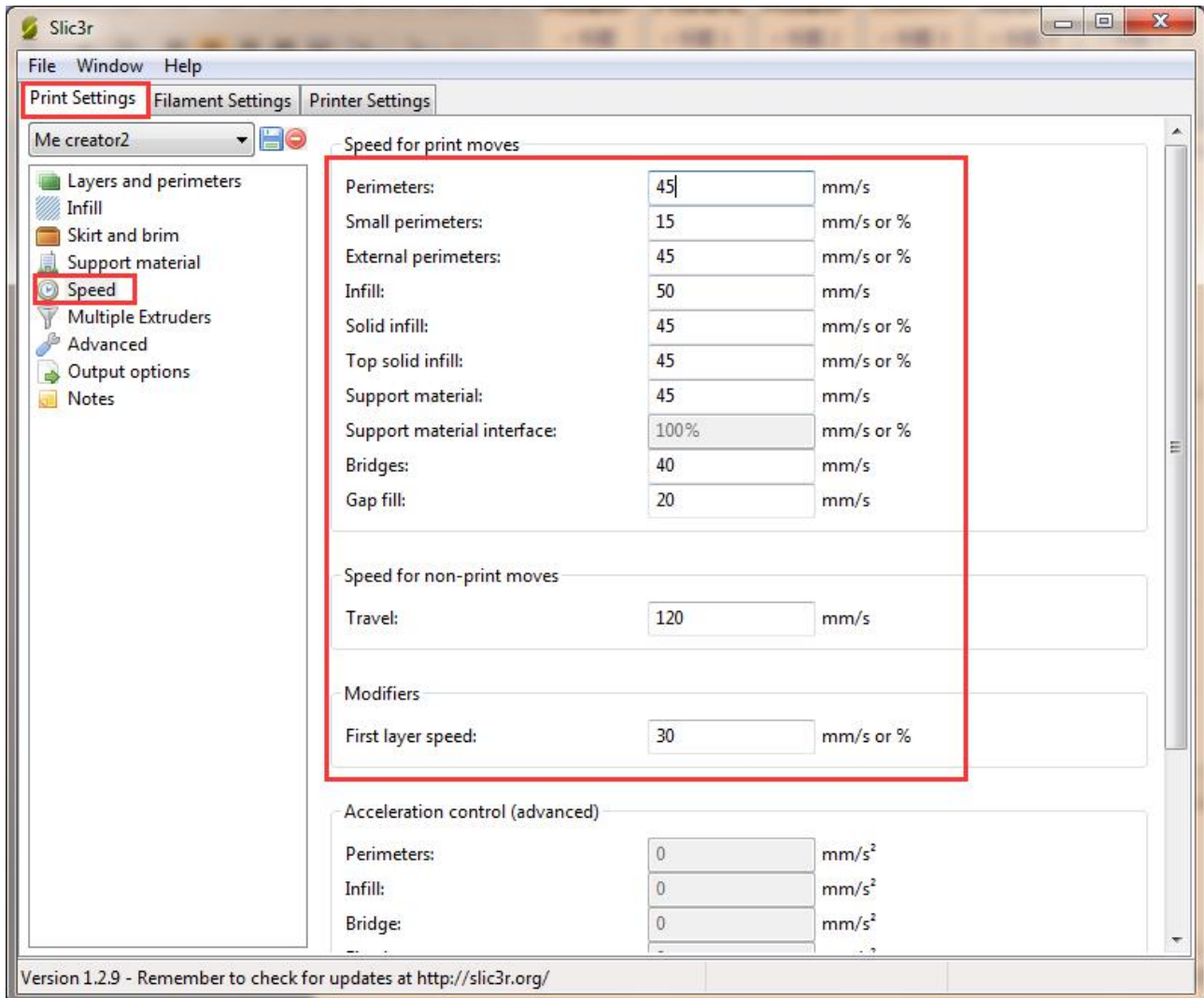


7.1 Printing Setting

Set the layer height and height of the first layer in the option of Print settings. The layer height of Me creator 2 can be between 0.05-0.3mm. Considering of precision and speed, 0.2mm is the most appropriate. Set the first layer height as 0.35mm by default.



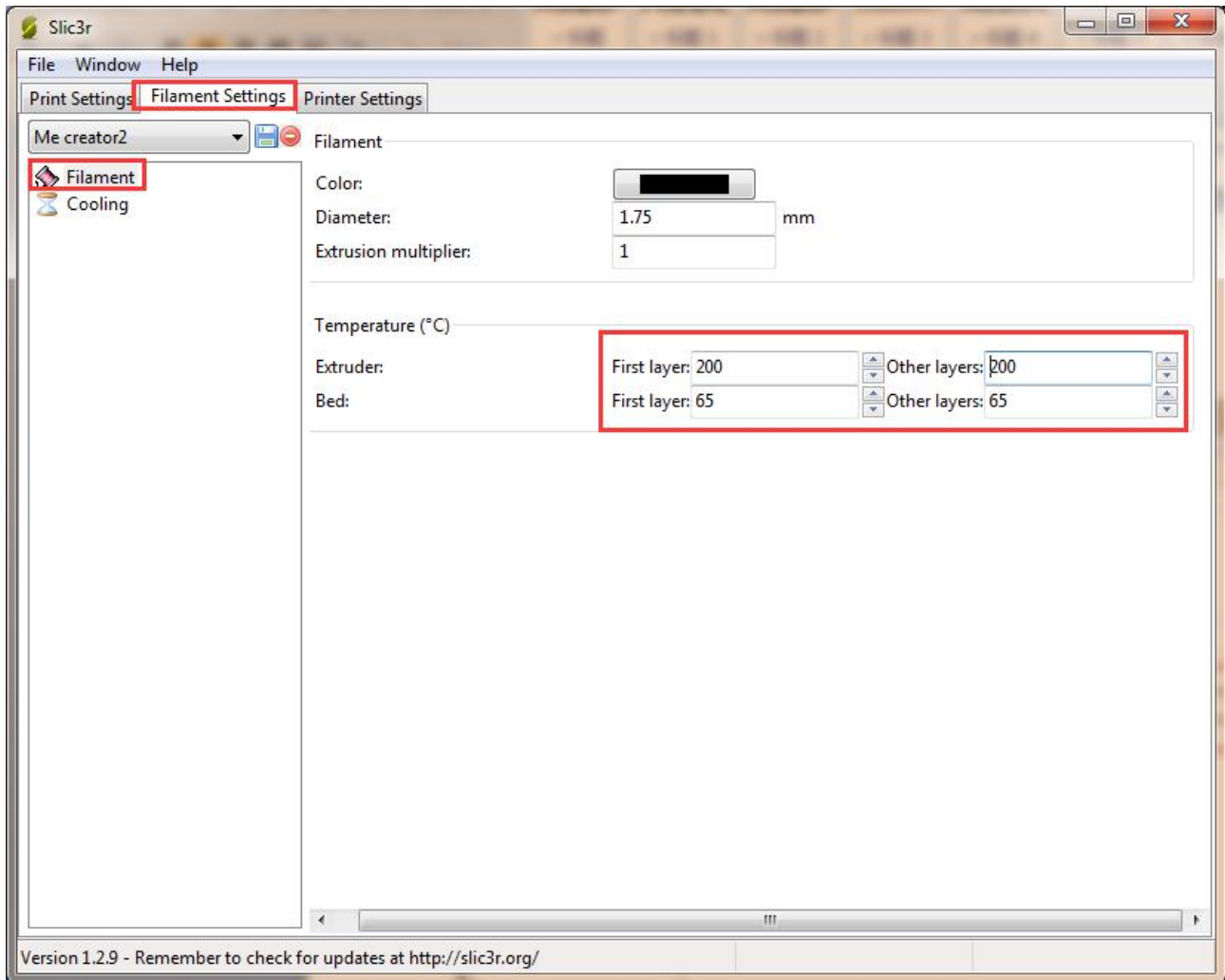
You can set the printing speed here:



7.2 Filament Setting

Set the filament diameter and printing temperature in the tab of Filament settings. Here we use 1.75mm PLA. Usually the temperature of the print head is 195-210°C, the hot bed is 60-70°C. Here we set them as 200°C and 65°C. If you use ABS filament, the recommended temperature of the print head is 230-240°C (for the actual temperature please refer to the data from manufacture of filament) and 90-110°C for the hot bed.

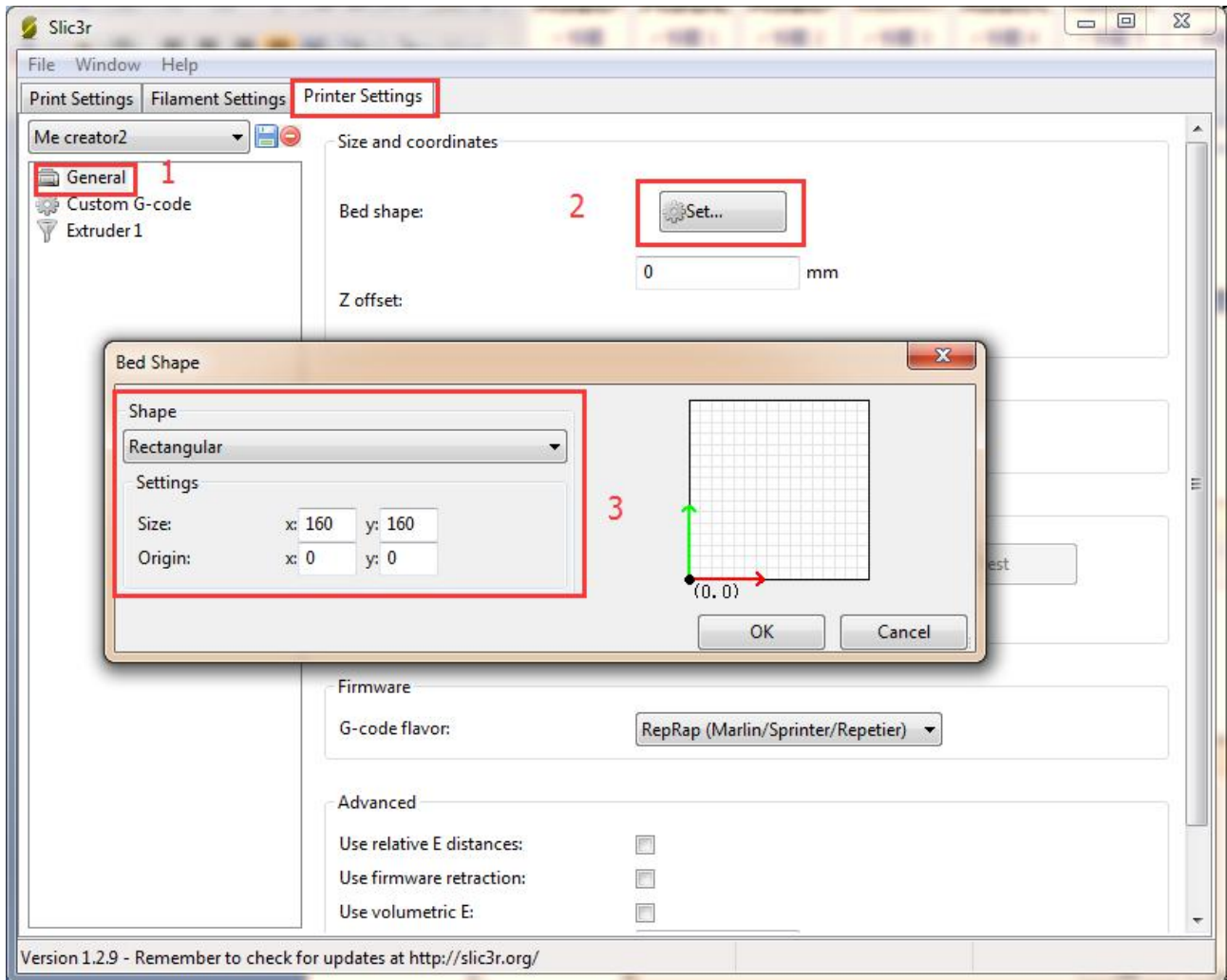
You need to use glue on the hot bed when printing with ABS, which can effectively help the first layer stick to the platform and avoid warping.



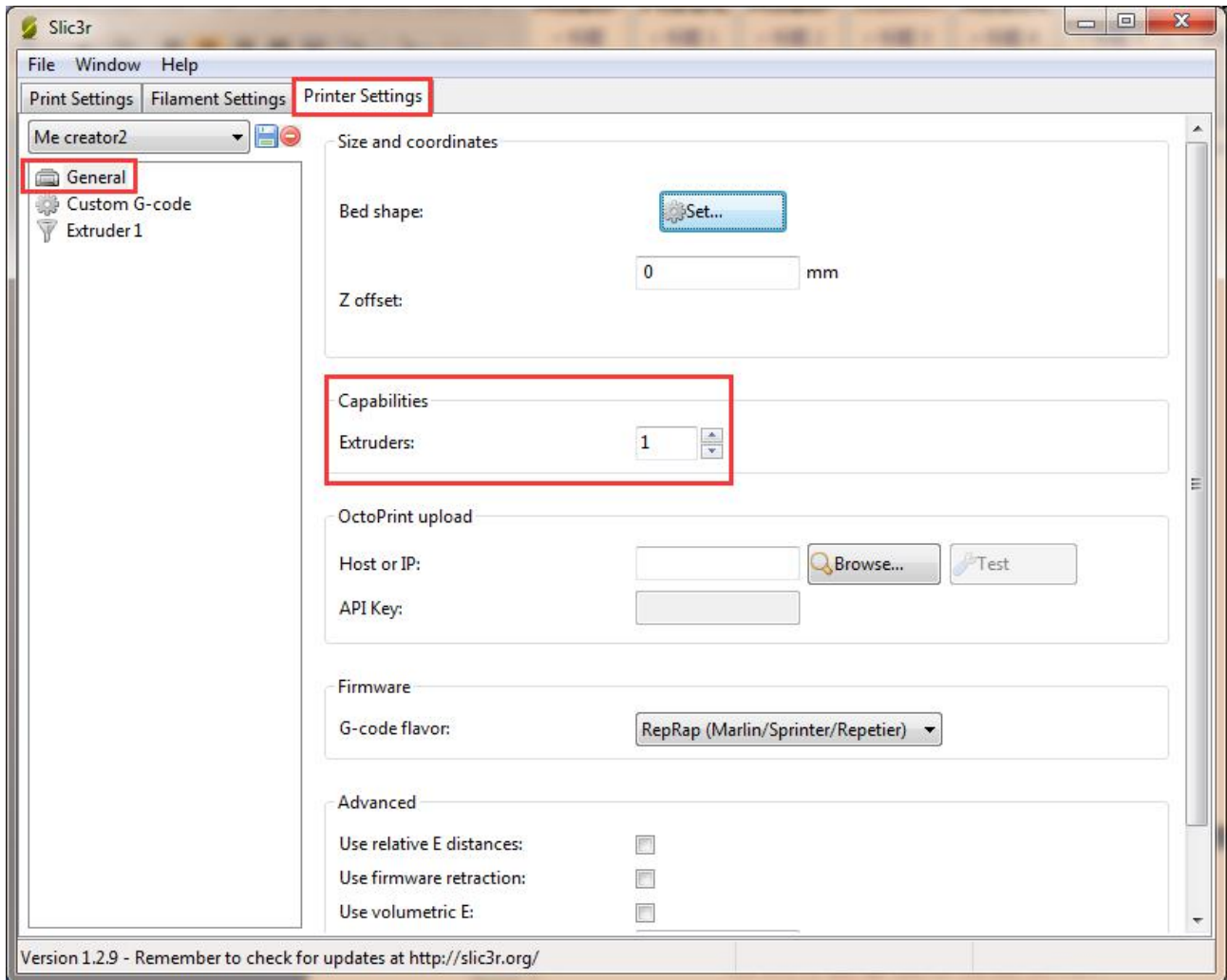
7.3 Printer Setting

Set the shape and size of the hot bed and the number of extruder in the option of *Printer settings*> *General*.

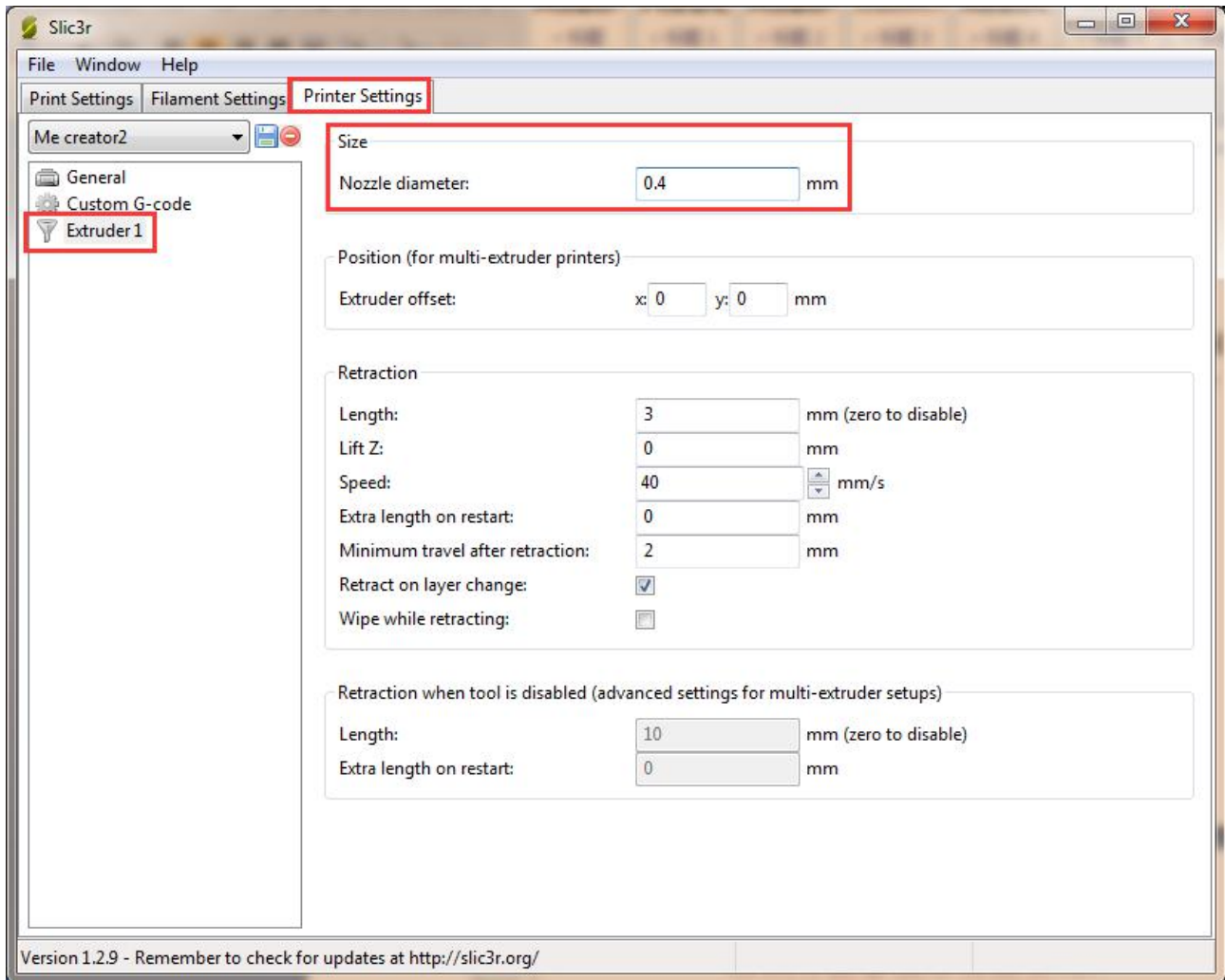
Hot bed shape:



Number of extruder: 1



At the same time, set the diameter of the print head as 0.4mm. (input the actual diameter of your printer)

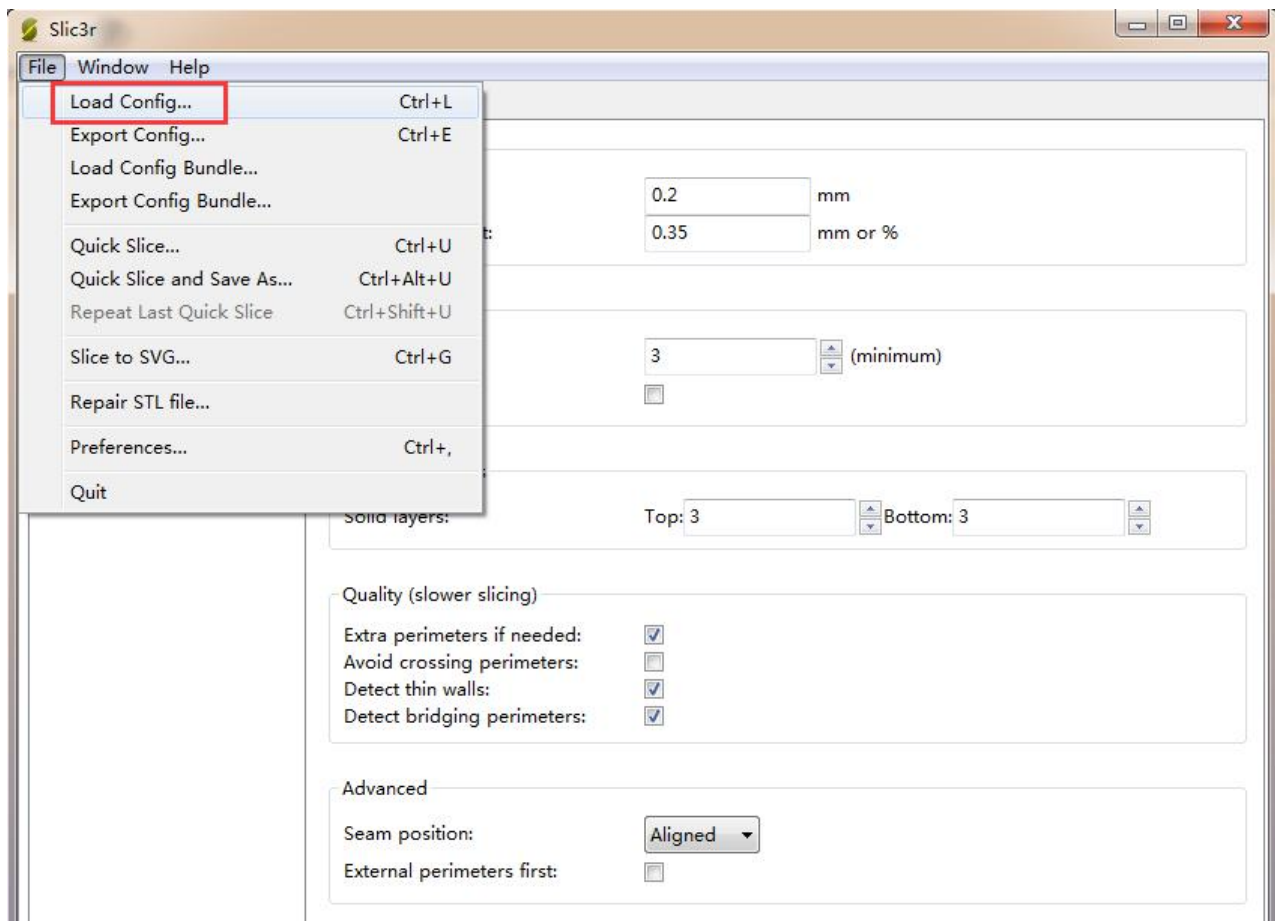


7.4 Other parameters

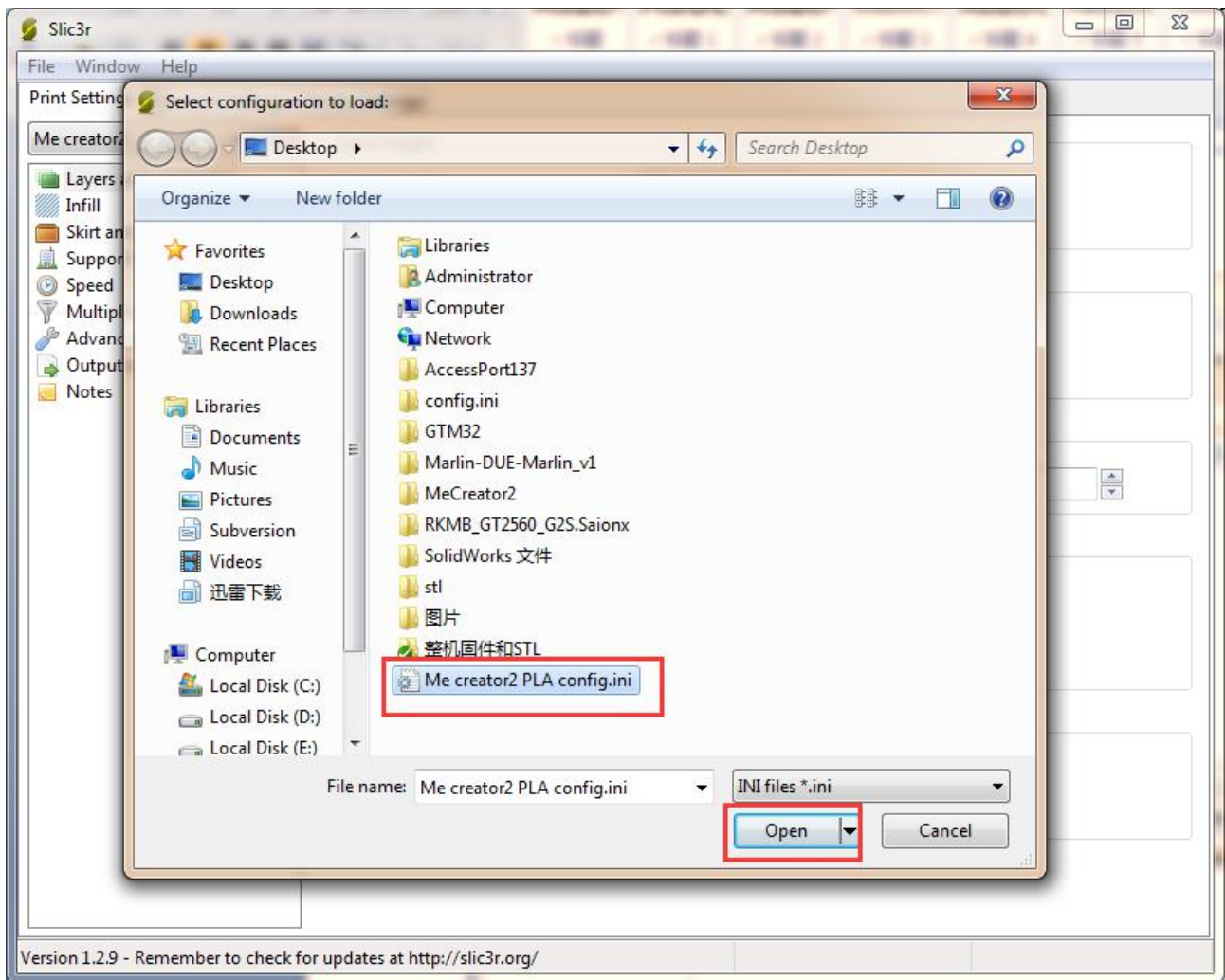
Except for above settings, parameters like speed are also important to the printing effect, which requires your long time using experience of 3D printing. Here we give you a reference setting, please download the attachment [config.ini](#). You can import it into slic3r according to the following steps.

Note: the configuration uses 1.75mm PLA filament and 0.4mm nozzle diameter, and it slices with slic3r engine which is built-in in Repetier host 1.6.0.

Open **slic3r>File>Load Config:**



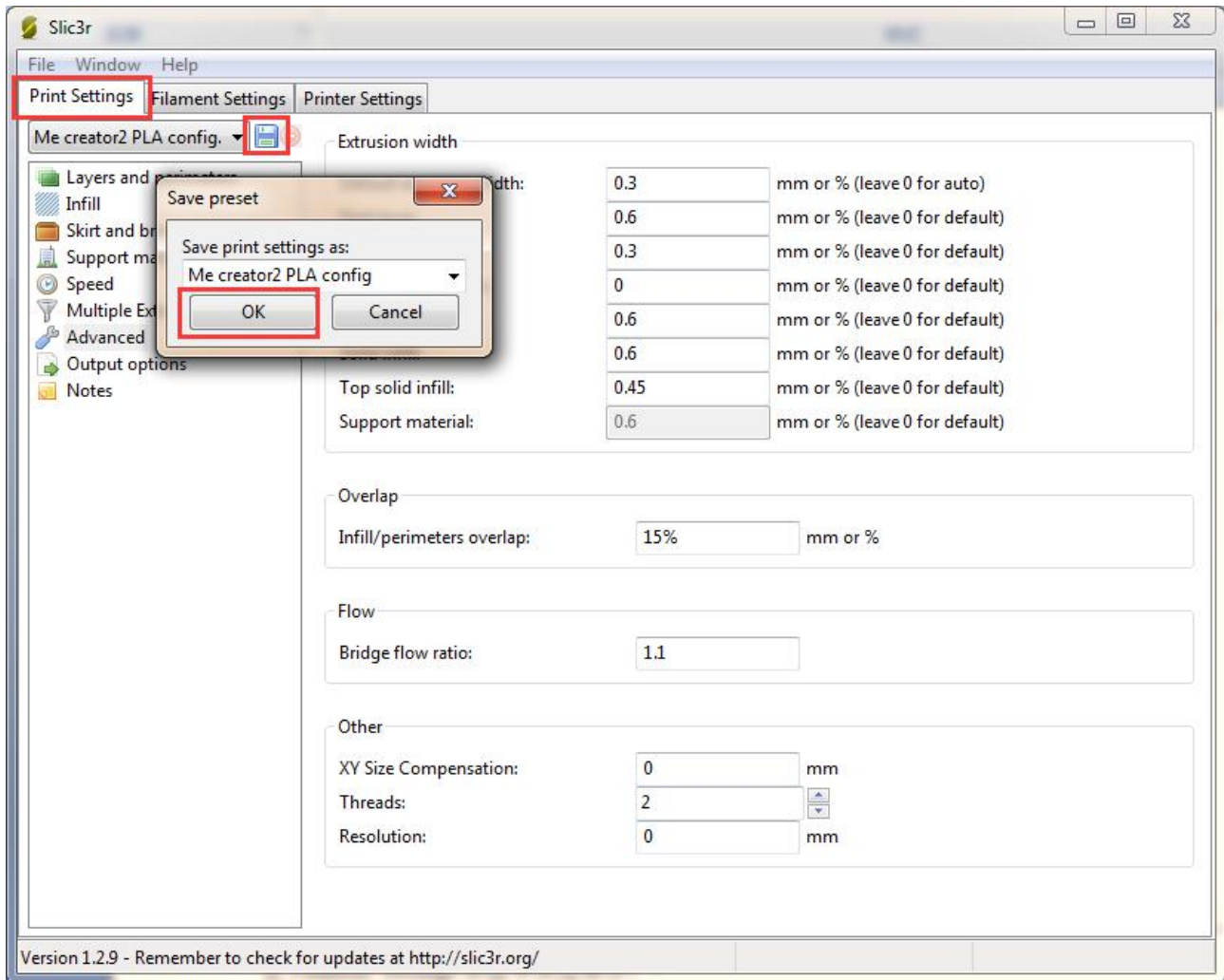
Direct to the file **Me creator2 PLA config.ini** and open it.



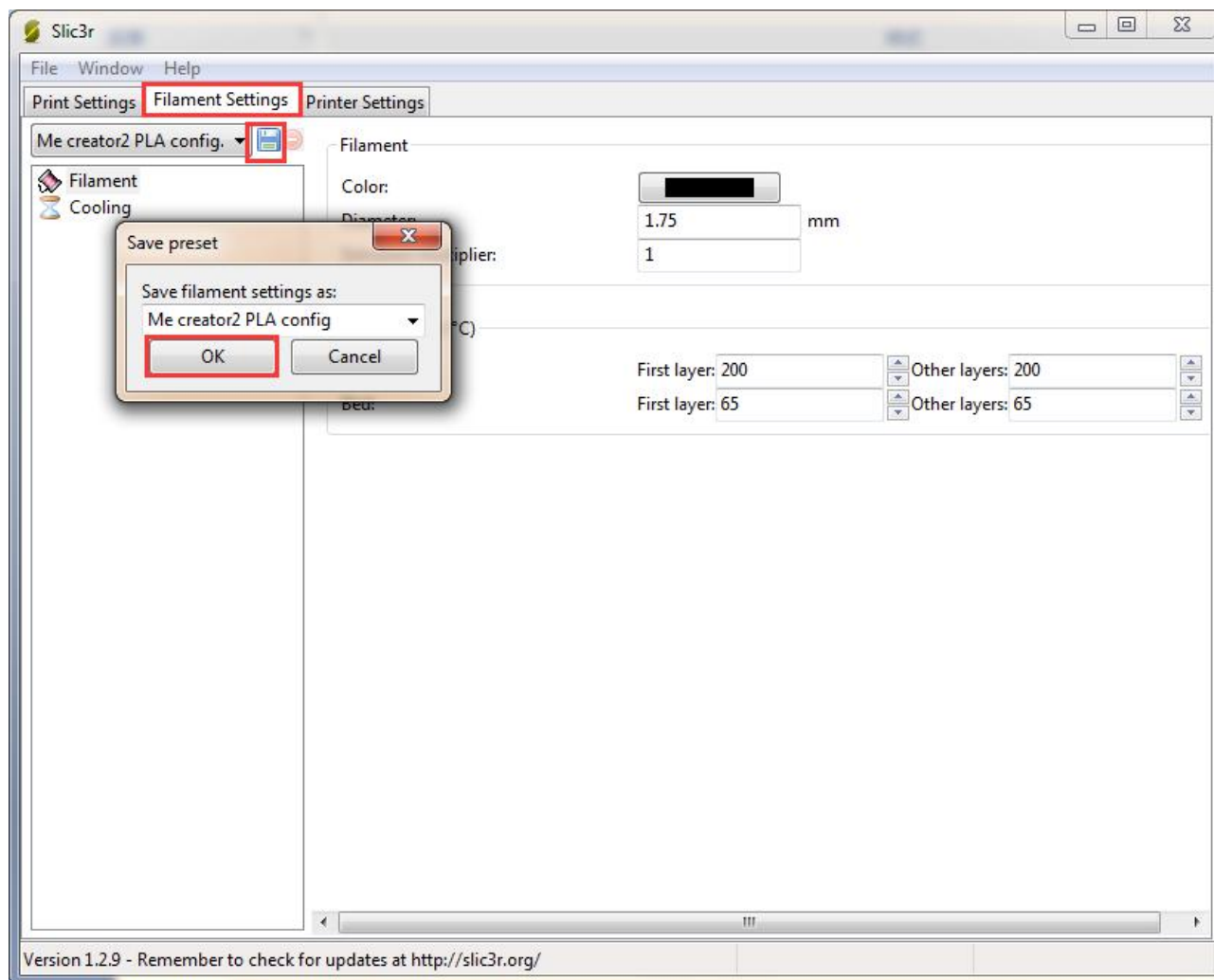
After you imported the config.ini file . Click the save button to rename and save.

Click to save in the tab of **Print Settings**:

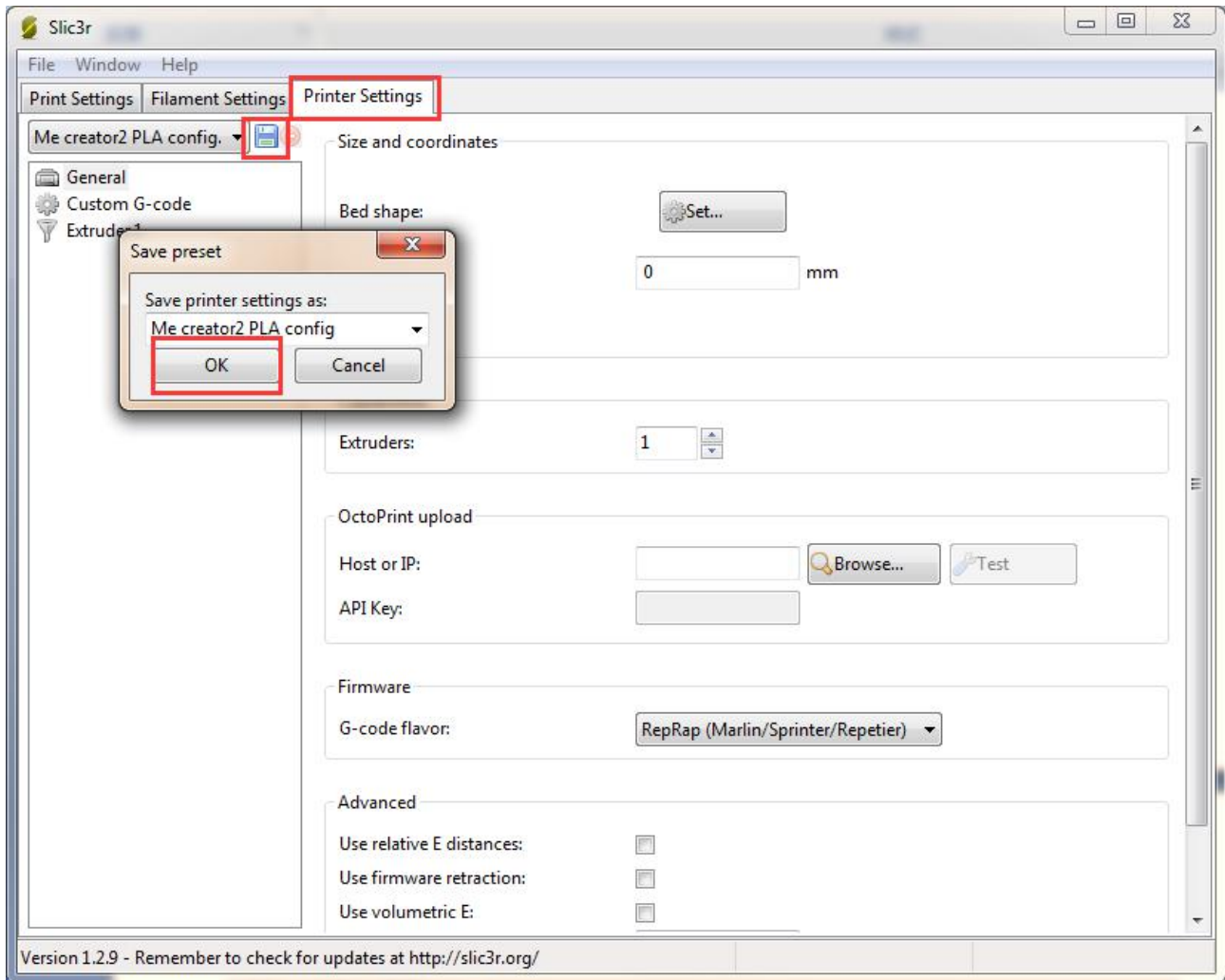
Note: all the the three settings need to be saved in turn!



Click to save in the tab of **Filament Settings**:



Click to save in the tab of **Printer Settings**:



Watch the video [here](#).

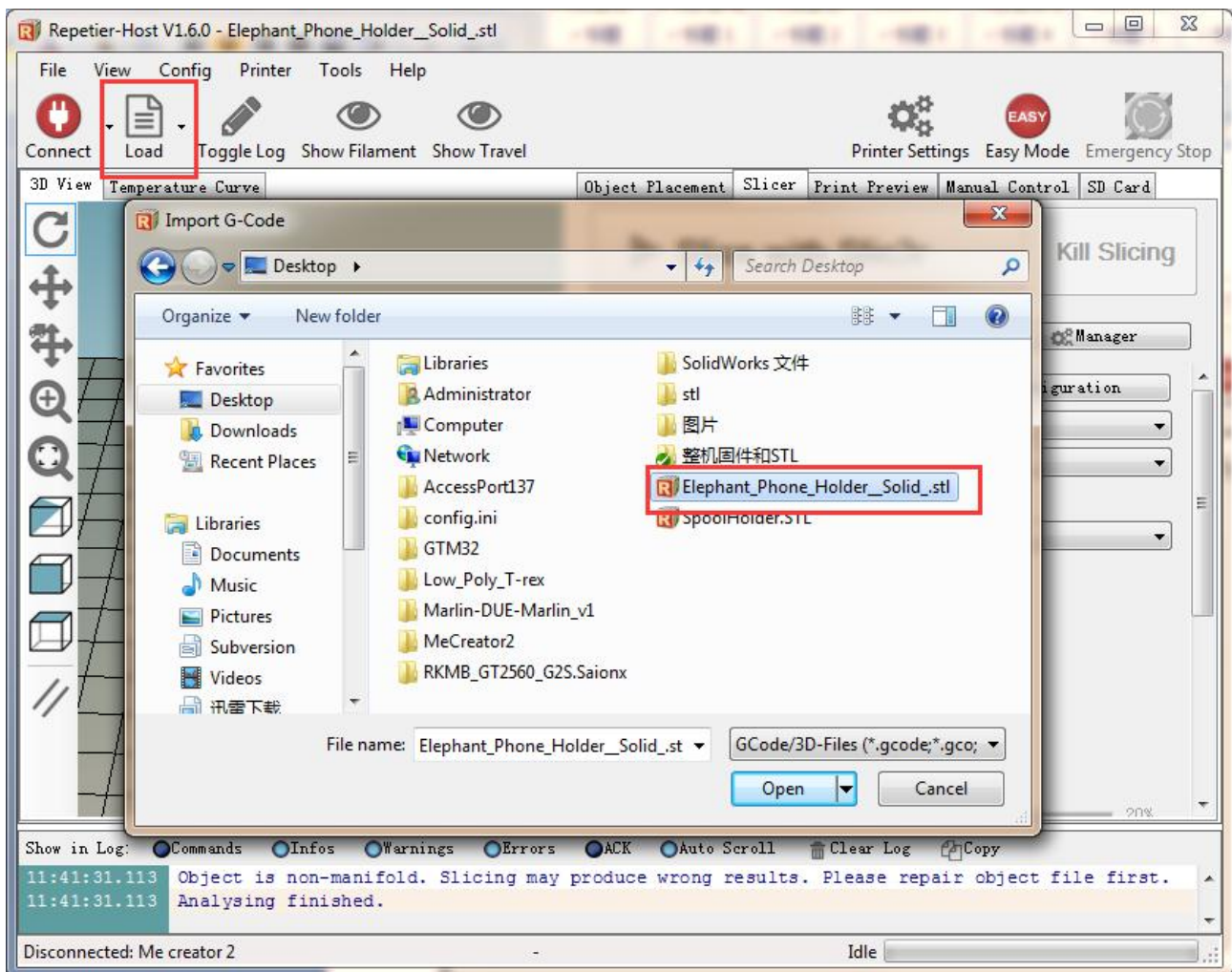
8 Start Printing

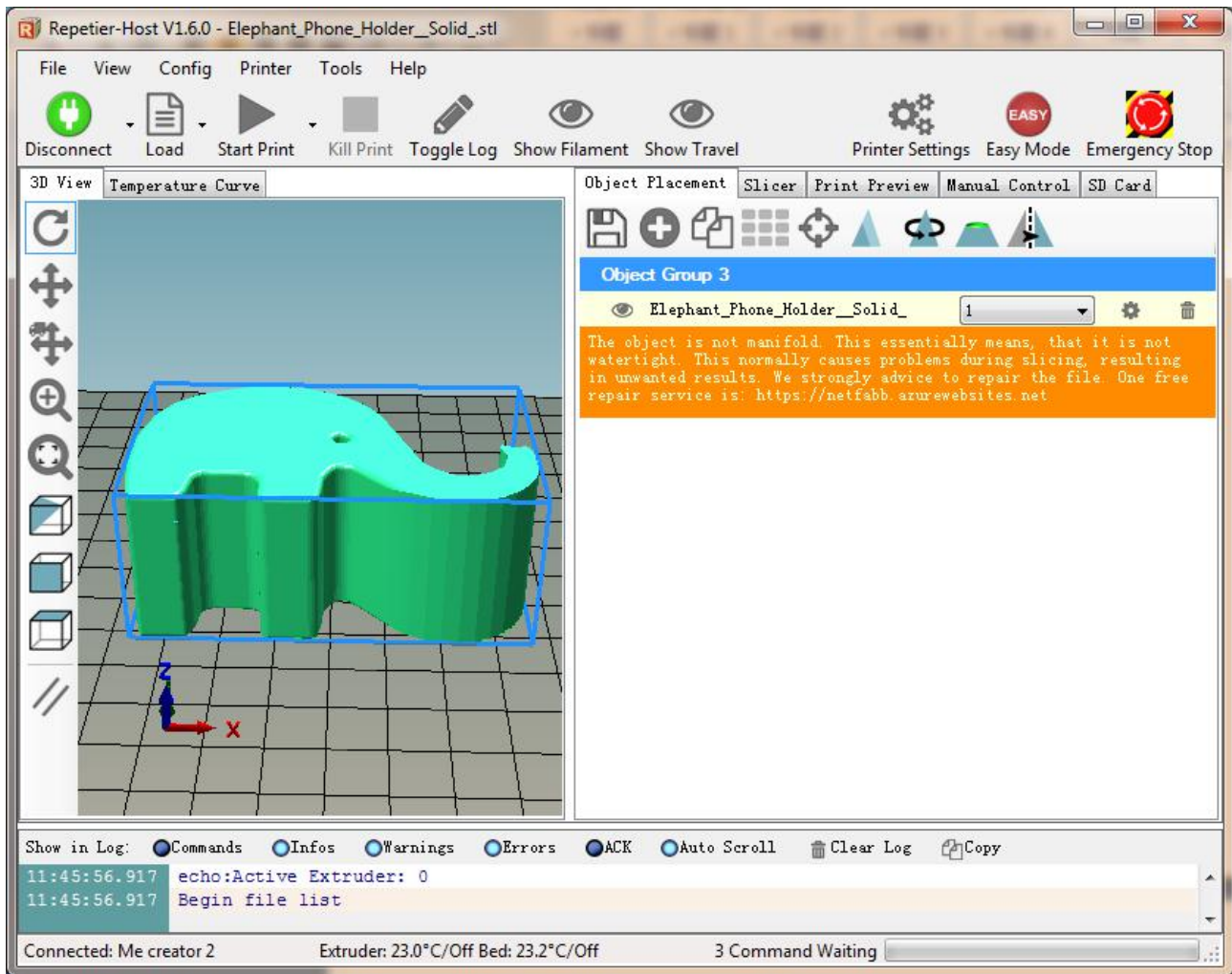
So far the preparation work is finished. Next step is to load model, slicing and printing.

The file format of the model file for 3D printer is usually .stl. Me creator2 supports following file format: **STL, 3ds, obj, mf, dae, G-code**. You can download models on the internet for printing. Of course you can also design your own creative models for printing. Here we print a small elephant phone holder. You can download the model here: [Elephant_Phone_Holder_Solid.stl](#)

8.1 Load the Printing Model

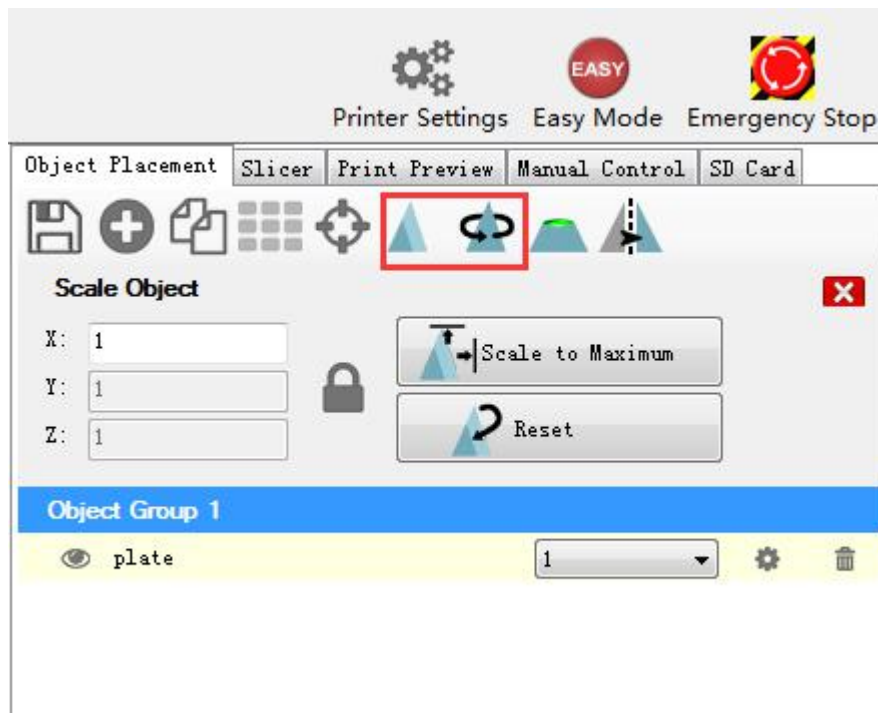
Click **Load** button in the main interface of Repetier host, choose the file and open it.



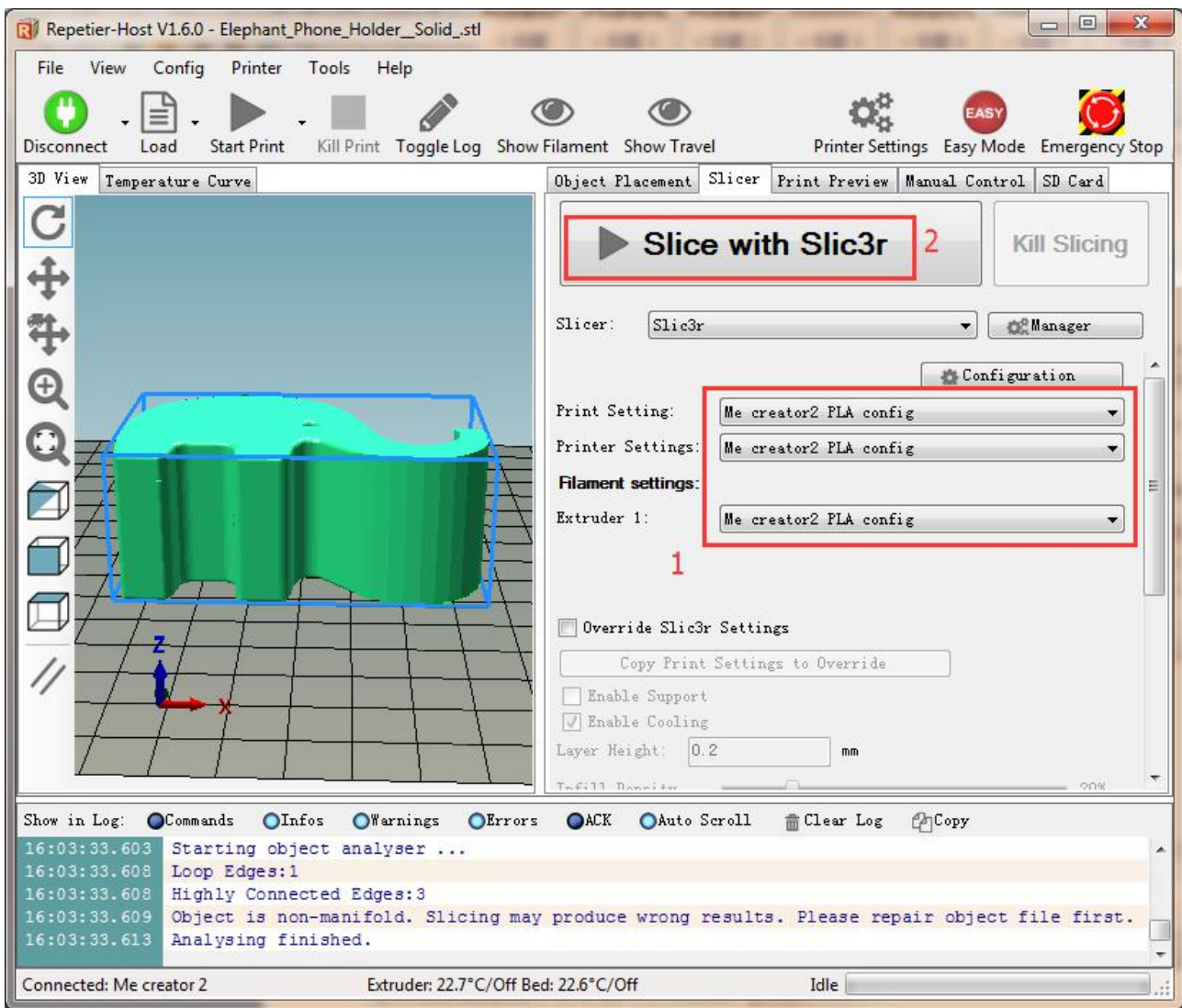


8.2 Slicing

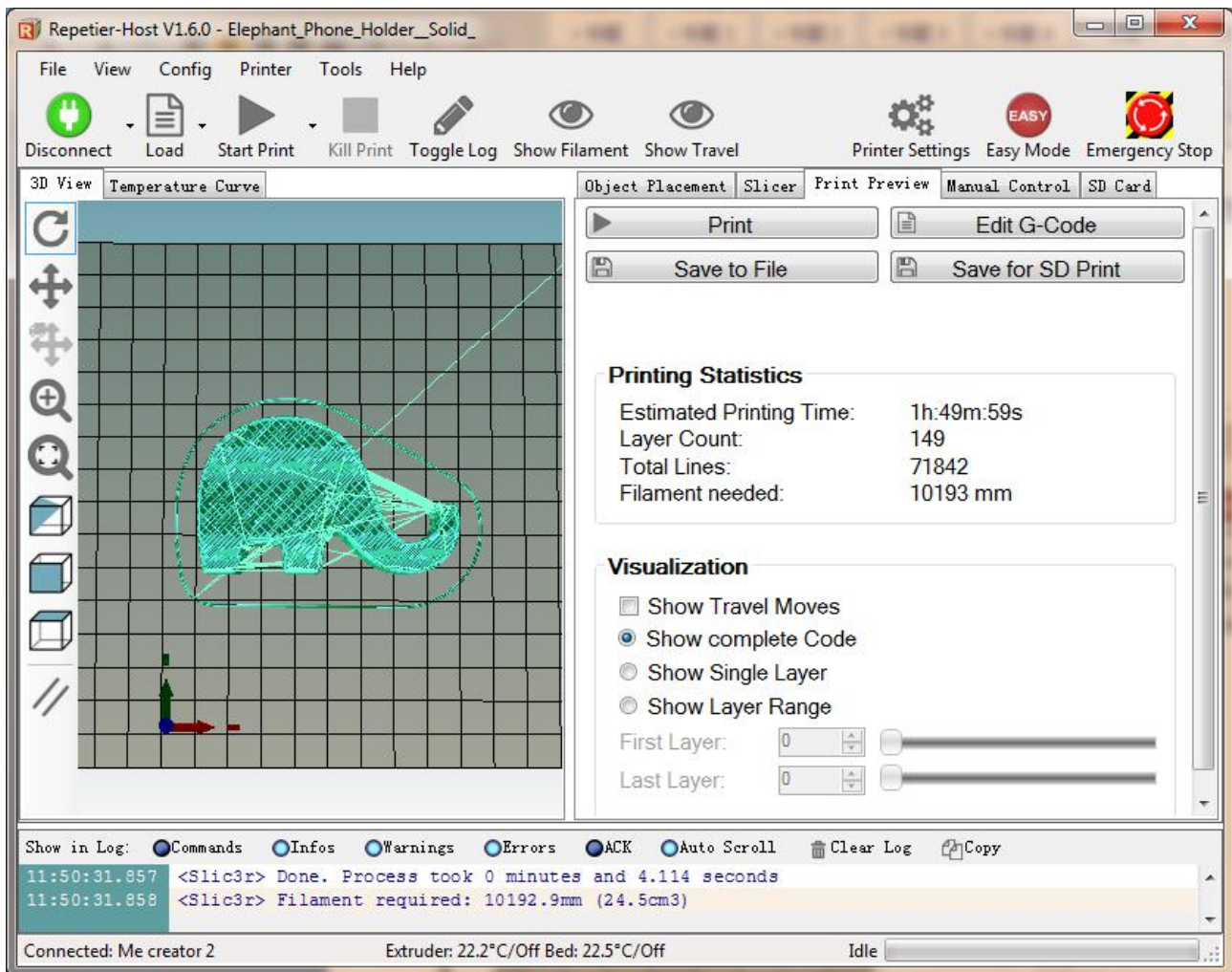
You can use the following button to enlarge, shrink or rotate it.



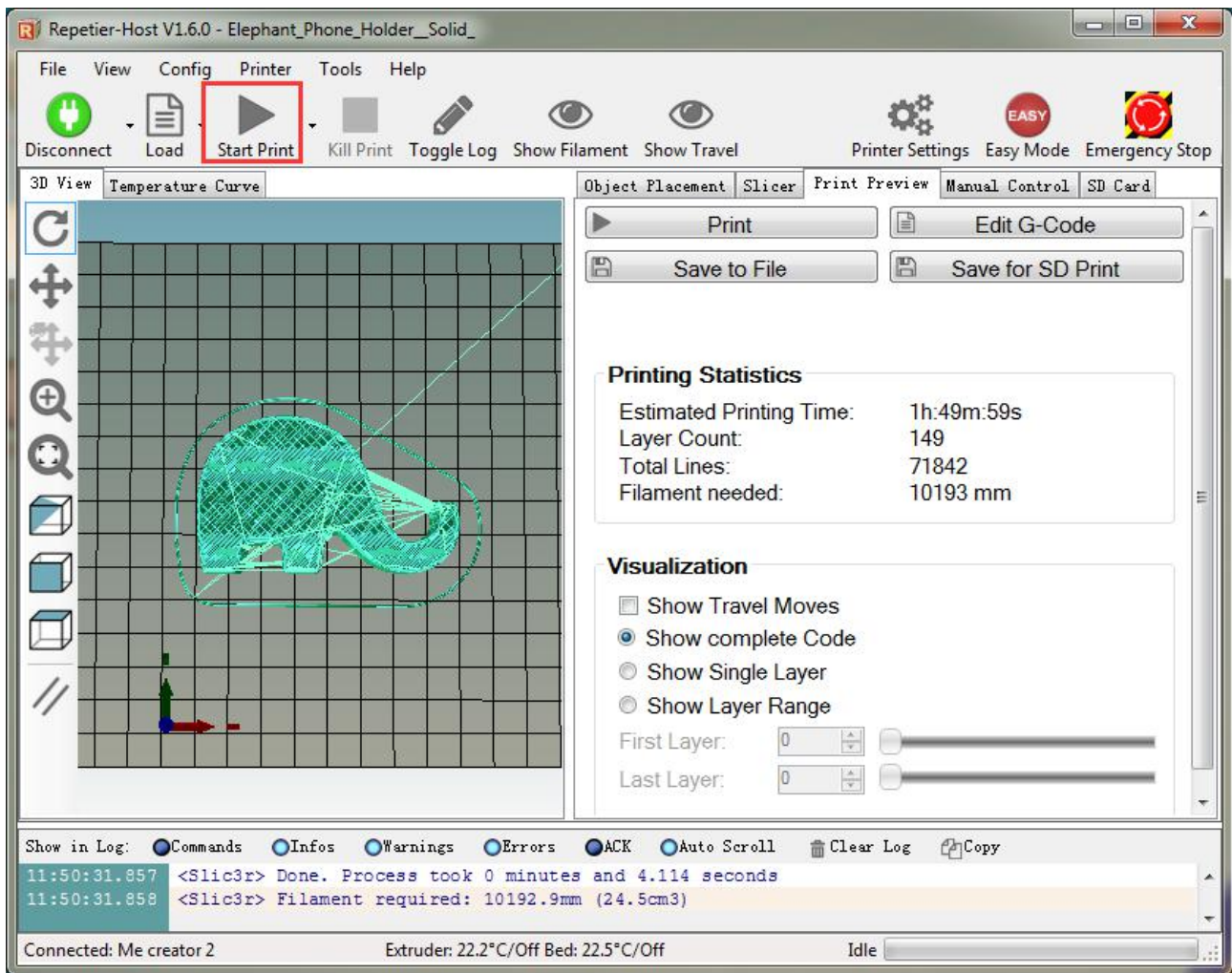
After setting the size, choose the slicing parameters which were imported before in **slicer** window, and click slicing.



Now the .gcode file which can be recognized by the printer is generated.



click printing button to start printing.



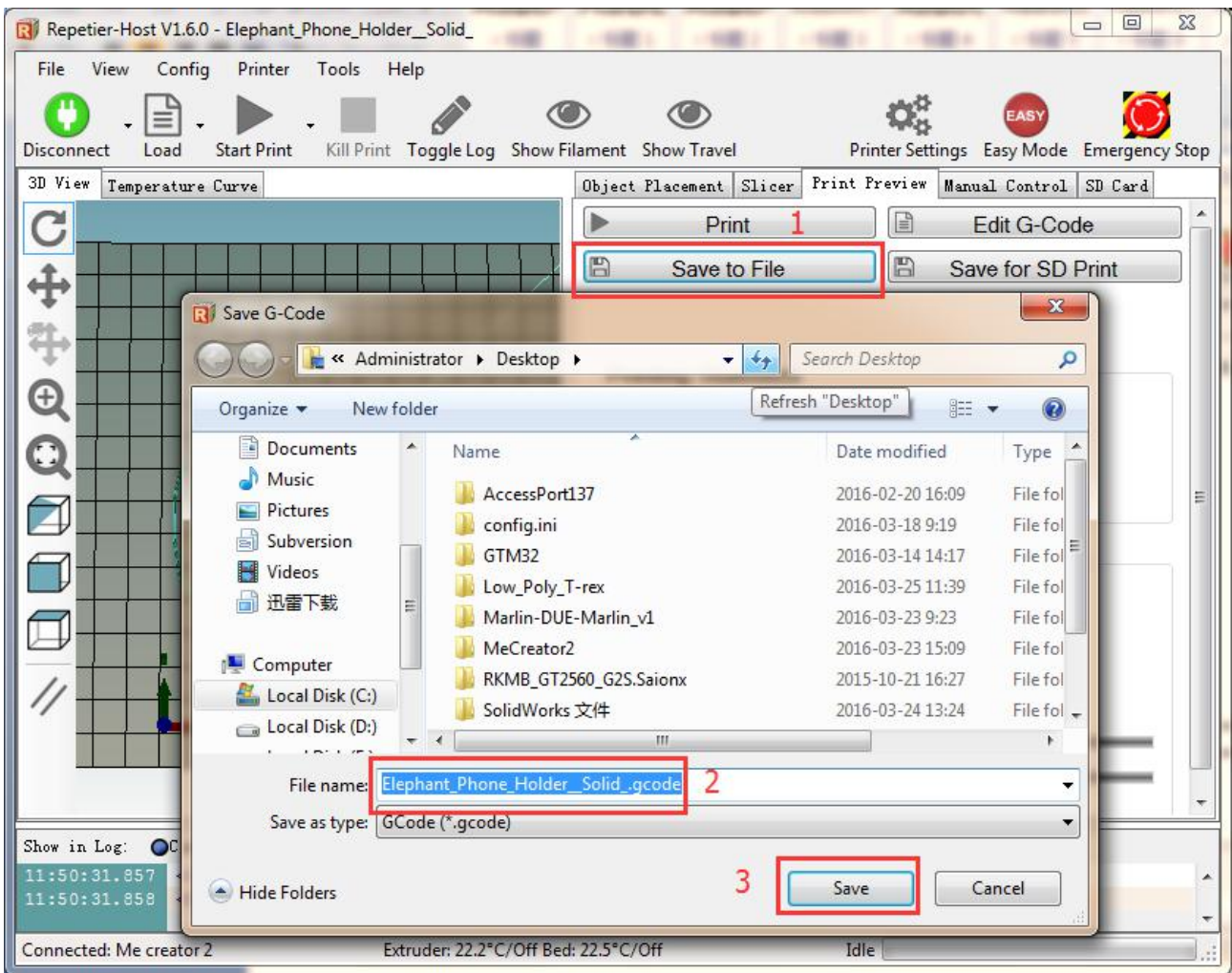
8.3 Stand-alone Printing with SD card

If you want to use SD card to print, we can save g.code file into SD card for printing.

Note: the printer can only recognize .gcode file, and it can not be put in any folder!

8.3.1 Save

Click **Save to File**, and choose save button in the dialog. Choose the saving path, and produce g.code file which can be used for printing with SD card.



8.3.3 Printing

Insert the SD card into the printer, choose corresponding .gcode file to print.

Press the knob on LCD, enter the main menu, and choose the **Print from SD**.



Choose corresponding g.code file to begin printing.



Heating



It will automatically print after heating is finished.

9.FAQ

If you have any problem when you use the printer, you can visit our forum <http://www.geeetech.com/forum/> There are detailed solutions on the forum. FAQ are as follows:

9.1 How to upload the firmware?

9.1.1 upload the firmware in Win7 OS

To upload the firmware, we need following tools:

1.Arduino IDE

Arduino1.0.1 is recommended, and you can download it here:

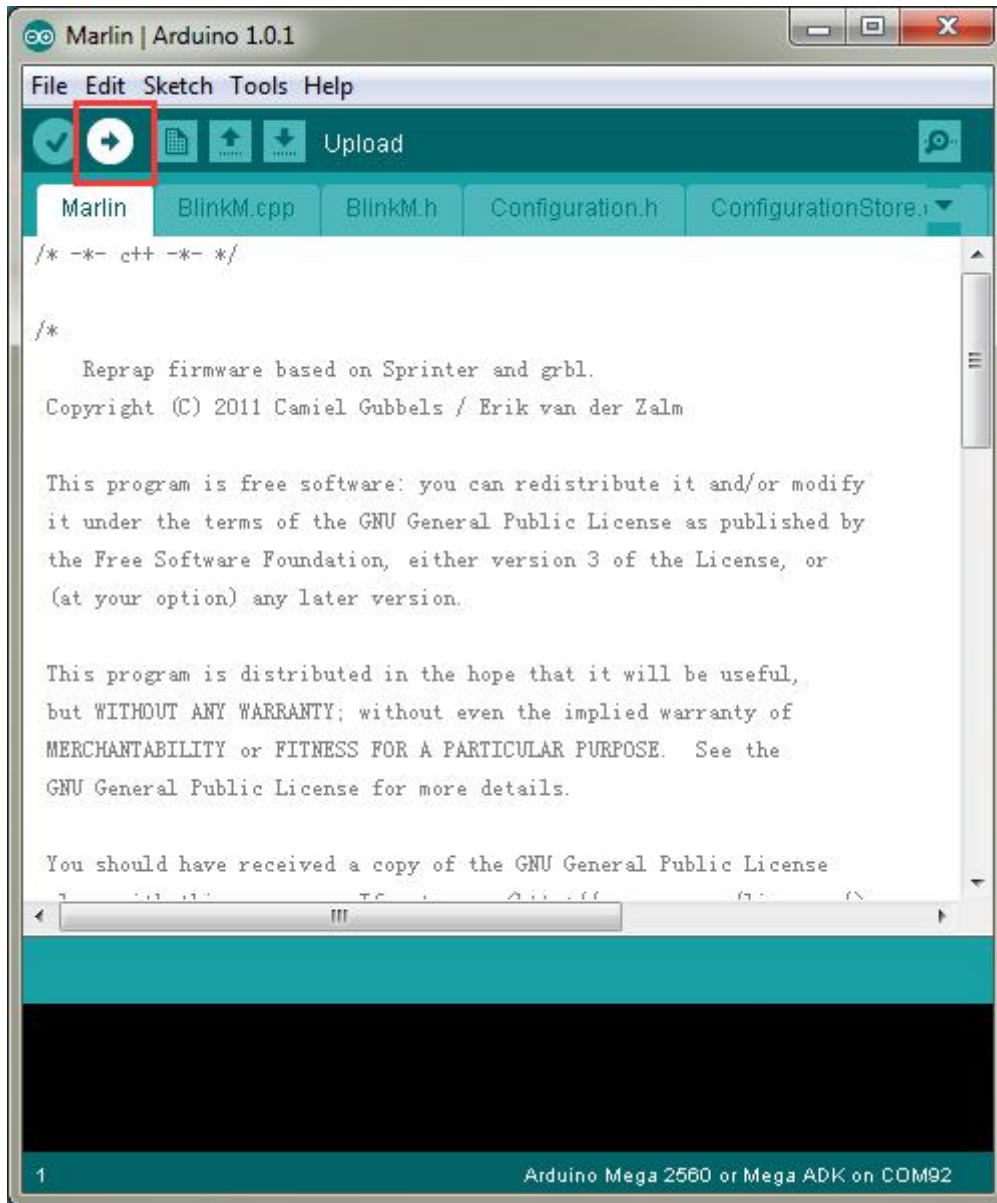
<http://www.geeetech.com/wiki/images/a/a2/Arduino-1.0.1-windows.zip>

2. the firmware for the printer

Me Creator uses GT2560 control board. Download the firmware of Me Creator2 here:

<http://www.geeetech.com/forum/viewtopic.php?f=20&t=17046>

After Arduino and firmware are downloaded, you can upload the firmware. First please connect the printer and computer with USB cable, then open arduino1.0.1 software to upload the firmware. Choose corresponding control board and COM port, and click upload button to upload the firmware.



For detailed uploading process, please refer to:

<http://www.geeetech.com/forum/viewtopic.php?f=13&t=17181>

9.1.2 Upload the firmware in Mac OS

The way of installing driver and uploading firmware in Mac OS is similar with that in Win 7 OS. For detailed method please refer to this link:

<http://www.geeetech.com/forum/viewtopic.php?f=21&p=27952#p27952>

9.2 Change the motor direction

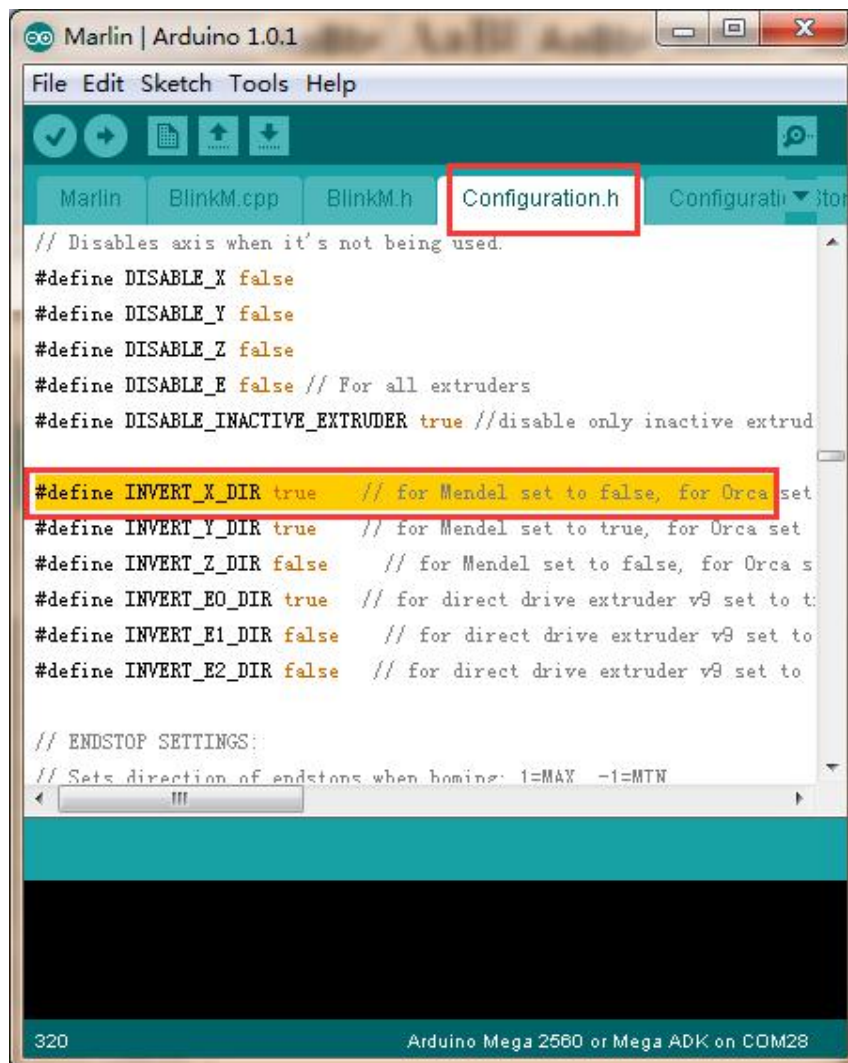
In the configuration.h tab of firmware, find the following codes. Change the true of corresponding axis into false or false into true, and save the firmware and upload it into the printer. (Because you don't know the firmware which has been uploaded by the control board is true or false, it may be necessary to upload both of the two parameters.)

```
#define INVERT_X_DIR true
```

```
#define INVERT_Y_DIR false
```

```
#define INVERT_Z_DIR true
```

```
#define INVERT_E0_DIR false
```



For detailed method, please refer to:

<http://www.geeetech.com/forum/viewtopic.php?f=13&t=17037>

9.3 Motors can not work

When you are testing the motors, if the motor of an axis has no response or can not work normally (the extruder can work when it is above 170 °C), you need check whether the motor, motor driven board or voltage of this axis can work normally or not. Meanwhile you need make sure whether the bearing is damaged or not, whether the smooth rod/screw rod is bent or not, whether the tension of belt is normal or not, whether each axis is installed correctly or not. For detailed solutions, please refer to:

<http://www.geeetech.com/forum/viewtopic.php?f=17&t=17038>

9.4 Extruder can not work/ extrusion not fluent

When you are testing the extruder, make sure the temperature is over 170°C. If you find that the extruder doesn't work or the extrusion is not fluent, or there is click noise, you need check the motor or clean the barrel and nozzle of the extruder. For detailed method please refer to :

<http://www.geeetech.com/forum/viewtopic.php?f=19&t=17097>

9.5 Printing quality optimization

If there are problems such as stringing, warped edge, the first layer not sticking to the bed, and poor surface quality, you can refer to following link to do adjustment for parameters:

<http://www.geeetech.com/forum/viewtopic.php?f=26&t=17183>

specifications

Printing specifications:

Print technology: FDM

Build volume: 160x160x160mm

Printing precision: 0.05mm

Print Speed: 60-80mm/s

Positioning precision: X/Y: 0.05mm. Z: 0.02mm

Filament diameter: 1.75mm Nozzle diameter: 0.4mm

Filament type: ABS/PLA/flexible PLA/wood-polymer

Software:

Operating system: Windows/Mac/Linux

Control software: Repetier-Host, Printron

Slicing software: Slic3r, Cura-engine

File format: .STL, 3ds, obj, amf, dae, G-code

Temperature:

Max heated bed temperature: About 110 °C

Max extruder temperature: About 240°C

Electrical:

Power Input: 115V/230V 360W Power Output: DC12V/29A

Connectivity: USB, SD card (support stand-alone printing)

Mechanical:

Chasis: metal sheet

Build Platform: Aluminum alloy plate+ heatbed

XYZ Rods: Wear-resistant, stainless steel and lead screw(Z axis)

Stepper Motors: 1.8°step angle with 1/16 micro-stepping

Physical Dimensions & Weight

Machine Dimension: 320x320x360 mm

Shipping box Dimension:460x460x410mm

Machine Net weight: 9.05kg

Machine Shipping weight: 17.5kg

Contact us

<p>Technical support</p>	<p>1. There are lots of documents and troubleshooting for MeCreator 2 on our website. They are good resources if you would like to quickly solve problems by yourself.</p> <p>2.If you still can not solve problems yourself even with the help of above files, you can send e-mail to technical@geeetech.com, we will reply to you within 24 hours.</p>
<p>Sales</p>	<p>For more products of Geeetech, please visit www.geeetech.com or send e-mail to sales@geeetech.com</p>
<p>Feedback</p>	<p>In order to improve our products to provide better user experience, please send your comments and suggestions to Rita.xiang@geeetech.cn. We will appreciate to hear your valuable suggestions.</p>



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