



Desktop 3D Printer Riwell RL200A User Manual



JuRong Riwell Electrical Co.,Ltd.

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1. Introductions


1.1 Manual introduction

This user manual includes product overview, operating instructions, printing and testing model, maintenance and troubleshooting, and others. Please read carefully and use the 3D printer according to the user manual.

1.2 Cautions

1.2.1 Safety attentions

 Jurong Riwell Electric Co., Ltd. does not recommend using other brands of consumable, in order to obtain optimal 3D printing results, please use the dedicated consumable supplied by Jurong Riwell Electric Co., Ltd. The maintenance and repair will not be included in the warranty which caused by using other consumable that not supplied by Jurong Riwell Electric Co., Ltd.

 Please do not touch when the machine is working or right after printing finish, the temperature of the model, nozzles, print platform or other parts of the internal body is high.

1.2.2 Contact Riwell

If you are going to contact Jurong Riwell Electric Co., Ltd., or seeking RL200A 3D printer driver, software, services or support, please visit





<http://www.myriwell.com>

5. SD Card User's Guide: Regarding the usage and troubleshooting information you can find in the SD card attached in the accessories.

6. HTML (online) user guide: please visit Jurong Li Weier Electric Co. website <http://www.myriwell.com>. More information of usage and troubleshooting can be

found in our website.

Identification and interpretation:

Note	The information of 3D printer is subject to our website.
warning	 means Potentially hazardous, if not be avoided, it could result in injury  means Do not touch  means Do not touch for long time  means The component parts are heated to high temperature

1.3 Item list

Item list

3D printer	1 set
Power cable	1 pcs
USB connecting wire	1 pcs
Tool bag	1 set
Printing supplies	1 roll
Qualification certificate	1 pcs
SD card	1 pcs
Packing list	1 pcs

2. Product overview

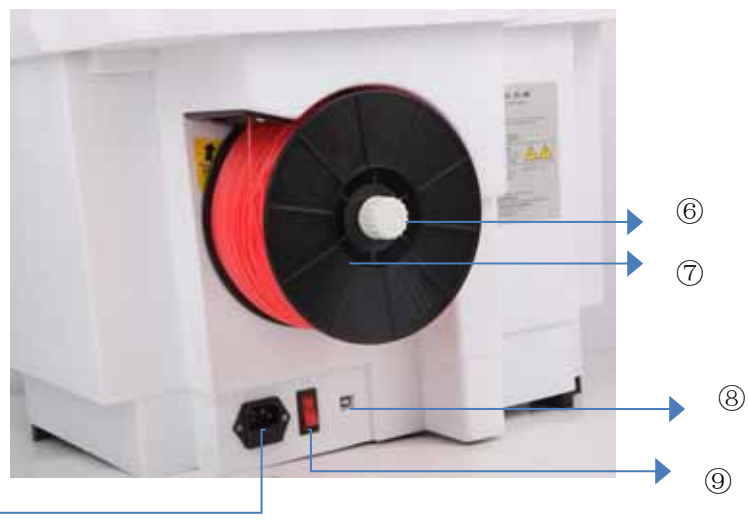
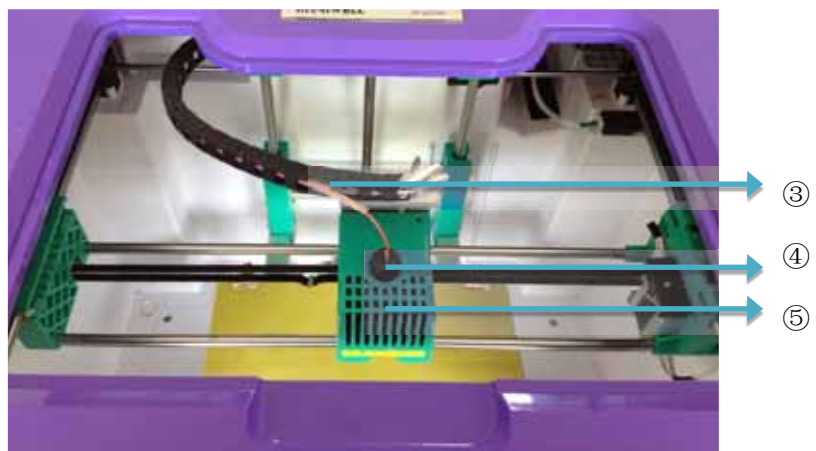
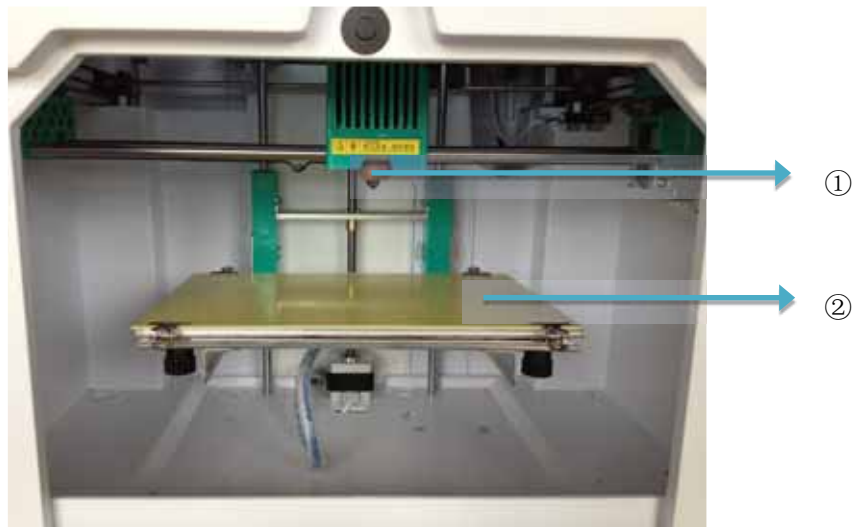
Based on Fused Deposition Modeling, RL200A is the rapid prototyping device that connect to the computer to print online via a USB cable or through an SD card for print spooling. It can complete a variety of complex three-dimensional solid model of the print job only by copying Gcode file from the SD card to normal computer or laptop. This device is easy to operate, even if never used 3D printers you can also use RL200A easily to print all kinds of three-dimensional models.

2.1 Appearance

RL200A appearances of the various parts are shown as following diagram (due to upgrade or optimize the appearance or internal structural changes, please take the material object as the standard).



front view



RL200A Device

1 Heating nozzle

2 Printer bed

-
- ③ **Guide tube**
 - ④ **Extruder hole**
 - ⑤ **Cooling fan**
 - ⑥ **Spool holder (Include nut)**
 - ⑦ **Filament**
 - ⑧ **Interface**
 - ⑨ **Power switch**
 - ⑩ **Power port**

Note:

- The printing plate is installed on a PCB substrate of the print platform, the temperature is high (up to 90°C) when printing, please do not touch.
- The temperature of nozzle can reach over 200°C when printing , please do not touch when printing as well as right after the printing finish.



① LCD Screen

Print device

② SD Card

③ Control button



Tool bag



SD card



Power cable



USB line

2.2 specification

2.2.1 parameter

RP Process	FDM (Fused Deposition Modeling)
Machine Size	570mm×515mm×470mm
Packing Dimension	585mm×525mm×480mm
Model Size	225mm×145mm×150mm
Modeling Precision	±0.2mm/100mm
Layer Thickness	0.15mm~0.4mm
Modeling Speed	10~60mm/s
Nozzle Dia.	0.4mm
Velocity	±24cc/h
Working Temp	Extruder 180-260°C, Baseplate 60-110°C
Material	ABS/PLA White/Red/Yellow/Green/Black/Blue etc.
Workstation Compatibility	Windows®7/Windows®XP/Windows®Vista/Linux
Interface	USB
Power Consumption	250W ,100-120/200-240VAC ,50/60Hz
Operation Environment	Temperature 10°C-32.5°C Humidity 20%-80% (RH)
Language	Chinese/English
File Format	STL
Weight	11kg (Net Weight) /13kg (Package Weight)
Accessory	Tools, consumable, SD card

Note The above parameters are subject to updated information without notice.
Please visit the our Web site <http://www.myriwell.com> for latest information.

2.2.3 Environmental specification

Environmental specification

Operating environment	<ul style="list-style-type: none">● installed in a well-ventilated, dust-free area。● temperature: 15°C to 35°C● humidity: 20% to 80% (RH)
Storage environment	<ul style="list-style-type: none">● temperature: 0°C to 40°C● humidity: 10% to 80% (RH)● non-corrosive gases existing and clean occasion

Note The above parameters are subject to updated information without notice. Please visit the our Web site <http://www.myriwell.com> for latest information.

3. Operating instructions

3.1 Unpacking

1) Check the appearance of 3D printers, whether there are bumps, scratches and other defects.

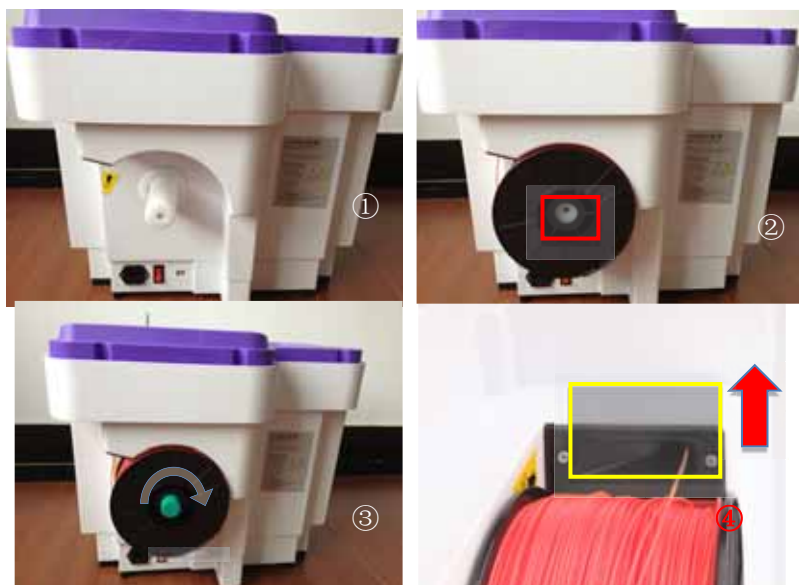
2) Open the cover, cut out ribbon what it fasten extruder.



Picture 3.1

3) Manually move the nozzle, check if its X, Y direction is flexible.

4) Remove the packet, pick the filament roll up, put it on the filament scroll and pull it through the wire feeding hole. As the picture 3.2, filament get through the wire guiding tube, then insert the hole at the top of the nozzle.



Picture 3.2

3.2 Computer setting up

Before RL200A 3D printer working, make sure you use a properly grounded electrical outlet, and turn on the power switch on the posterior wall of the 3D printer, but do not connect the USB to the computer (please do it after installing the following software and drivers).

Please install the driver and control software by following the steps as below.

3.2.1 Install driver

- 1) run “myriwell.exe”:  , as shown in picture 3.3:



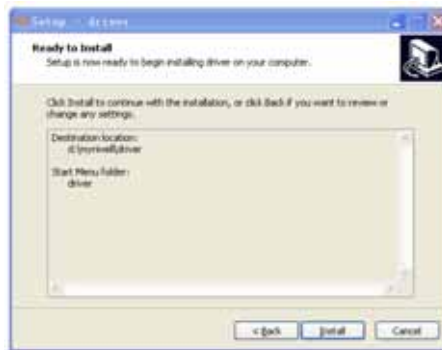
Picture 3.3

- 2) click“Next”, Select destination for driver installing, it is recommended to use the default directory, as shown in picture 3.4:



Picture 3.4

3) Keep clicking "Next", don't have to operate for any other until picture 3.5 comes out, click "Install" to install the plug-in:



Picture 3.5

4) Click "Finish" and choose "Launch" to start installing, we recommend to always choose "Next" or "Finish":



Picture 3.6

5) After installation is complete, it is shown as Picture 3.7:




Picture 3.7




6) Select "Next" as picture 3.7 show to start "MyRiwell" Setup Wizard, we recommend that you select the default "next" during installation and create a desktop shortcut, when installed, it will appear the interface as shown in Picture 3.8;

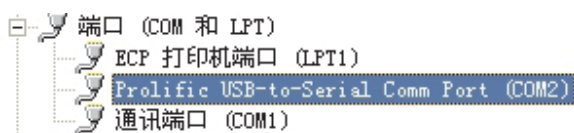


Picture 3.8


7) Clicking "finish" will end Myriwell 3D printing software installation as shown in picture 3.8. If you choose to create a desktop shortcut, when the installation is complete, the desktop icon  will appear.

3.2.2 Install driver

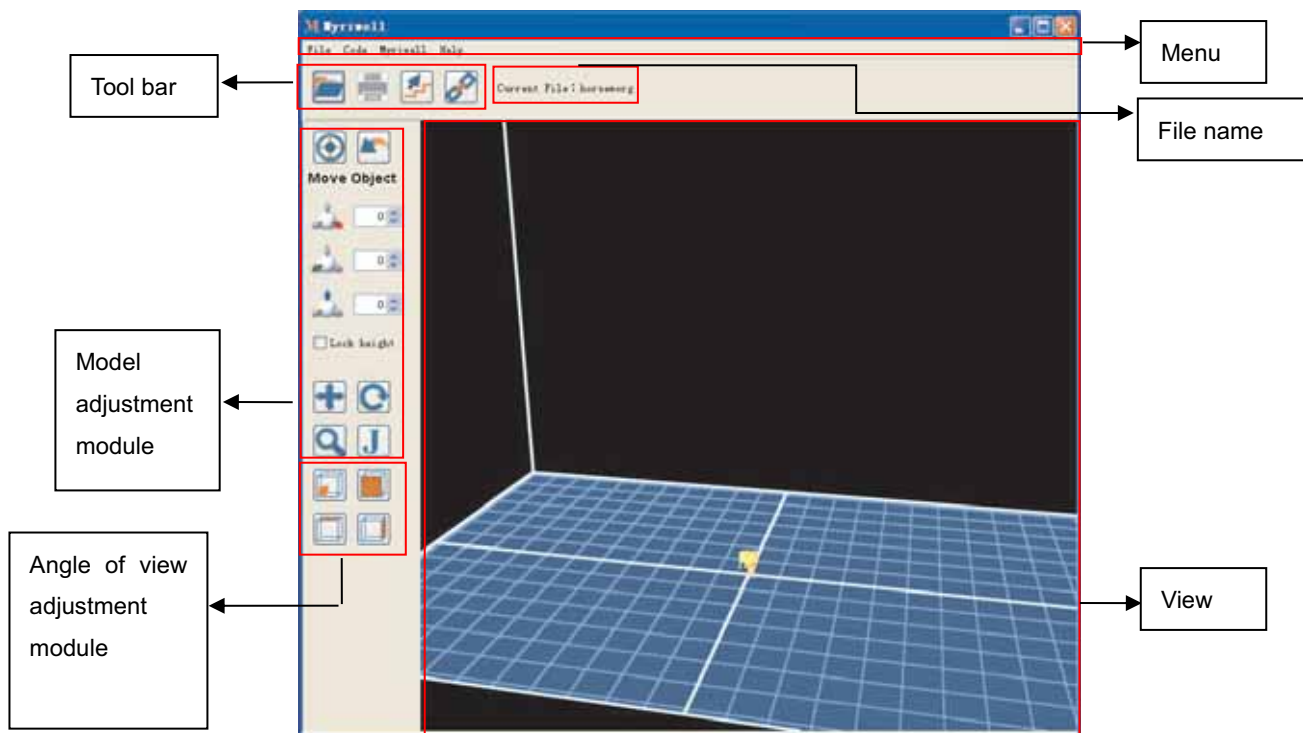
- 1) Choose the driver installation folder  ;
- 2) In the PL2303 driver folder, select one of the following two folders according to your computer's operating system   ;
- 3) Enter the folder, you can directly click to install, if PL2303 driver has been installed in the system, we recommend that you uninstall the driver then restart the computer to install the driver again;
- 4) When driver installation is completed, connect the printer and computer by USB cable, when the electricity is turned on, check your computer's Device Manager, add new device port in the port directory :



3.2.3 Software description

- 1) After installing the software, click the icon  to run the software, the main

interface appears, as shown in picture 3.9:

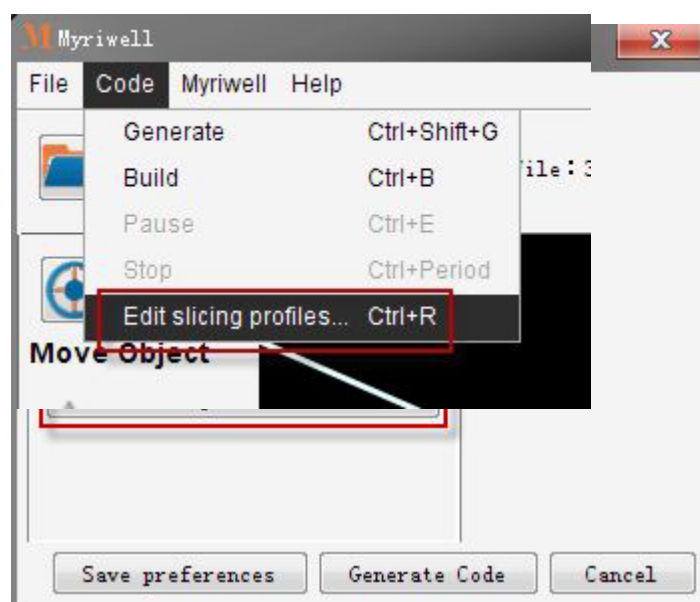


Picture 3.9

Note: when the first time you run this program, please make sure select the print mode when generating files. Shown as picture 3.10:

Note: The open source software ReplicatorG37 is compatible in this printer, and we can operate online printing by this software, as well achieve SD card printing via the G code generated by this software; Moreover the G code generated by the latest version ReplicatorG-0040 is also supported in SD card printing (not be supported in online printing).

Attention: If use these softwares above, please select Machine menu, and select teacip(112500) in Machine Type; Baud rate should be match for printer's firmware.



Advanced setting:

It is use to adjust the parameters of printer to improve print quality, This option for professional user. Usually set defaults option.

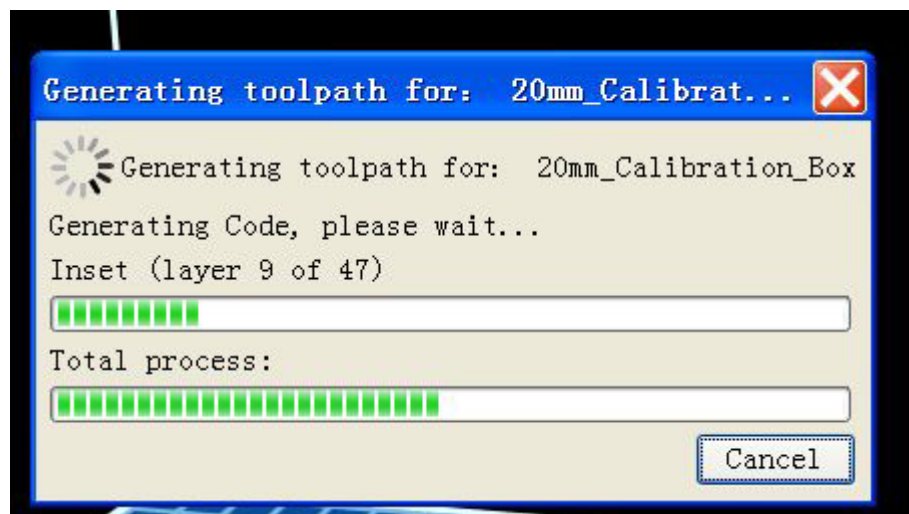


picture 3.10

Note: All of the firmware upgrades have to through Myriwell software.

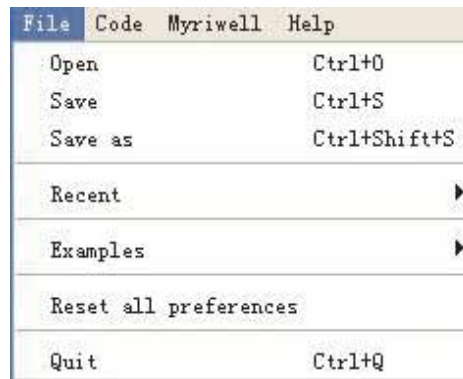
Otherwise the files will be generated and will not show as below picture

3.11:



Picture3.11

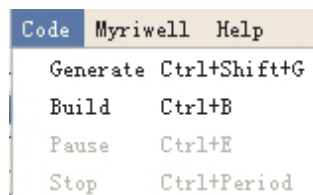
2) Select the menu "File" the drop-down menu will come out as shown in picture 3.10:



Picture 3.12

"Open" is used to import STL files, "save" is used to save the current STL file in the current directory, "Recent Files" list recent imported STL file to software, "testing (model examples)" list sample STL files come with the software, "Restoring default printer settings" will clear all the records and exit, "Exit" is used to exit;

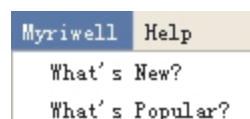
3) Select the menu "Code" the drop-down menu will come out as shown in picture 3.11:



Picture 3.13

"Generate processing code" is used to generate the current STL file to GCODE file "print file" is used for printing after getting the GCODE file, "Pause" and "Stop" to control the printing process;

4) Select the menu "Myriwell Technology" the drop-down menu will come out as shown in picture 3.12:







Picture 3.14

Select "New" and "most popular" to browse the website about the 3D printer;



5) Select the menu "Help" the drop-down menu will come out as shown in picture 3.13:


Picture 3.15

Select "Offline Documents" to open the note;

6) The icon  in the tool bar is used to import the STL file, the icon  is used to start online printing, the icon  is used to update the firmware, the icon  is used to select the machine you want to connect;



7) it shows the name of STL file;

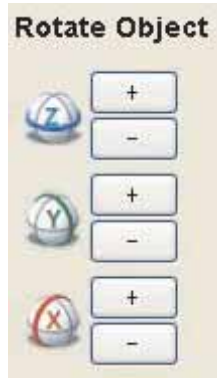
8) The icon  in the model adjustment module is used to move the drawing in the middle of the view,  is used to cancel the operation;

9) The icon  in the model adjustment module is used to move the model in the view, in the picture3.14 the three icons are used to move the model from X、Y、Z three different ways, meanwhile we can drag the model by clicking the left mouse button. If choose ☐ Lock height the Z-axis height will be fixed when moving the model:




Picture 3.16

10) The icon  in the model adjustment module is used to rotate the model, as shown in the picture3.15 the three icons of X、Y、Z are Respectively used to rotate the model with $\pm 90^\circ$.  this icon is used to flat the model, meanwhile we can rotate the model with any angle by clicking the left mouse button. If choose ☐ Rotate around Z, the model will be rotated around the Z-axis fixedly:








Picture 3.17


11) The icon  in the model adjustment module is used to zoom in/out the model, the interface as picture3.16 shown will come out:

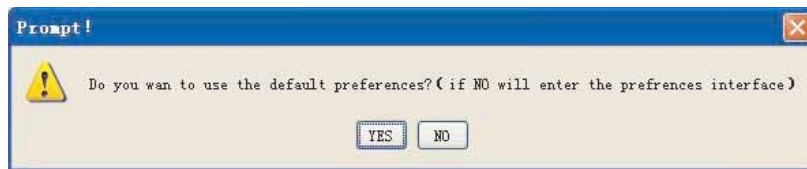


Picture 3.18

 is used to zoom in the model,  is used to zoom out the model,  is used to let the model fill the entire view,  is used to scale the model according to the  coefficient;

12) Angle adjustment module is used to view the model in different visual angles;

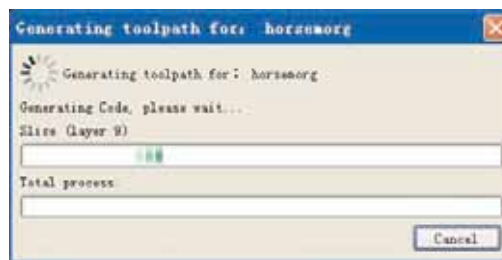
13) The icon  in the model adjustment module is used to make STL file to generate executable file, once clicking, it may come out pop-up dialog box according to the actual model, Please choose according to the actual requirements. Continue to operate, the dialog box will come out as shown in picture 3.17:



Picture 3.19

choose "yes", The model will be converted into executable file by default parameter settings, then the dialog box comes out to show the conversion progress as shown in the picture3.18, if choose "no", then enter the dialog box of parameters setting as shown in picture3.20.

14) Picture 3.18 shows the progress of making the model to convert into executable file, you can "Cancel" what you have chosen to stop the current conversion:



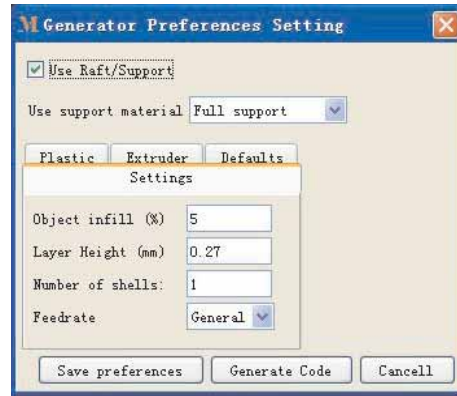
Picture 3.20

The time of this process is depending on the sizes of different files, once the conversion is completed, the dialog box come out as shown in picture 3.19, if the machine is already connected, you can select "Online Print" to start printing the model; choose "SD mode" the generated executable file will be saved in designated folder; choose "Back", the generated executable file and current STL file will be saved in the same folder, it will not print.



Picture 3.21

15) Picture 3.20 shows the dialog box of parameter setting of converting model into an executable file:



Picture 3.22


Clicking "Generate Code" will generate the corresponding executable file following the parameters.




The parameters:

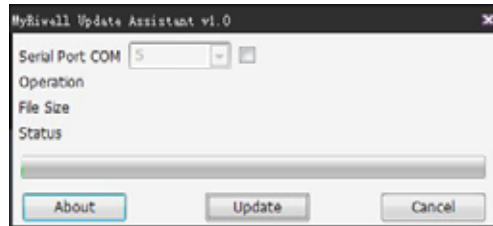
- ①、☒ **Use Raft/Support** is used to choose if use bottom support or not;
- ②、**Use support material** **Full support** there are three ways of "use support": "None" means no support, "Exterior support" means using exterior support (no support inside of model), "Full support" means using full support;
- ③、**Object infill (%)** **5** is used to set the printing device's internal fill rate;
- ④、**Layer Height (mm)** **0.27** is used to set thickness of layer, The parameters impact the quality of printing.
- ⑤、**Number of shells:** **1** is used to set the number of out layers;
- ⑥、**Feedrate** **General** it has three modes, "low speed", "normal speed", "high speed", it impact the printing speed;
- ⑦、**Nozzle Diameter (mm)** **.4** it impacts the printing accuracy;
- ⑧、**Filament Diameter (mm)** **1.82** according to the diameter of filament material;

16) Update firmware

- ①、connect the computer and printer by USB cable;

②、select the connect button in the tool bar  , till successfully connecting the machine;

③、select the button of update firmware in the tool bar  ; At this point the software will remind "machine is connected, if you need to update the firmware, first disconnect" , select OK, and click  disconnect. Then click  again,



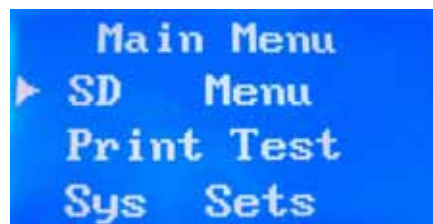
④、click "Updata", and wait till the process is finished, then the update firmware is completed;

⑤、After the update is complete then restart the machine, it will quit firmware update program and USB cable will be disconnected.

3.3 LCD display

3.3.1 Main interface

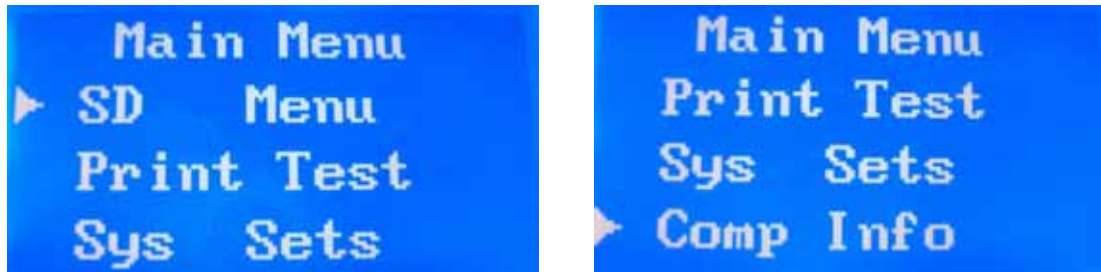
Turn on the power, the main interface is shown as below。



Picture 3.23

3.3.2 Preparation

1) Once turn on the power, there are four modes on the LCD display: SD menu, print testing, system setting, company information, as shown in picture 3.24.



Picture 3.24

2) The function of five buttons: up and down buttons are used to go up and down, left and right buttons are used to page-turning operation, middle button is used to confirm, shown as picture 3.25



picture3.25

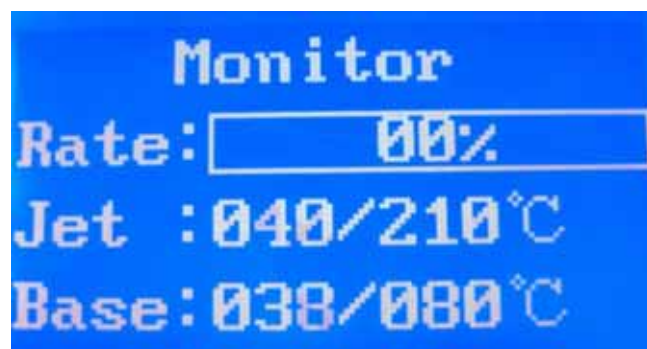
3) If the SD card has been inserted in the machine, choose “SD menu” and you will see all the GCODE files in the root directory of SD card. Insert the SD card as shown picture 3.26, select “SD menu” and enter the root directory as shown picture 3.27. GCODE file will be shown as .G format.



picture3.26

picture3.27

4) It will start SD printing mode by choosing any GCODE file in SD menu; this is the display in SD menu as shown picture 3.28



picture3.28

4) In the SD card printing process, press the middle confirmation button, LCD screen will display relevant options of "Cancel Printing", confirm again will cancel the printing.



picture3.29



Picture 3.30

6) In the main menu, select "Print Test" to enter the "Print Test" menu, shown as picture 3.31.



picture 3.31

Select "Start" to start testing, printing graphics are a few lines, print testing can not be canceled. Print testing process displayed as shown in picture3.32.



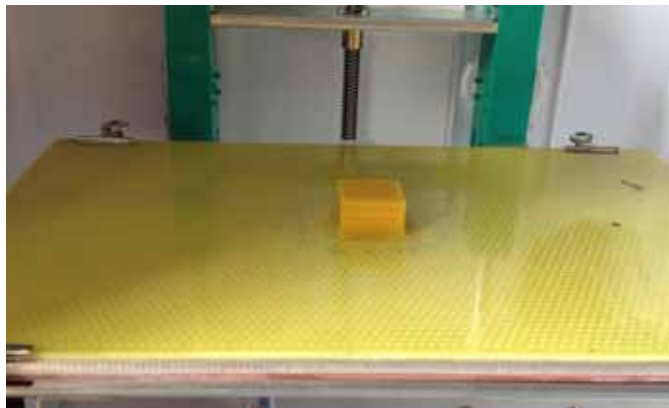
picture3.32

When Print testing is completed, it will display the printing is finished, LCD shown in picture 3.33.



picture3.33

The performance of lines after testing shown as picture 3.34. When testing is completed, the system will be automatically homing, LCD display returns to the main menu.

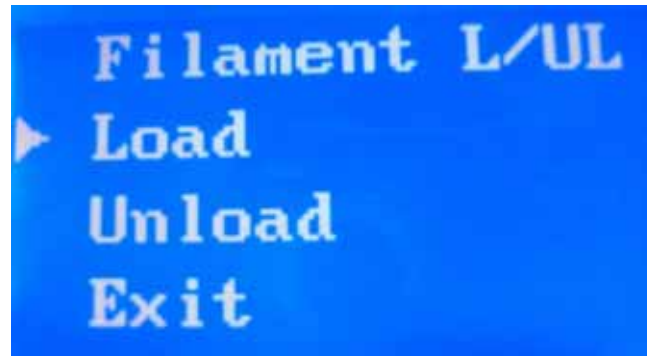


Picture3.34

7) In the main menu, select "Company Info", will display products and company information, press the enter key to return to the main menu.

8) In the main menu, select "System Settings" to enter the system setup menu, there are six modules shown in the System Settings menu : material handling, platform calibration, English (or Chinese), nozzle temperature, chassis temperature, and return, in which the return is used to return to the main menu.

9) Select "Filament L/UL" into the filament load and unload operation interface, this interface has three options modules "Load", "Unload" and "Exit." As shown in picture 3.35. Select "Load" operation, the system begins to heat the nozzle and platform.



Picture 3.35

Heating as shown in picture 3.36.

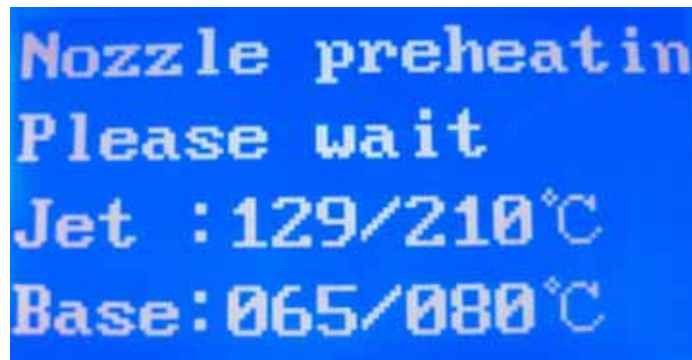
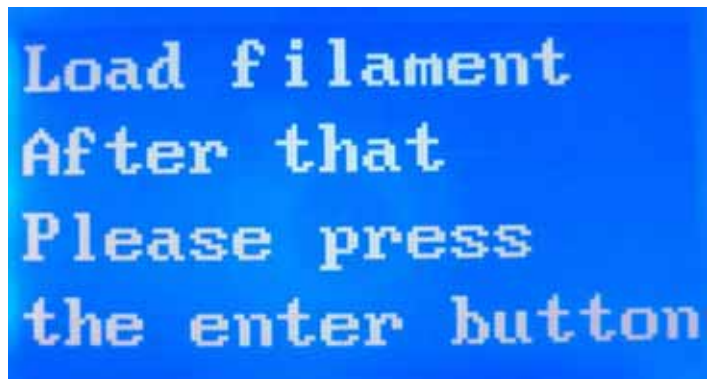


图3.36

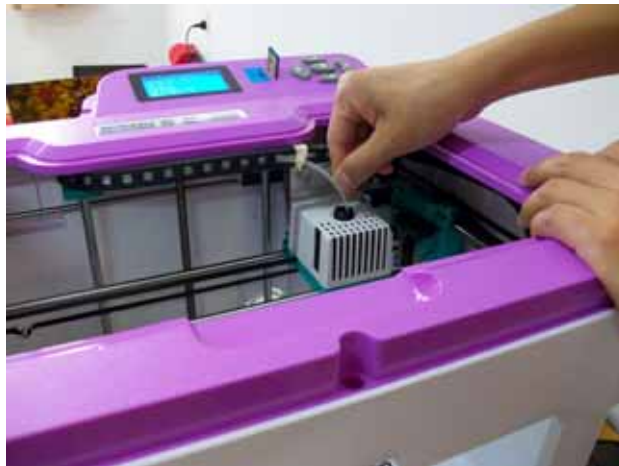
When the nozzle get the target temperature, the LCD will prompt to feed wire, as shown in picture 3.37. At this point the wire feeder is working for feeding wire (At this point you should ensure that the ABS filament access to the wire feeder).

A blue LCD screen with white text in a pixelated font. The text reads: "Load filament", "After that", "Please press", "the enter button".

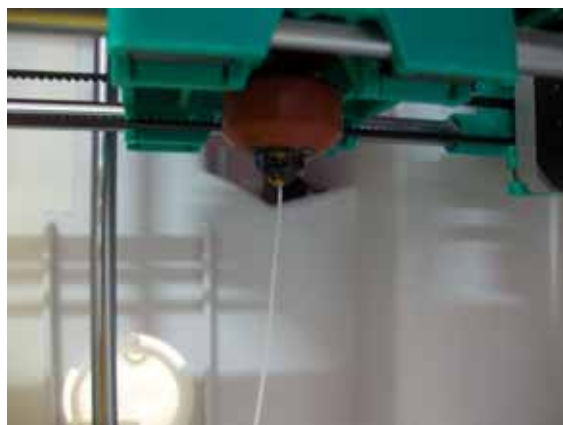
Load filament
After that
Please press
the enter button

Picture 3.37

As shown in picture 3.38, put the ABS filament into the nozzle. The motor will bring ABS material into the nozzle.

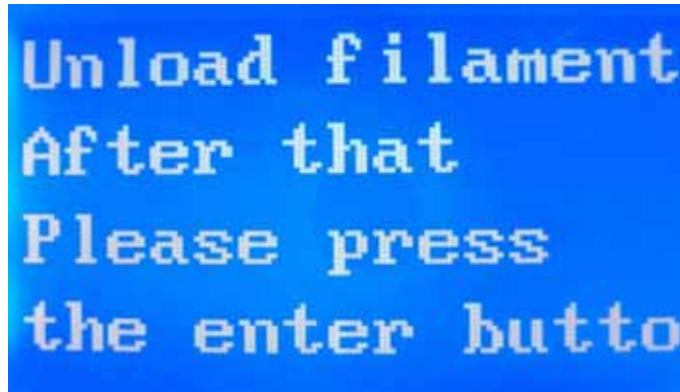


Wait for 1 minute and the filament will be spitted out from the nozzle as shown in picture 3.39. Then it indicates ABS filament has been loaded.



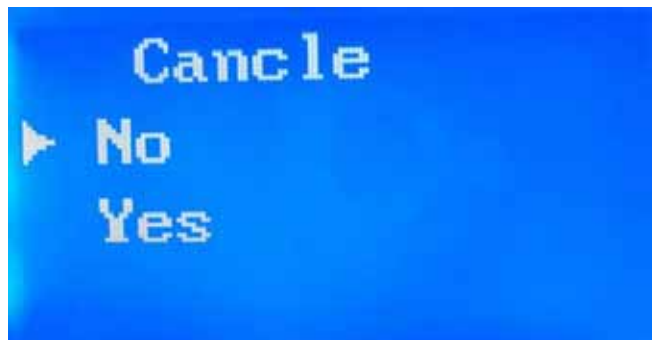
Picture 3.39

Select "Unload filament", when the nozzle get the target temperature, the LCD prompt unloading wire, as shown in picture 3.37. At this moment the wire feeder reverses for retreating wire. When it is completed, press the enter key, the system returns to the System Settings menu.



Picture 3.40

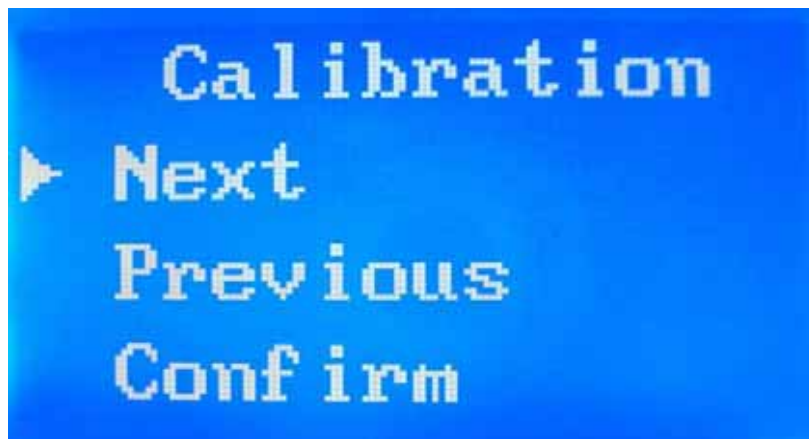
In the loading / unloading wire heating process, sometimes because of wrong operation or other reasons, if you want to cancel heating before the nozzle getting the target temperature, just press the enter key (as shown in picture 3.41) to cancel loading/unloading filament, and will return to the system setup menu.



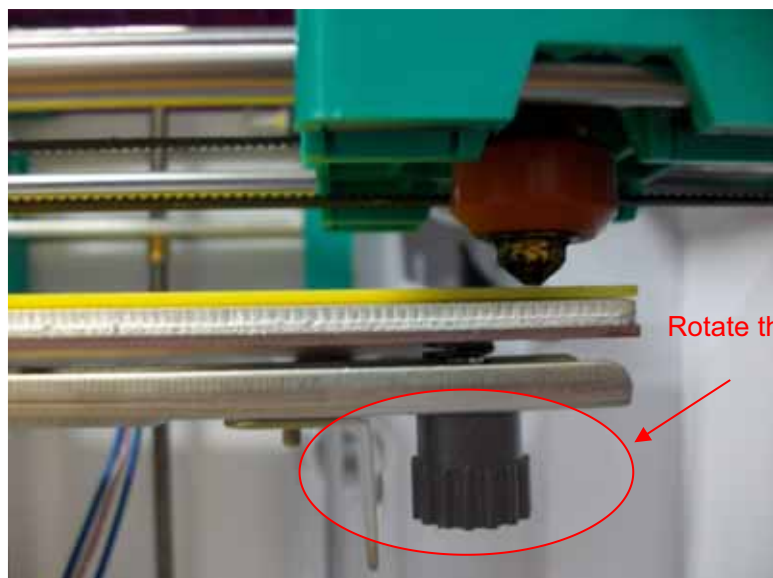
Picture 3.41

10)Select "Calibration" into the heating printer bed and calibration. The platform calibration function is mainly to adjust the space between the platform and nozzle

by rotating the screws on the platform, so as to achieve a good printing effect. The calibration interface platform has three options: Next, Previous and Confirm. Select the "Next" nozzle will move to the next set point; "Previous" to return to the previous set point; choose "Confirm", will default the platform calibration is completed, the system reset. This is shown in Picture 3.42 and 3.43:



picture 3.42



Picture 3.43

After you have correctly calibrated your nozzle height, check that the nozzle is at the same distance at all four corners of the print platform and center of the print platform. If it is not, you may need to adjust the platform until it is level with the

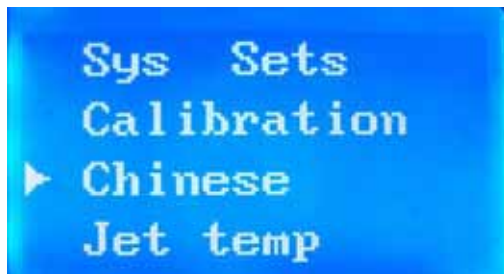
nozzle at all 4 corners and center. There are 4 screws and 4 spring washers under the platform .

Loosen a screw and the related corner of platform will rise. Tighten, or loosen, the screws until you have the same gap between the nozzle and the platform at all four corners of platform.

An easy way to check the distance between the nozzle and platform is to fold a piece of paper in two (Which will make it about 0.2mm thick) and use that as a spacer to gauge the distance between the nozzle and platform.

Note: when first time printing, make sure finish platform calibration!

11) If the system is in English, choose "Chinese", the system will automatically switch to the Chinese. If the system is in Chinese, choose "English", the system will automatically switch to the English. Language switching will be saved in the system.



picture 3.44



picture 3.45

12) Select "nozzle temperature" or "bed temperature" will be used to set the head or printer bed target temperature, modify the number by using the direction keys. After setting, the target temperature will be saved in the system until the next setting. Because of the different target temperature corresponding to the different ABS material, we recommend when you use the new material, please adjust the target nozzle temperature in accordance with the actual effect. Nozzle temperature adjustment is shown in picture 3.46.



Picture 3.46

4. Print testing

4.1 Ready for printing

4.1.1 Platform calibration

In order to ensure the safety and printing precision, calibration must be performed in the first time before printing, in the calibration the epoxy board must be installed on the platform. For specific operation please check "3.32 Preparation" in No. 10);

4.1.2 Load ABS filament

Loading filament can be divided into two steps, the first step put the ABS filament in the wire feeder through a wire casing, the second step is heating the nozzle until the ABS material is extruded from nozzle. The detailed operation of second step please check "3.32 Preparation" in No. 9);

4.1.3 Print testing


After platform calibration and loading filament, we can check if the printer and the components is running normally by print testing, please check the specific operation "3.32 Preparation" in No. 6);

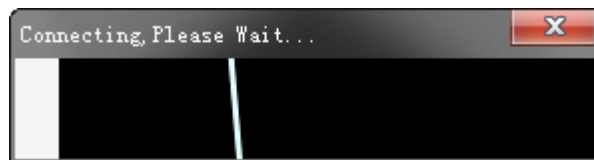
4.2 Print mode

There are two kinds of work mode: 1. Online print, 2. Off-line print by SD card

4.2.1 Online print

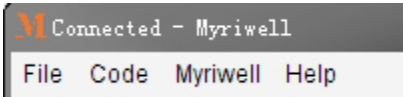
1) Click the icon  to run the software;

2) Click the icon  in the tool bar, connect the printer, the following prompt dialog box appear:







When successfully connected, will show following prompt dialog box:




Click "OK", the banner becomes  it means the connection is OK;

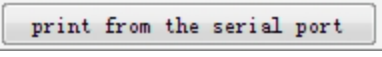

3) After connection, the icon  in the tool bar comes high bright  ;

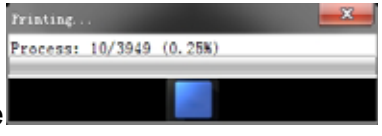

4) Click the icon  in the tool bar, select the STL file into the software;

5) When the model come out in the view, operate by  "move" 、
 "rotate"、
 "zoom" in the model adjustment module, adjust the model into a reasonable size, position and angle, we can view the model from different visual angle through angle adjustment module;

6) When model adjustment is completed, we suggest that select "save" in the "file" menu to save the model. Then click the icon , generate executable file. We can take this process by using the default parameters or selecting the related parameters;

7) After generating code, if printer is connected, select

 to start printing by serial port, the icon  will appear at the bottom of windows view, we have to wait for a moment;

8) After that it will appear the view like , meanwhile the LCD screen will show the printer is online printing. During the printing, you can click  to stop printing;


Note: in the case of online printing, printing can not be stopped before printing with extruded filament!

9) When printing is completed, the prompt dialog box will show in the software to inform the time of printing.

This is the operation brief of online print.


4.2.2 Off-line print by SD card

1) Operate by following the step 1) to step 4) in "4.2.1 online print";

2) After generating executable file, select , it appears the interface as shown in picture4.4:



Picture 4.4


For example, if you choose  SD (G:) you can save the generated executable file in the SD card, note: so far this type of Myriwell 3d printer only support FAT32 file system, you can set the SD card into FAT32 file system by formatting;

3) After executable file is generated in the SD card, you can insert the SD card to printer and select off-line printing to work.

Prompt: Platform preheating is one of key using 3D printer successfully

If the temperature is set too low, may lead to no enough adhesion force between the bottom of model and printing bed, the printing model will tilt deformation. The best way to prevent this phenomenon is: keep the printing bed fully preheated, it means to do not start printing until the temperature of printing bed reach the setted temperature (ABS:110 °C,PLA:60 °C) as shown in the software.

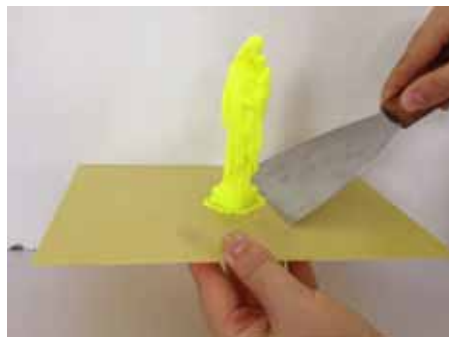
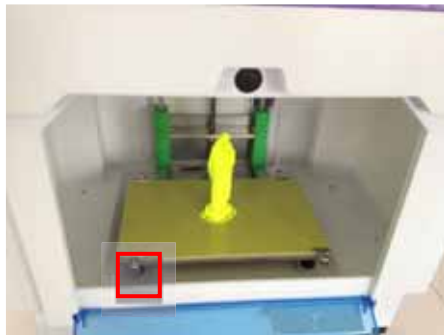
The operation step of model printing is same as print testing:

 After printing, please clean printing bed, so as not to affect the next printing. You can remove some parts which is difficult to remove by the scraper in the tool box. Printing bed is the heated platform, therefore do not touch the platform, in order to avoid burns.

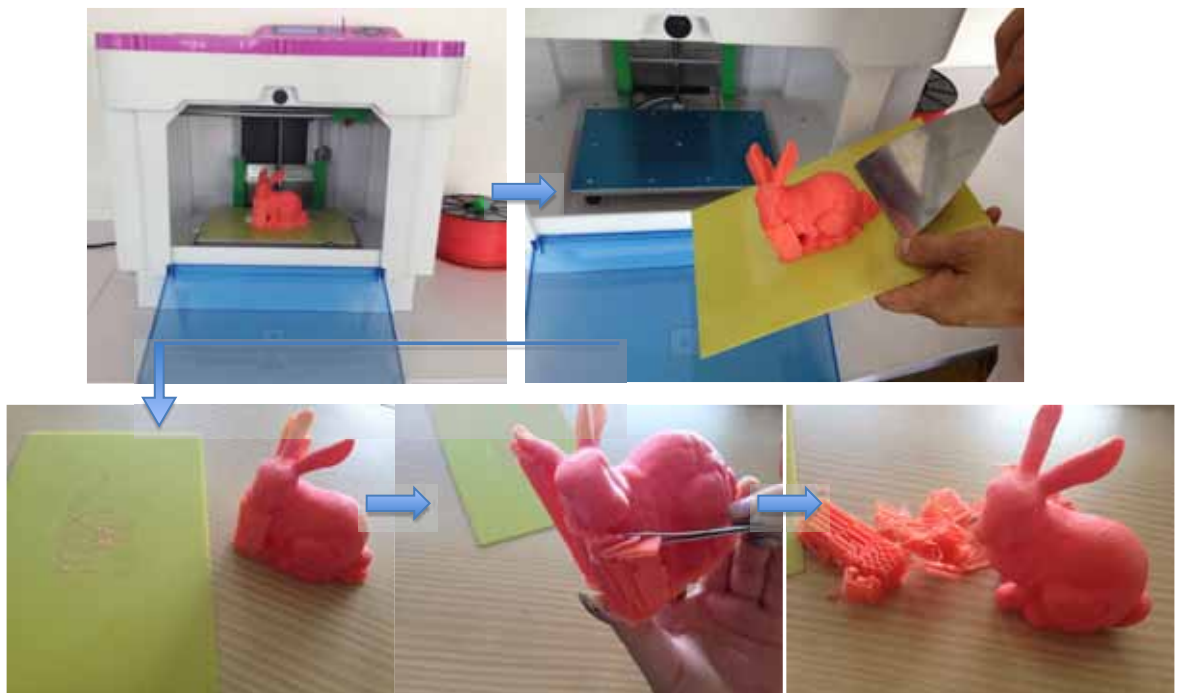
5. Take the model

After printing model, the printer will beep, nozzle and plate will return to the zero position and stop heating, system reset to the initial state.

- 1) Take the printer bed from the print platform of RL200A (that is the PCB board with regular mesh points as picture shown below). Holding the blade, put it between the model and platform, and slowly moving the shovel, prizing model back and forth. Remember that printer bed and platform has to stop heating, but it is still high temperature in a short time, beware of burns. If there is support part of the print model, support part removal can be operated by using a variety of tools in the accessory.
- 2) If there is support part of the print model, support part removal can be operated by using a variety of tools in the accessory.



Loosen the binder clips ,
remove the PCB board after
printing to remove printed
models from the printer.



Picture 5.1 take the model

Note: the two pictures above is taken after 10 minutes of stopping print, at this moment the temperature of platform is closed to room temperature.

Prompt: it is easy to remove the model from the printer bed when the model is warm.

Please note: when the print platform is not removed from the RL200A, strongly recommend that you do not remove model. If the plate is connected with printer, when remove the model by force, it may damage the printer structure and its accuracy.

6. Maintenance

RL200A does not need special maintenance, but it needs to paint the oil regularly on the principal axis and the screw rod to prevent premature aging of the moving parts.

The following listed matter is that we should note and maintain:

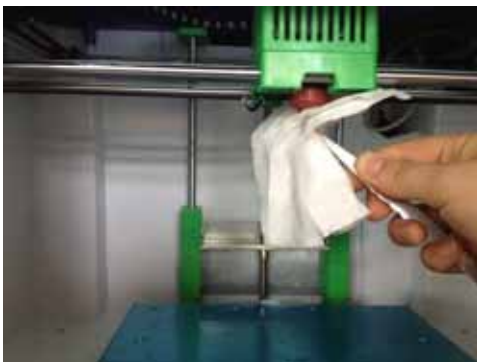
6.1 Clean the Print Head

Several times use later of printers, the print head will clog, you can use a clean, soft, damp cloth to clean the external three-dimensional printer.

Attention: Do not use ammonia-based cleaners to clean the printer or around the printer.

During the 3D printing process, some elements in the supplies, dust particles can accumulate inside the printer or print head. With the passage of time, the accumulation of material will cause print quality problems. Like print head clogging and no silk, silk Volume tumor. Printer you want to correct and avoid such problems, you can clean the print head and printer floor area.

Clean the print head generally with tweezers to remove impurities. As shown below.



Picture 6.1

If the nozzle clogged, we need to remove and clean the print head, the steps are as follows:

1) Adjust the printer bed to the lowest position, and select "loading filament", waiting for heating up to the setted temperature and buzzer. Extrude the filament by.





Picture 6.2

2) If we have diameter auger bit with diameter 0.3mm or the needle with diameter 0.3mm.

6.2 Belt Tensioning

The flat belt is loose if you find belt bending the head or both sides of RL200A. Phenomena of the belt loose such as out of step, bounce, or print less the object within the shell surface.

In addition, when the motor is selected the direction, there will be a certain amount of exercise is stored, then in the opposite direction with my hand, it can be run the right move, "bounce" may result in part of the structure of the print object inaccurate.



Attention: more information about the tension belt, see www.myriwell.com.

6.3 Lubrication Guide

In the course of work sounds very loud noise and vibrate powerful, you need to add oil to the rail. X, Y two axes rely on precision rails of 10mm diameter and Z-axis screw to ensure a smooth line movement without any swing. Add oil to reduce friction, reduce wear and tear caused by long-term exercise.

The method: choose a clean cloth and painted lubricant on the rail and screw, then screw the lubricant on screw mandrel smoothly.

Chapter 7: Trouble Clearing

Frequently Questions	
Problems	Solution
The printer 's power light is off Ready light of printer does not shine	Check power whether on. Turn the power off , reboot
Can not be connected to the printer	1. Check the UBS interface is connected properly 2. Check the USB interface corresponding to software COM interface 3. Turn the power off and then turn on the power 4. Restart the computer
the print platform failed to reach the specified temperature	1. Heater is damaged, replace the heater 2. Restart the printer
The print head has failed to reach the specified temperature	1. Heater is damaged, replace the heater 2. Replace the temperature resistance , as shown in Figure 3. Restart the printer
Print head is clogged or no plastic wire	Clean the print head, or adjust the squeeze plastic wire set screws, such as still clogged, replace the print head.
The print model is skewed (crooked)	Loose belt , need to tension the belt Loose of motor or timing belt pulleys link.
Starting up LCD diaplay “Fireware Error Update”	Reference firmware update mode, operate the firmware updating through the PC software. Note: in this case please do not clink the icon  , after connecting printer with power on, click the firmware update icon  directly. Setting by viewing the device manager equipment in the port, the firmware update plug-ins to manually set the port number in firmware

	update, then start to update.
After connection with computer, pull up the USD cable, the LCD screen become dark	Restart the printer in the case the the USB cable does no insert the computer If first time is not successful, you can try once again
Base layer curl or non-stick to print platform Software don't work	Whether the temperature of baseplate reaches the setting temperature Reinstall the software
Other failures	Technical Support

Tips: Sometimes curling phenomenon will appear when pint the large model. This is caused by the printing platform surface uneven preheat. Before printing a large model, the warm-up is essential. In addition, the smaller the print model, the less curly part prone to appear. If possible, avoid printing large models as much as possible.

Illustration and explanation

In order to facilitate your reading and understanding in the following below "Myriwell 3D printer common malfunction analysis and troubleshooting, we list some drawings of machine parts in the beginning.

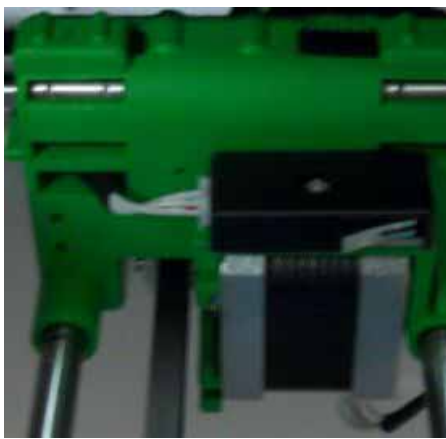
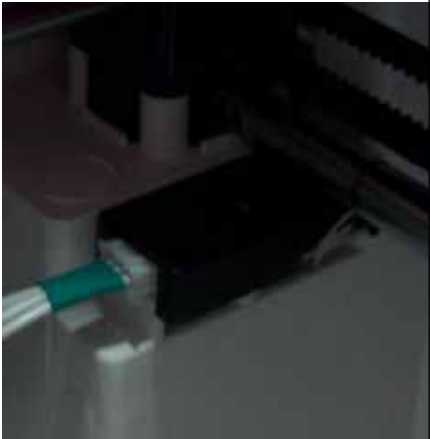
figure		
mark	Figure 1: X axis travel switch	Figure 2: Y axis travel switch


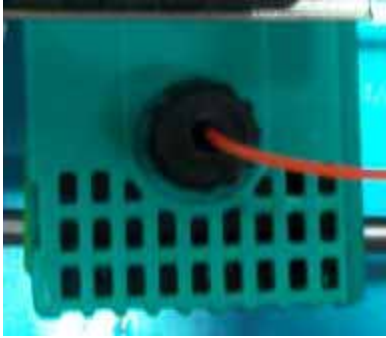
figure		
mark	Figure 3: Z axis travel switch	Figure 4: extruding motor part

figure	
mark	Figure 5: Z axis lead screw

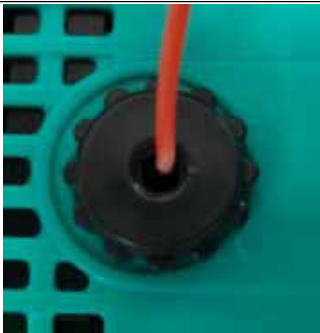

figure		
mark	Figure 6: extruding motor feed port	Figure 7: feeding tube


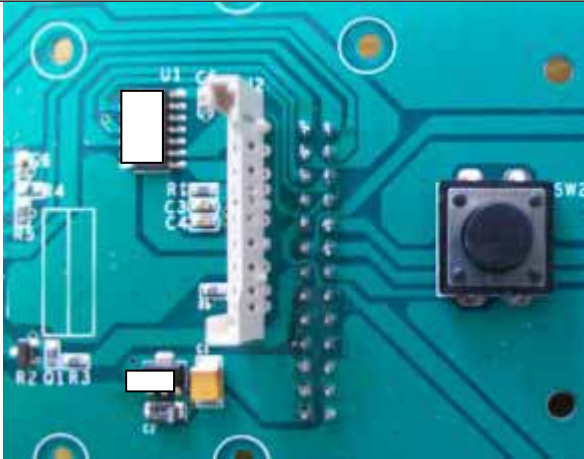

figure		
mark	Figure 8: back feed port	Figure 9: keyboard plate

figure		
mark	Figure 10: SD card slot	

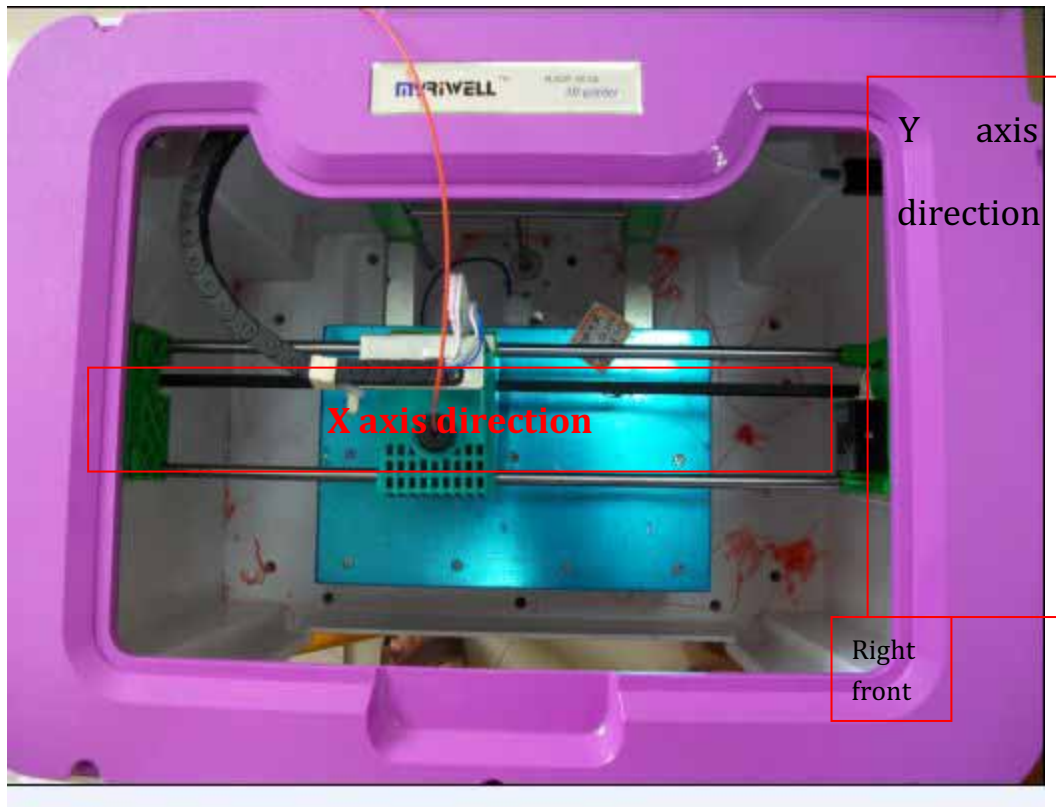


Figure 11

Myriwell 3D printer common malfunction analysis and troubleshooting

Question 1: Printer is power on and running abnormally, appear similar to: Motor continuous jitter, the moving parts of machine continuously collides.

Problem analysis: the emergence of the phenomenon, there are two main reasons: first is the motor wiring loose or damaged due to the motor itself can not work normally, second, some problem with the travel switch (see Figure 1). According to statistics, most of the reason is that the travel switch issue.

Troubleshooting:

A、 Check if the travel switch is OK or not

A. Confirm no damage on the appearance of the X, Y, Z three travel switches, each stroke switch outside with a small sheet metal,

B. Power on, do not need to select operation. With the hand pressing X, respectively Y, Z travel switch sheet metal. Press it, the corresponding travel switch LED light turns red, loosen, light off.

If the travel switch examination was normal, still exists that the motor continuously jitter phenomenon when the machine works, you can check whether the motor is normal, please follow the above A, B to examine the three travel switches are normal, because according to our statistics, the majority is lead to by the travel switch problems.

B、 Check the motor is normal or not

- Power off, Move the extruding motor to central manually, hand rotating Z axis screw rod (Figure 5), ensure that there is a certain distance between the heating plate and the nozzle
- Power on, select "platform calibration" mode, normal steps: a), extruding machine firstly move towards (Figure 11) the X axis travel switch in the X direction, b), collision to the X axis travel switch, extruding motor (Figure 11)

move towards the Y axis travel switch in the Y direction, c), collision to the Y axis travel switch, extruding motor moves to the right front of the machine (Figure 11), the Z axis direction (Figure 11) heating plate will rise, hit the Z axis travel switch, platform slightly fall, and stop moving.

- As shown above, you can initially determine the X axis motor is abnormal by a) issue; you can initially determine Y axis motor is abnormal by b) issue; you can initially determine the Z axis motor is abnormal by c) issue.

Question 2: the machine can not read SD card, reset during the reading process (LCD screen flashing)

Problem analysis: SD card cannot be read, there are two main reasons. First: the machine does not support the SD card, currently, Myriwell 3D printer supports only 2G card, and the SD card file system is FAT32. second: the SD card slot (Figure 10) in the housing of machine is the key board (Figure 9) is damaged.

Troubleshooting:

- Check the SD card by attribute selection to confirm it is a 2GSD card, and the file system is FAT32. SD card file system can be set by a process of formatting SD card.
- If the SD card meet the requirements, you can open the machine shell, remove the key board, the SD card slot if there is a metal pin bending, fracture;
- Because of the large number of copy SD cards currently on the market, if you are failed to find problems in the two ways above, suggest that you replace the other requested SD card (2G memory, FAT32 file system)
- Reading SD card very slowly, may be because of too many card files (also occupy 1G space, a file of 1G and 1024 files of 1M both take up the space of 1G, but the reading speeds are not the same), or GCODE file name is too long;

Question 3: no filament extrusion in the printing process

Problem analysis: by wire feeding tube (Figure 7) filament is sent to the extruding motor at the top of the feed port (Figure 6), in the printing process, through the extruding motor dragging, filament is extruded from the heated nozzle. Any step is abnormal in this part, can lead to abnormal extruding.

Troubleshooting:

- First, ensure the filament can smoothly pass the feeding tube, can pull the filament slightly by hand from the wire extruding motor at the top of the feeding port, if you feel a great resistance, it may be because the knot wire plugging in the wire feeding tube. Pull the wire out, straighten out and put it back into the tube
- In the process of loading filament, put the filament into feeding motor, until the filament touch the gear of extruding motor
- If filament material can smoothly pass through the feeding tube, and filament is extruded to the gear of extruding motor, when the temperature reaches the requirement, still can not extrude the filament, and there is blocking sound in the extruding motor, maybe the feeding port is blocked below the extruding motor, remove the radiating fan and check the extruding motor.

Power off when disassembly process. If the temperature reaches the requirement, do not feel extruding motor dragging the filament down, maybe the extruding motor is abnormal.

ONE: Firmware update

Question 1: “Firmware Error” display in the screen

Problem analysis: the error is mainly caused by sudden power off when the machine is working, of course does not exclude the influence of other cases of switching power supply. The error can be resolved by the firmware update.

Solution: see Appendix 1 "solution of the Firmware_Error"

Question 2: in the firmware update into the tip "handshake failed"

The solution: keep the PC firmware update window, only needs to plug the USB cable and reset the machine, again and select "update". If you try several times, still suggest "handshake failure", suggest you change another computer for printing.

Question 3: when firmware updating, always prompt "connection fail", and you can see the corresponding port number from the computer's "device manager" .

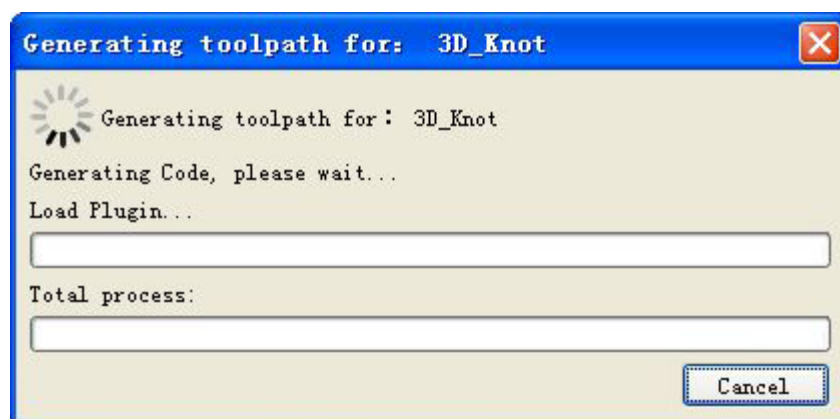
Solution: the phenomenon is mainly caused by the conflict of searching software equipment, in the current software version, suggest you change another computer for printing .

Question 3: after completing the firmware update, but also prompt update error, unable to update.

Solution: shut down the software. In the C root directory delete Myriwell folder, and then open the software to upgrade again.

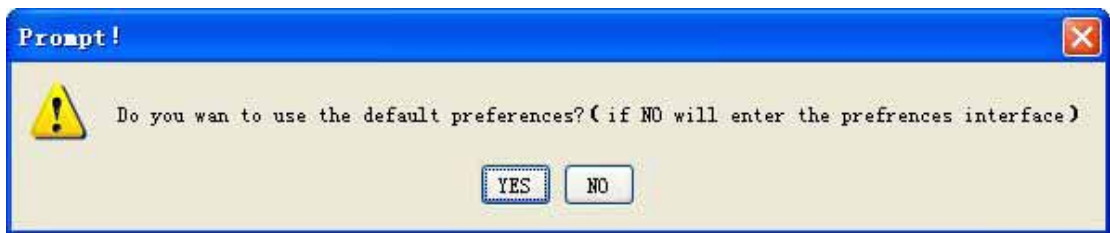
TWO: the issue of using upper computer software

Question 1: after you install the software, the first time using the software to generate printing model, select generate processing file, always stay in the following picture:

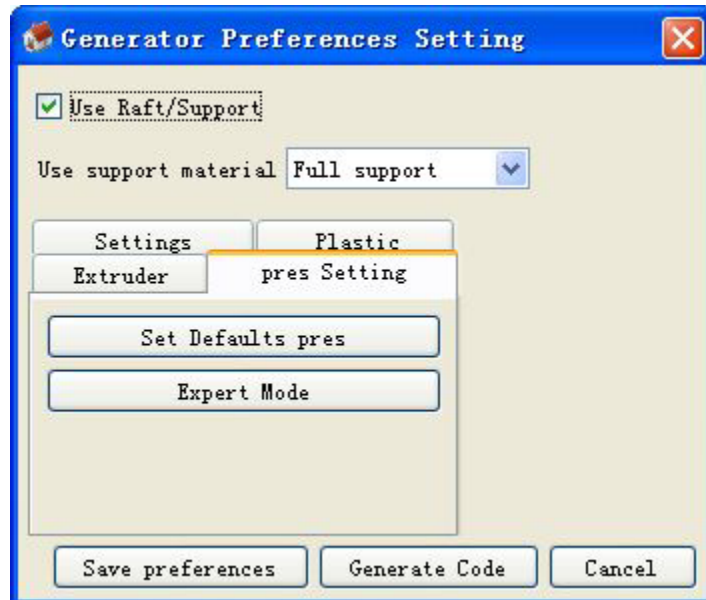


Problem analysis: the problem is caused by in the first time using the software can not correctly find the default cutter plug-in module;

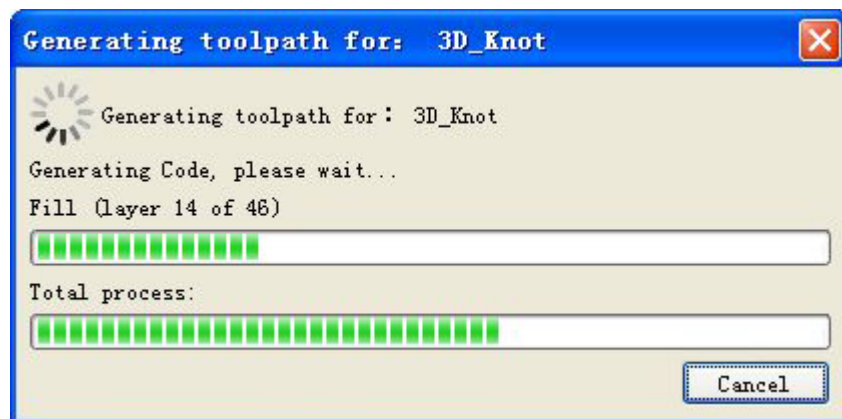
Solution: if the problem comes out in the generation, select "no" in the processing file dialog box, enter the parameter setting, as following figure



enter the parameter setting, as following figure



Select "load parameters" and select "restore default parameter settings", then click "save parameters". Click the "generate code" to get the documents, as the following progress display box:



It is only required in the first time using the software

Three: the issue of unable using the software normally

Question 1: after the installation of myriwell upper computer software, double-click the shortcut cannot open the software and the prompt "0x?????????" Command Reference "0x?????????" the memory, the memory

could not be "written" .

Solution:

A、 Do not exclude the memory problem, it is fouled after long-term using, then recommend to clean or replace.

B、 software problem

- If there is a Trojan or virus inspection system. This type of program to control system often irresponsible to modify the system, resulting in abnormal operating system. Normally should strengthen the awareness of information security, do not be curious about the unknown executable program.

2 、 Update the operating system, attention to the upgrade program from Myriwell (old version of the system will usually result in the problem)

3、 Re-install the system, find the latest version and recover system, and take the correct steps to install the software then it can be used normally

Question 2: normally installed Myriwell software, double-click the shortcut, the taskbar display, but no operation in the pop-up window.

Solution: this usually caused by insufficient system resources, you can change a machine, or offload something which take the resources. Such as design client computer will usually loaded materials such as many fonts, you can offload some fonts.

Question 3: the system is running normally, the upper computer software is installed normally, but still can not use, prompt file loss.

Solution: in this case please carefully check the default installation path in reality and whether location of the corresponding file. For example, the folder Python27 in the C root directory, may mistakenly installed in the Program Files of C root directory, then you can not find a file to execute by the default path.

Question 4: the system prompts



Solution: re-install python27, download the version of python2.7.5, pay attention, it must be installed under the root directory C. After the installation, you'd better to



check if the folder in the C driver.

Appendix 1: methods for solving the Firmware_Error


Firmware Error usually caused by sudden power off when machine is working, of course we can not exclude other reasons, it appears as following

3) LCD display“Firmware Error”, machine can not work at all

4) Unable to connect the computer by USB cable

Solution:

Step 1 、 First please confirm if successfully install the driver and upper computer program;

Step 2 、 Run Myriwell upper computer software, select  for firmware update, will show following interface:

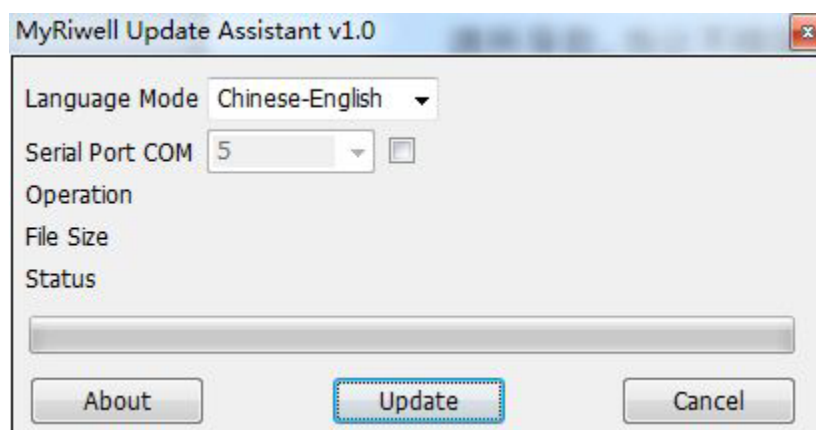


图 1

For English upper computer software, please select the version of firmware in the“Language Mode”, presently there are two modes: one is chinese-english, the other is german-french;

Step 3、Run the machine, connect computer by USB cable, check the new port number COMn (n is different value by different ports) in the device manager. The methods of checking the port number:

1: Click“start”, select“control panel”, select “device manager” in the control panel, as shown in following interface:

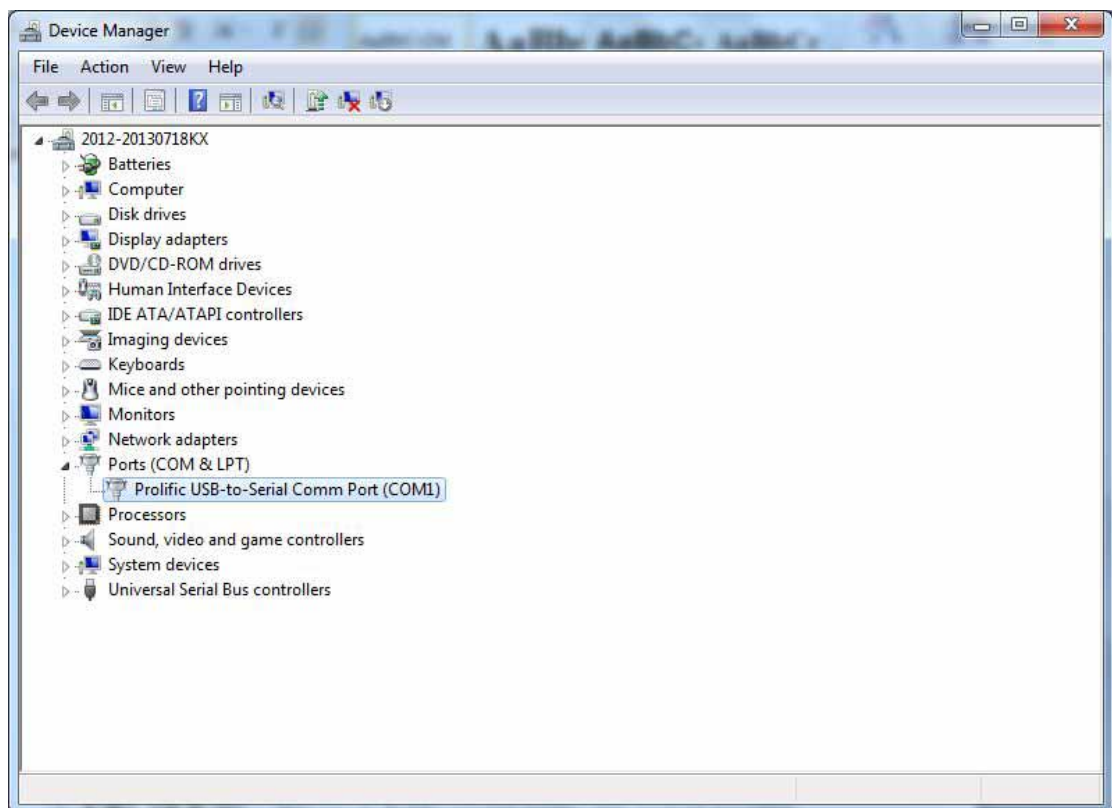





图 2


2: select “port” in the above “device manager:  端口 (COM 和 LPT) then you can find the new port number of the machine, it is COM1 in this example;


Note: if fail to install driver, it is unable to find the port number of the machine;

4、 set the port number in the firmware update plug-in module as figure 1:

a: Check  the single box , open the port setting manually;

b: Check the port number in  the drop-down box, it is COM1 in this example;

Step 5、 After selecting the version of firmware and setting the corresponding port number, click  to update firmware.

5、 If it shows “handshake failed” after clicking update, only pull the USB cable out and plug again, click  again then finish the ;

6、 Once we complete the firmware update, will solve the “Firmware Error”issue.

7、 If we can find the corresponding port number of the machine, after several attempts as description above, still failed to update the firmware program. Recommend that you use other computer to operate.

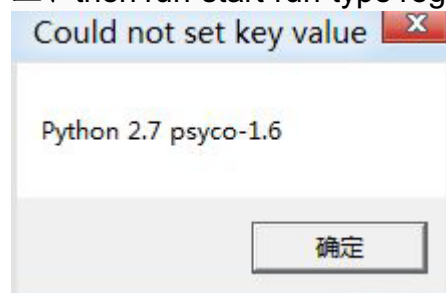
There is also an error you might meet in the installation (it can be solved due to the issue of authority)

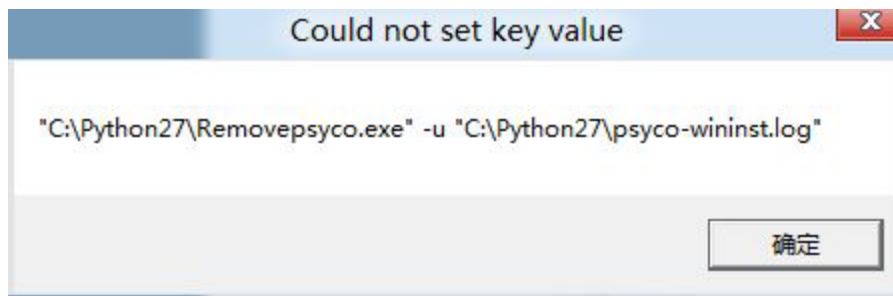
If your system prompt such error like “do not find MSVCR71.dll” or “MSVCR71.dll”, please download MSVCR71.dll to your computer

一、 copy the file directly to the system direction:

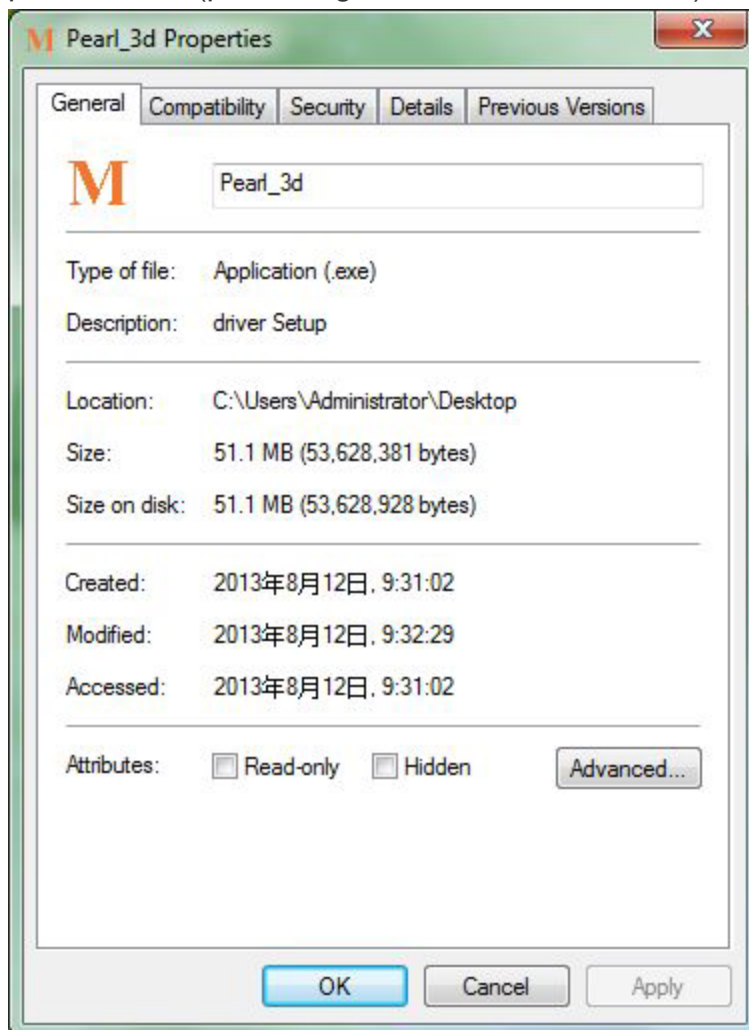
- 1、 Windows 95/98/Me system, copy to C:\\Windows\\System\\direction.
- 2、 Windows NT/2000 system, copy to C:\\WINNT\\System32\\direction.
- 3、 Windows XP system, copy to C:\\Windows\\System32\\direction.

二、 then run “start-run-type regsvr32 /s MSVCR71.dll”, enter, it will be solved !

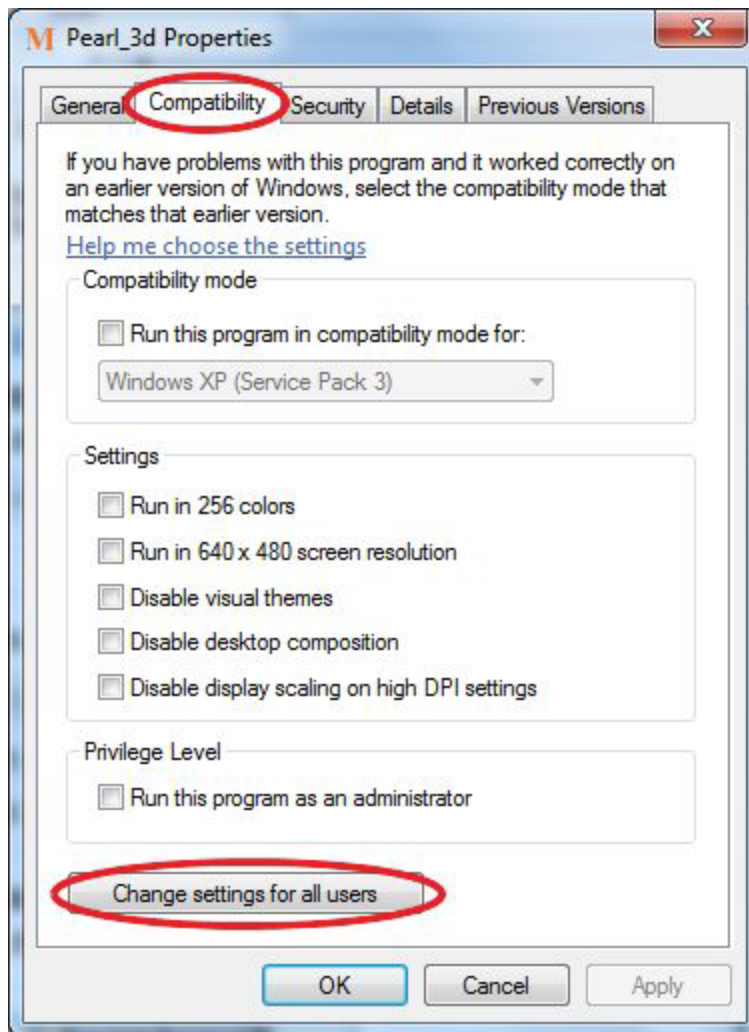




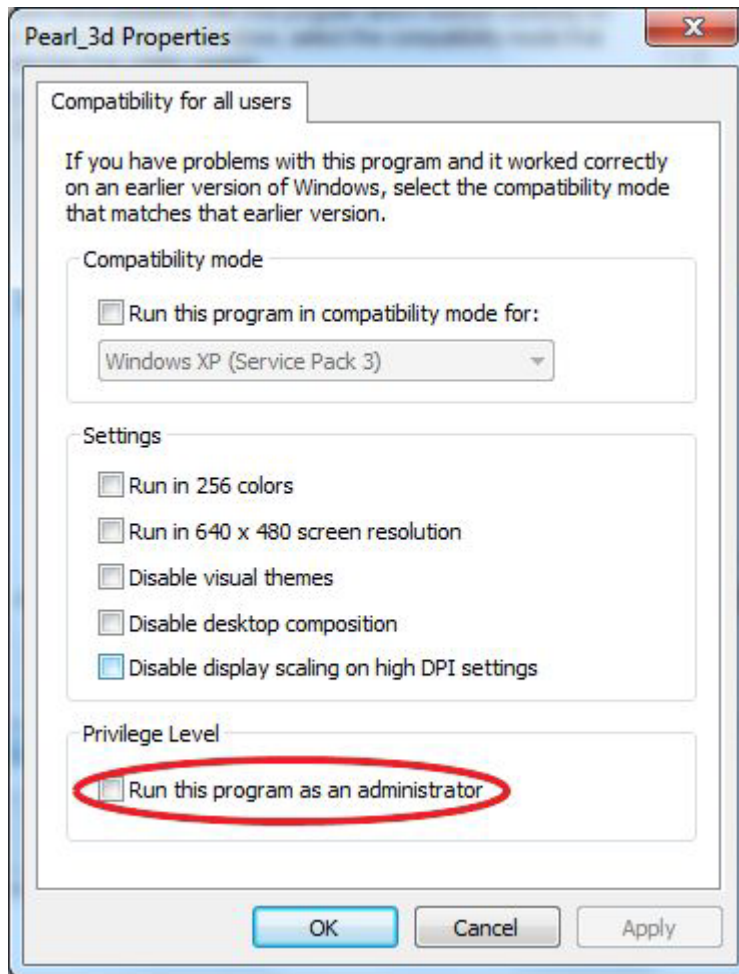
If your system prompted as shown above the window, the software does not get sufficient permissions, you can perform the following operations to obtain permissions. (please log in to the admin account)



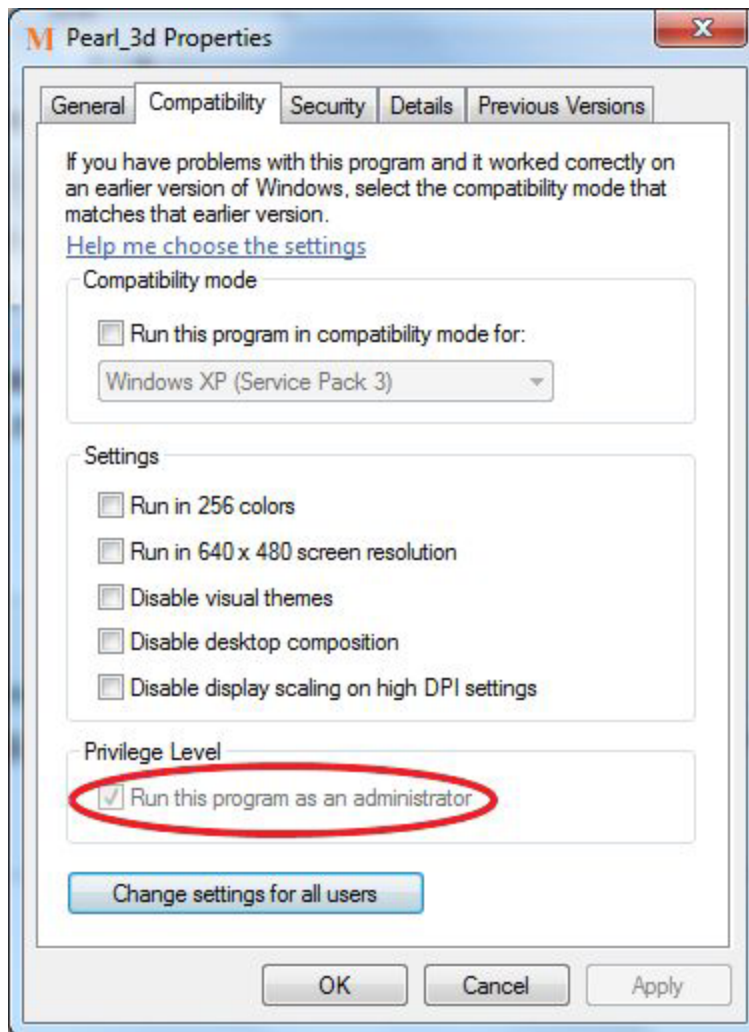
Right click the install package, selected in the attribute, jump out of the window, select the compatibility page.



After entering the compatibility page and select "change settings for all users"



In the permission level in check "run this program as an administrator". Click "OK" to confirm the operation.



This permission level to determine the default tick, then you can install the software again according to the process



As figure error, we can delete the Myriwell folder in the C root directory of C, restart the myriwell PC software and upgrade the firmware.

Chapter 8: Warranty Statement and License Agreement

JuRong Riwel Electronics Co., Ltd. Limited Warranty Statement

JuRong Riwel Electronic Co. Ltd. (short for Riwel) products of Myriwell 3D printer, one-year warranty to guarantee: Riwel hardware, accessories, and supplies from the purchase date in materials and workmanship does not exist on the defect. Riwel notice such defects during the warranty period, and repair or replace products which prove to be defective. Replacement products may be similar to the new product or performance of new products.

In the case of correct installation and usage, Riwel guarantee from the purchase date of within the specified date, the software does not execute its programming instructions due to defects in materials and workmanship. During the warranty period, if Riwel notice such defects, Riwel replace execute its programming instructions software defected.

We can't ensure the operation of the product will be uninterrupted or without error. If Riwel within a reasonable period of time can not repair or replace the product warranty liability, the customer will be entitled to immediately return the product and request the refund of the purchase price. Our product may contain the re-production parts equivalent to new parts performance, or may be subject to incidental use parts.

Warranty does not apply to a product defect caused by the following reasons: (a) maintenance or improper calibration or inadequate ; (b) the use of non-Riwel software, interfaces, components , or supplies; (c) unauthorized modification or misuse of equipment; (d) operation outside the environmental specifications for the product announced; (e) improper site preparation or maintenance .

The extent permitted by local law, the above warranty is the only addition, express or implied, written or oral warranty or terms, and Riwel not propose guarantee terms for any particular purpose of merchantability, satisfactory quality and applications implied. Some countries / regions, states or provinces do not allow limit the implied warranty, so the above limitation or exception may not apply to you. This limited warranty gives you specific legal rights, you have other rights which may vary due to different countries / regions, states or provinces. The Riwel limited warranty applies to the product support services only in the country / region of selling the product. The level of warranty service may vary with the different local standards. Riwel will not alter the form, fit or function, so that it can be used for legal or regulatory reasons and the country / region which never intended.

The extent allowed by local law, this Warranty Statement compensation is the only proprietary compensation. Apart from the above , the Riwel or its suppliers under any circumstances be liable for any data loss or direct, special, incidental, consequential (including loss of profits or loss of data) or other responsible for any loss , whether it is based on contract , tort or for other reasons. Some countries / regions, states or provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

In addition to the extent permitted by law, the warranty terms of this statement does not exclude or limit or modify the mandatory statutory rights applicable of this product for such customers.

FCC Certification Requirements

Caution: Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.