

JGAURORA 3D PRINTER

MODEL: A5 USER GUIDE



www.jgaurora3d.com

Read it carefully before printing and keep it properly.

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1. Preface

1.1 Introduction

The JGAURORA A5 User Guide was written to help new A5 users to start their printing journey with the JGAURORA A5. Even if you are familiar with earlier JGAURORA machines or experienced with 3D printing technology, we still recommend that you read through this guide, as there is lots of important information about the A5, that will help you have a better 3D printing experience.

1.2 Safety Advice

1) During printing, the temperature of the printing nozzle tip can heat up to 250 °C . To avoid being burned, be careful to avoid touching the nozzle while it is hot. The heated bed can also heat up to 100C, so please allow the bed to cool down after printing, before you try to remove your completed prints.

2) While the printer is operating, there is a danger of hands or fingers being crushed by moving parts. To prevent injury, please keep hands and long hair safely away from moving components, while the printer is operating.

3) Always use the A5 with a properly grounded outlet. Do not modify the A5 power plug.

Attention: Before power on, please check the input power is compatible with your local standard.(Method: Observe the power switch at the hole of back base, if your local voltage is 230V, then adjust it to 230V, Similarly, if the voltage is 115V, then adjust it to 115V. This process is described in detail in Chapter 2.)

4) When the A5 continuously work over 96 hours, it should be stop for 1-3 hours to restart.

5) Please be careful when removing prints. The print bed is a glass sheet, so to avoid damage, please avoid using excessive force. We recommend wearing protective glasses while removing prints. If you are using a spatula or scraper to remove prints, please wear gloves to protect your hands from serious injury, and be careful not to damage the print bed surface.

1.3 Filament requirements

Do not abuse the filament. Please make sure you use the JGAURORA filament or the filament from the brands certified by JGAURORA. All polymers degrade with time. Do not unpack until filament is needed. Filament should be stored at room temperature:15-30°C, and in dry conditions.

PLA filament in particular can absorb moisture from the air, to become brittle and unsuitable for printing. If you are not printing for extended periods of time, it is recommended to remove the filament and store it in an air-tight box. Use the filament holes in the spool to hold the loose end of the filament, to prevent it coming loose and becoming tangled.

1.4 Environmental requirements

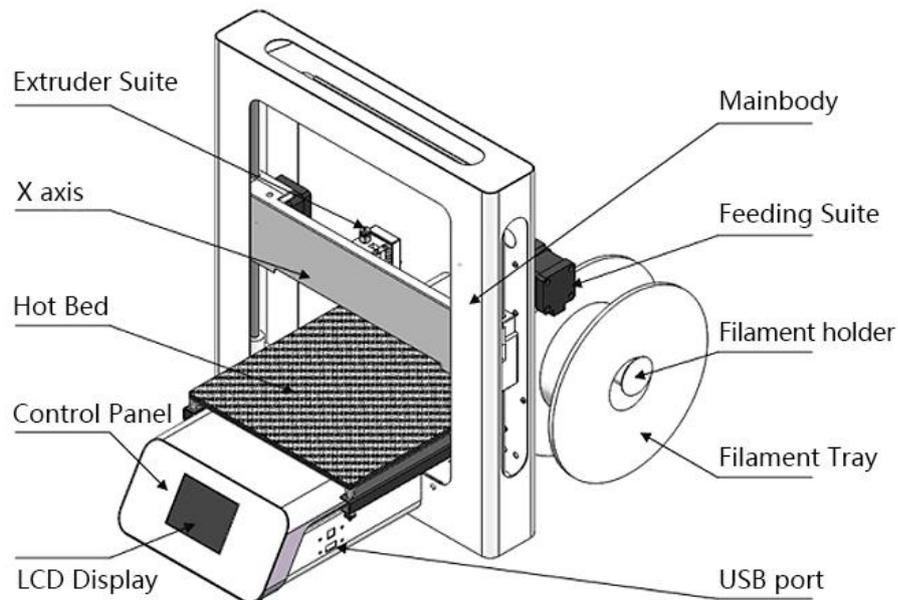
The ambient temperature in the printing environment should be between 5 to 40°C, with humidity between 20% to 50%. Using the printer outside of these conditions may result in reduced or inconsistent printing quality.

2. About A5

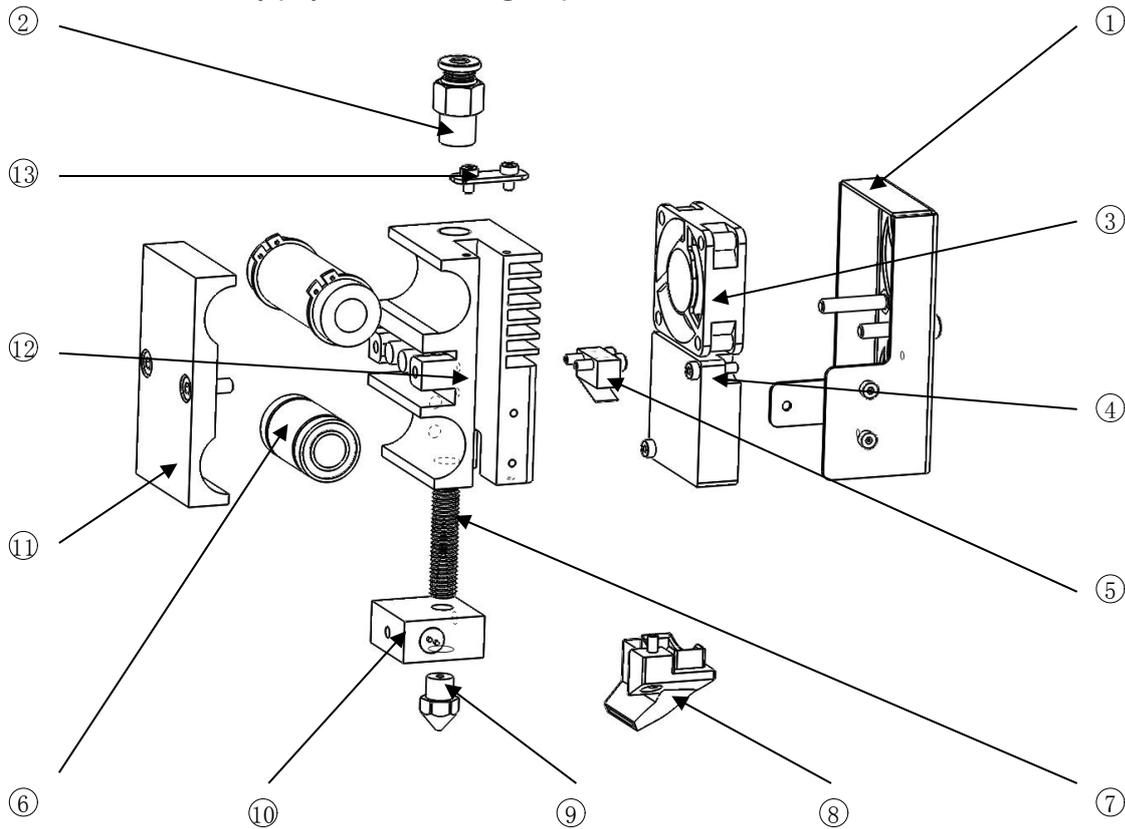
2.1 Basic reference

Model number: A5	Device size: 536*480*543mm
Layer thickness: 0.1 to 0.3mm	Device weight: 13.8kg
Printing speed: 10 to 150mm/s (suggest 30 to 60mm/s)	Package size: 640*610*280mm
Nozzle temperature: Room temperature to 250°C	Package weight: 17kg
Nozzle diameter: 0.4mm	Build size: 305*305*320 mm
Hot bed temperature: Room temperature to 110°C	Platform material: Black Diamond Glass heated plate
Support material: PLA /ABS/WOOD+PLA/PETG	LCD display: 2.8" Touch Screen
Filament diameter: 1.75mm	Connectivity: USB cable/ USB stick
Language: English/German/French/Spanish/Japanese	Support Formats: STL/OBJ/G-Code
Environmental requirements: Temperature 5 to 40°C, Humidity 20% to 50%	OS: Windows, Linux, Mac
AC Input: AC115 OR 230V, manually switchable	Software: Cura/Simplify 3d/JGcreat(Win 7 64 bit)

2.2 Views of A5



2.3 Extruder Nozzle Assembly (Exploded View Diagram)



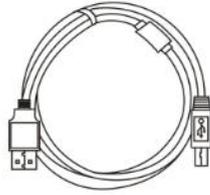
Item No.	Parts Name
①	Extruder cover
②	PTFE Tube Quick-coupler
③	Square Extruder Cooling fan
④	Blower Part Cooling Fan
⑤	Limit switch
⑥	Linear bearing
⑦	Threaded Extruder Throat

Item No.	Parts Name
⑧	Cooling Duct
⑨	Extruder Nozzle
⑩	Heater block
⑪	Bearing seat II
⑫	Bearing seat I
⑬	Wiring harness block

2.4 Tool box lists



Tool kit



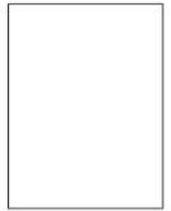
USB Cable



Allen Wrench



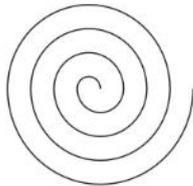
Power cable



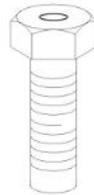
Leveling card



Warranty card



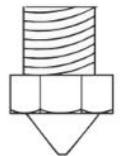
Trial filament



4*M3X5 screws



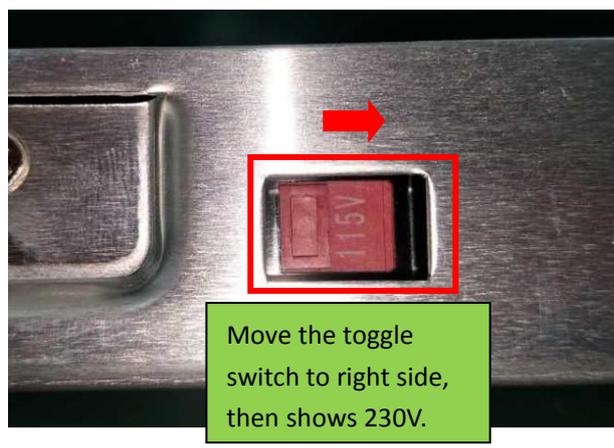
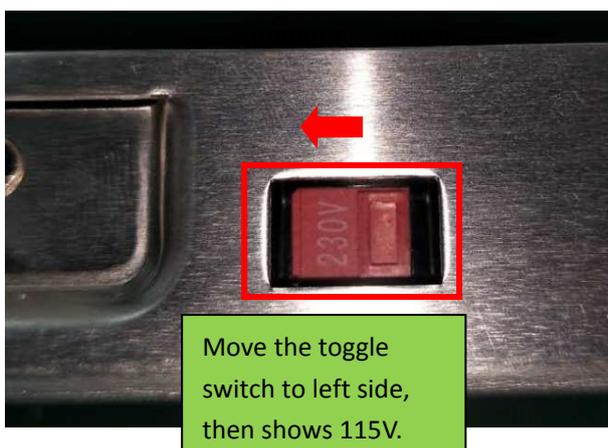
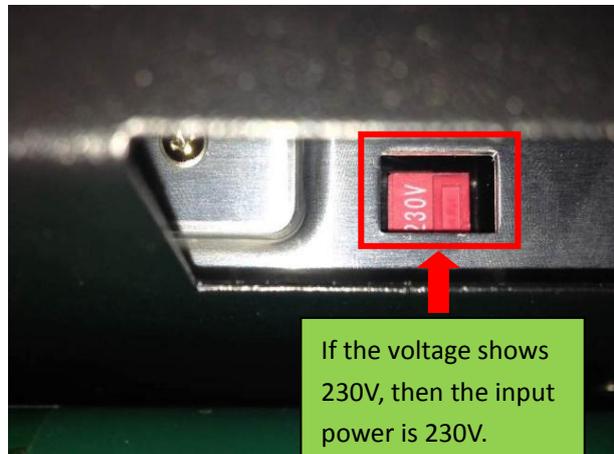
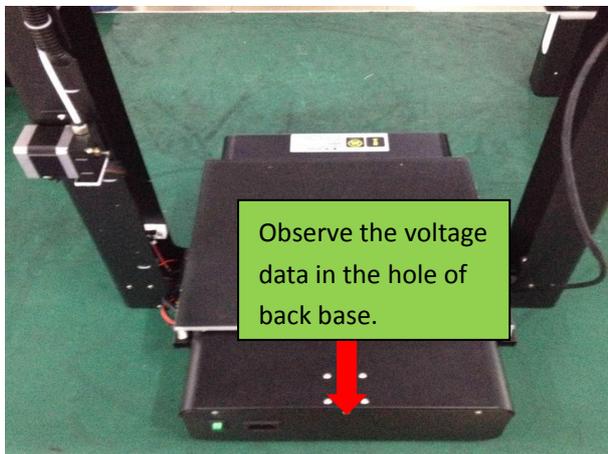
USB stick



E3D nozzle

2.5 Input Power Voltage adjustment

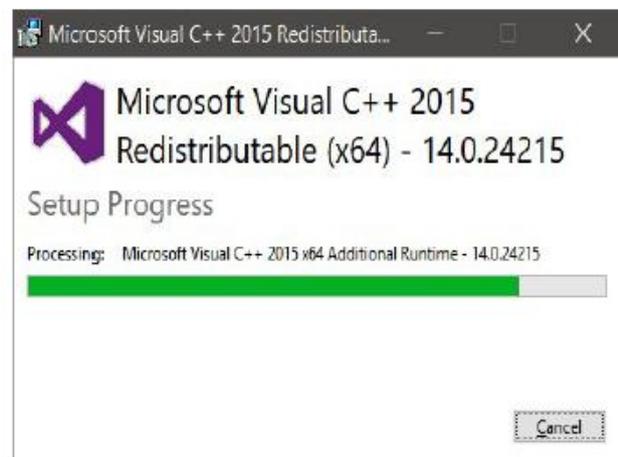
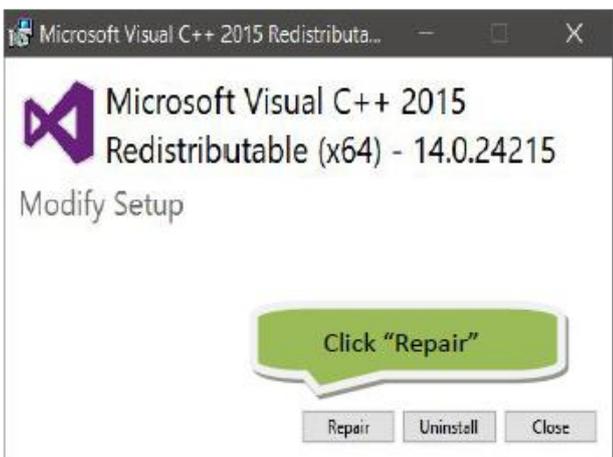
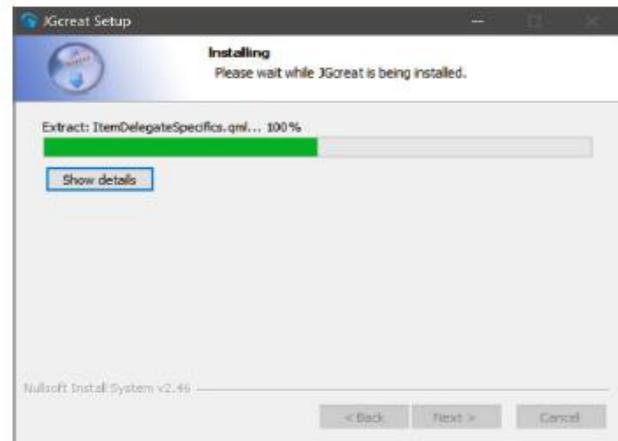
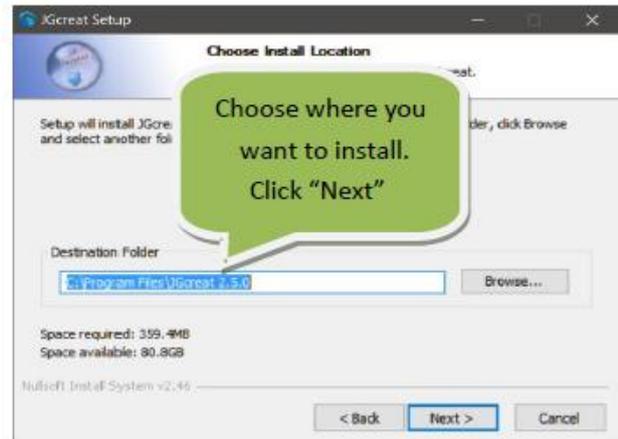
The Input Power of A5 is selectable, AC 115/230, please adjust it according to your local voltage standard as below:



3. About JGcreat software

3.1 Software installation

Copy the files in USB stick to your PC, then double click the software installation icon. Then, follow the installation instructions, as shown in the photos below.





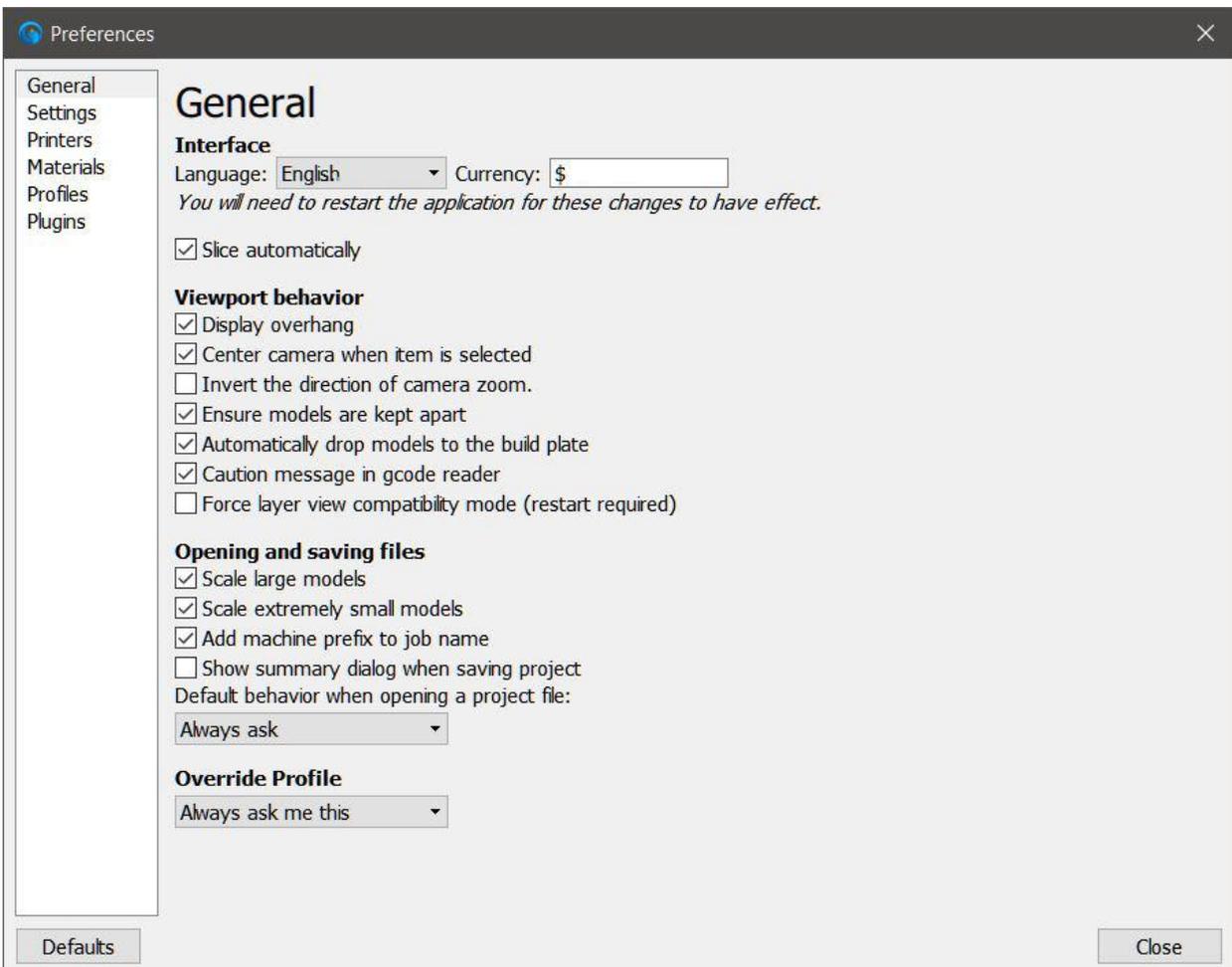
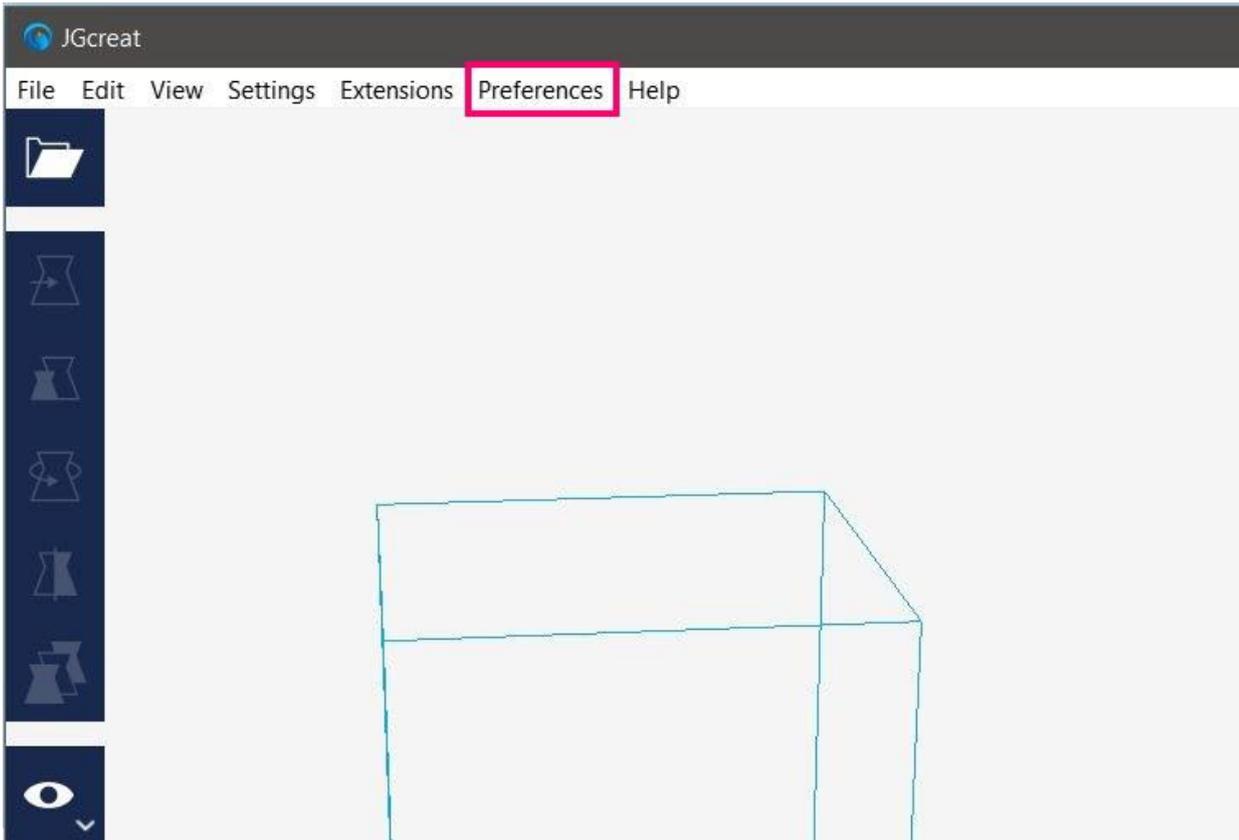
After clicking the “Finish” icon, the software is installed, and ready for use.

3.2 JGgreat introduction

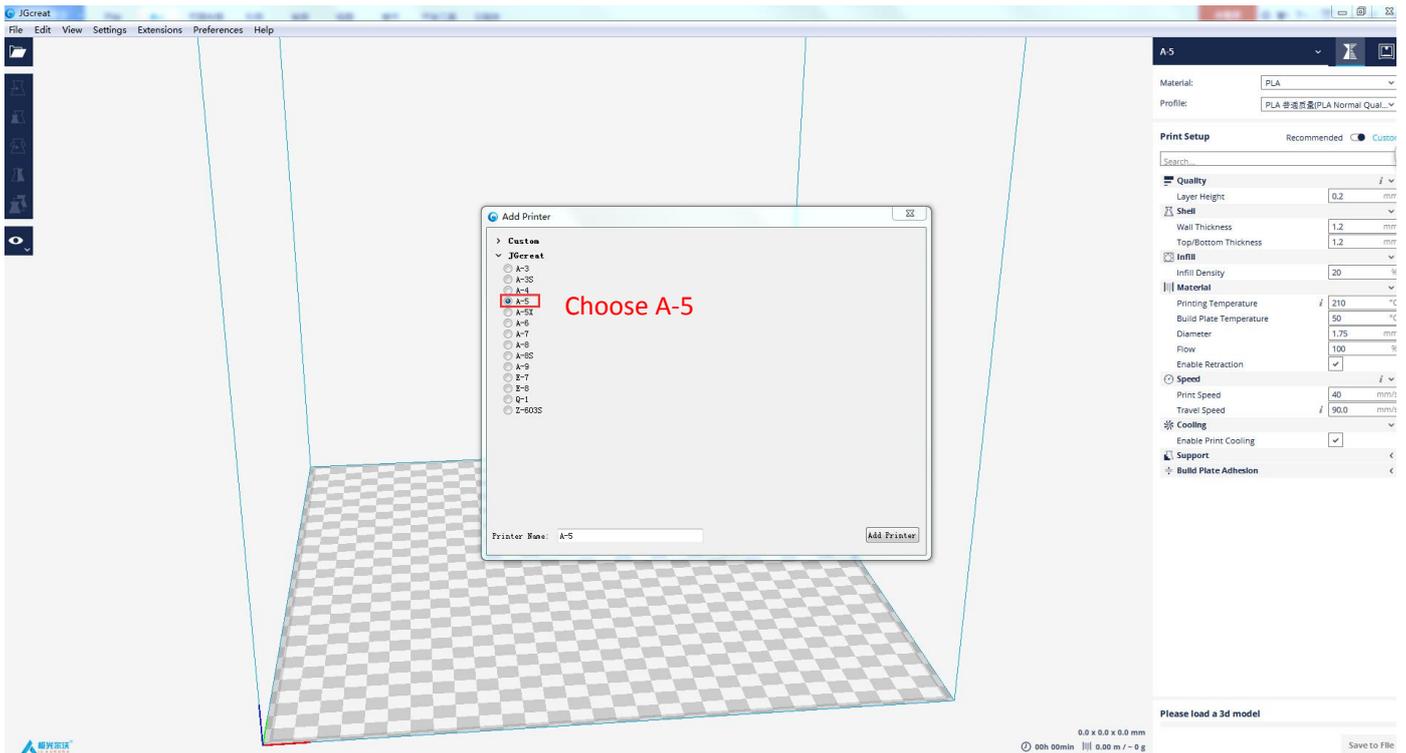
1) Open the software(JGgreat)



2) Choose the language you prefer (English as an example):

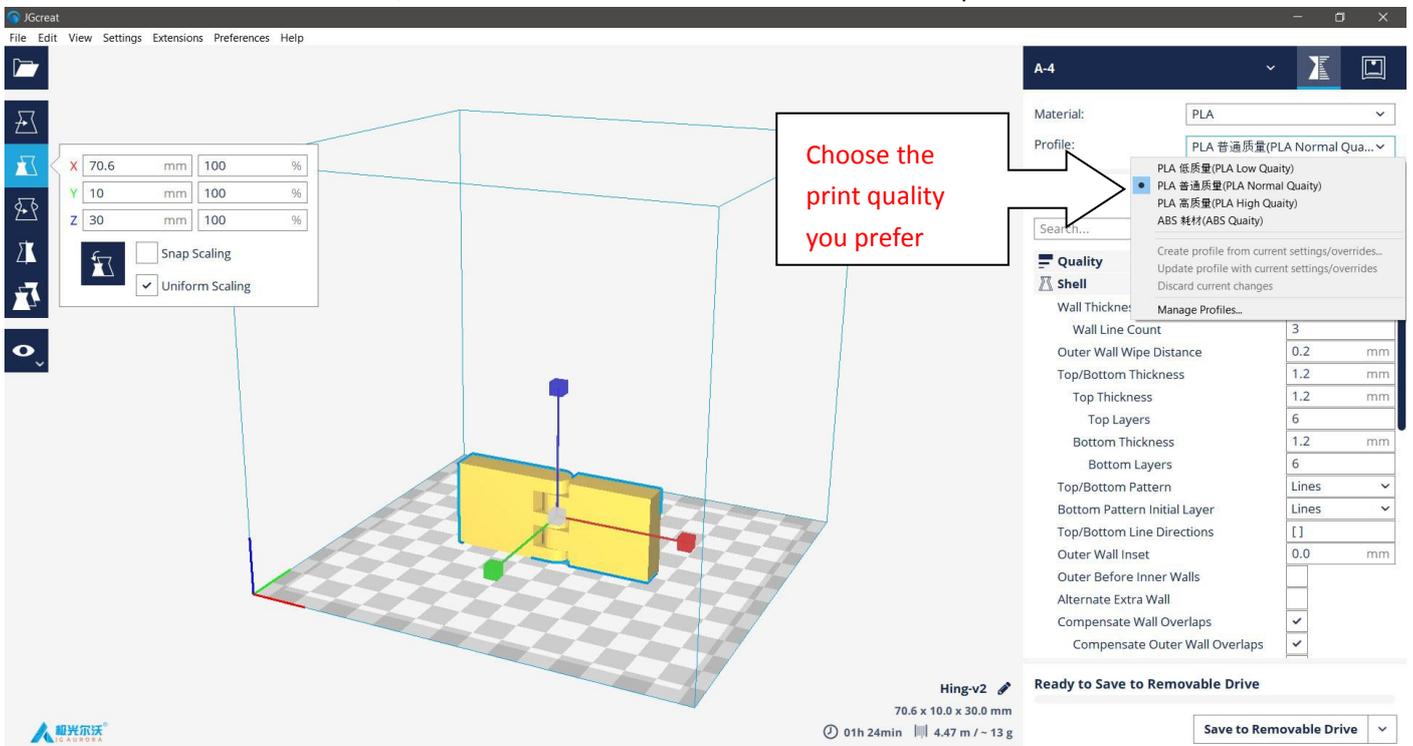


3) Add Printer

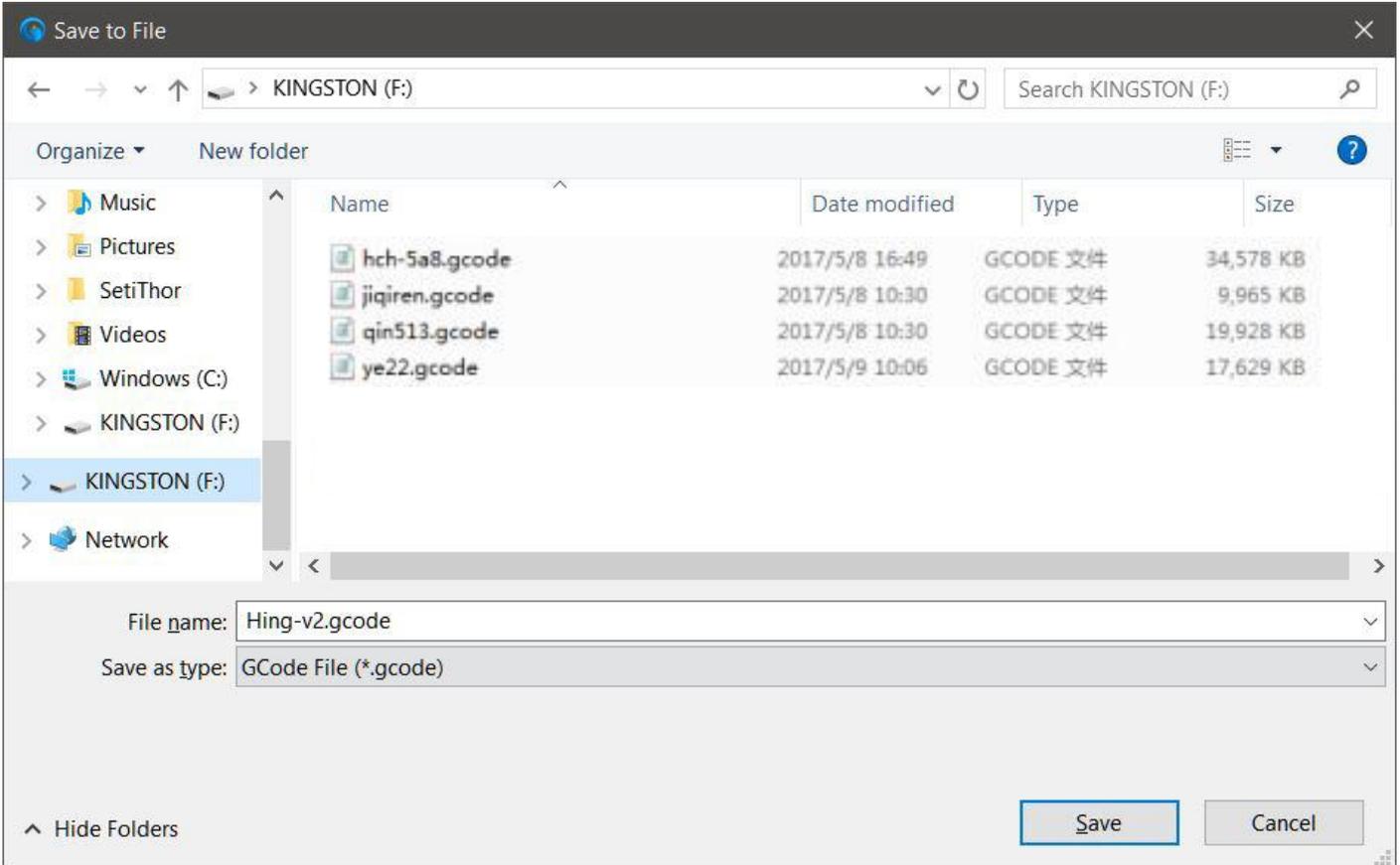


4) Load 3d file and slice it

Load an stl or obj 3d file. Select the appropriate print quality. The lower right corner of the software shows "Slicing", which converts the 3D model file, into the standard GCode instructions that the printer uses to run.



After slicing has finished, the lower right corner of the software shows "Save to file".

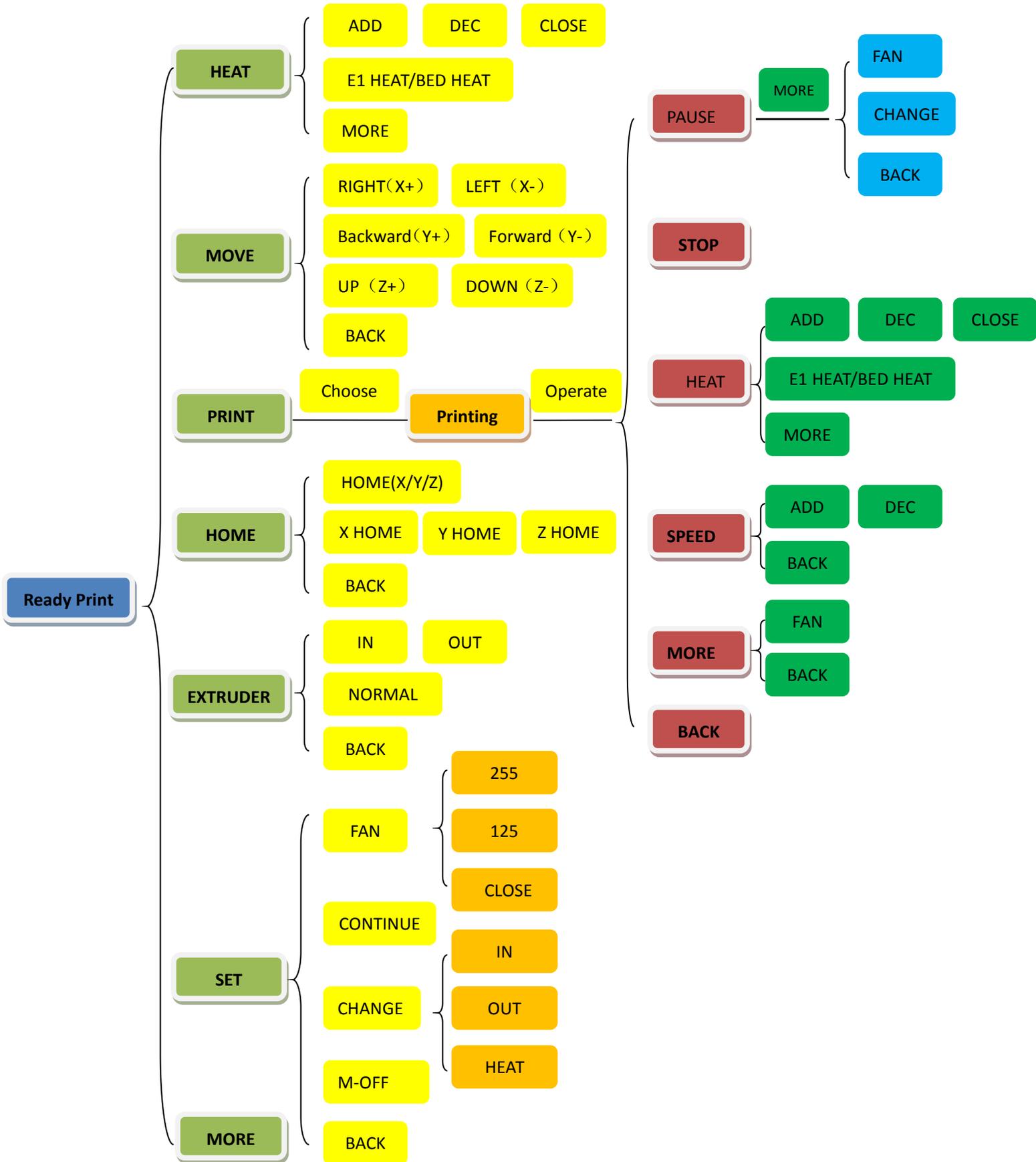


5) Copy the G-code to the USB stick, and insert it into the USB port on the A5 printer. Then, select the gcode file to print through the touch screen interface.

Note: Please refer to the JGcreat instructions document on the USB stick for how to operate the JGcreat software.

4. Print operation

4.1 Control menu introduction



4.2 Introduction of main screen



- Set temperature to preheat extruder nozzle and printing bed/platform
- Move extruder position
- Perform homing routines
- Select model file to print
- More options and functions
- Assistant for leveling printing bed/platform.
- Load or Remove Filament

4.3 Platform leveling

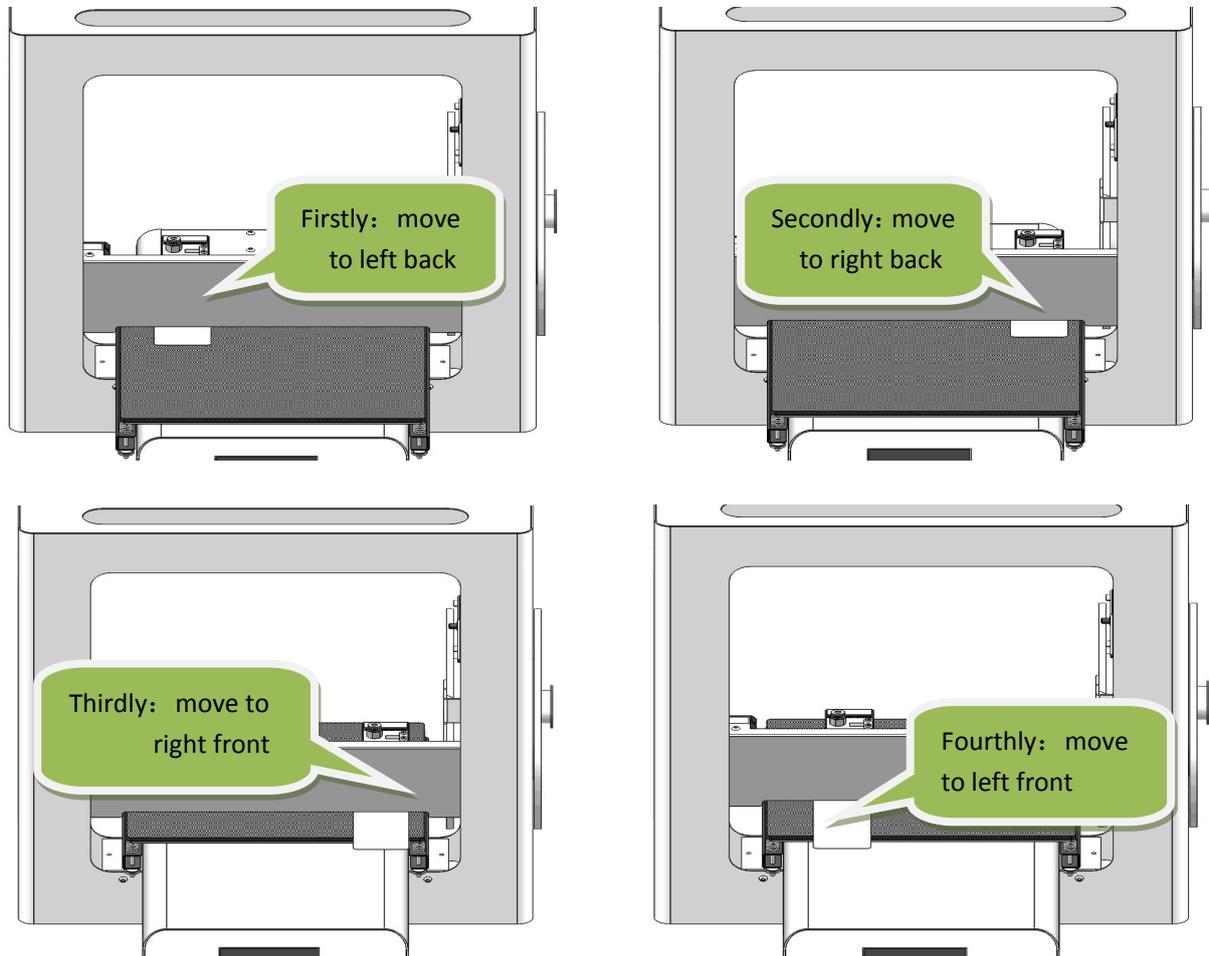
Click HOME in the main screen to "HOME" menu ,Click [HOME] , show as below :



Note: Before beginning the bed leveling routine, please tighten all four leveling screws first to compress the springs and lower the bed, and then loosen them during the levelling process, to gradually raise the bed up to the nozzle. This will prevent the nozzle scratching and damaging the bed surface.

After performing the initial homing, use the “Level” menu options to cycle the extruder head through the various locations, as shown in the figure below.

Using a piece of copy paper as a thickness guide, place it on the print bed. Move the nozzle over the paper and try to remove the paper. If the paper is easy to remove, then turn the adjustment knob clockwise. If the paper is difficult to remove, then the adjustment knob counter-clockwise. Keep repeatin this process until the nozzle height is calibrated for all of the leveling positions.



Please Note: You may find it helpful to refer to the video demonstrating platform leveling, that is found in the included USB stick.

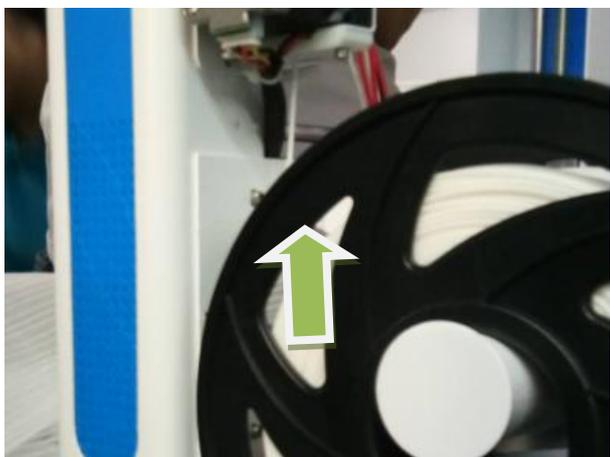
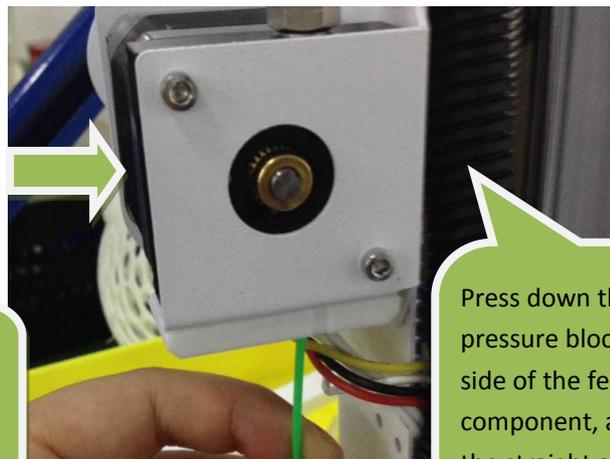
4.4 Filament loading

Click [HEAT] to enter “Preheat menu”->click preheat “Extruder 1 (E1)”->click [Increase] button to increase E1 to 200°C. Here, we are using PLA as an example.

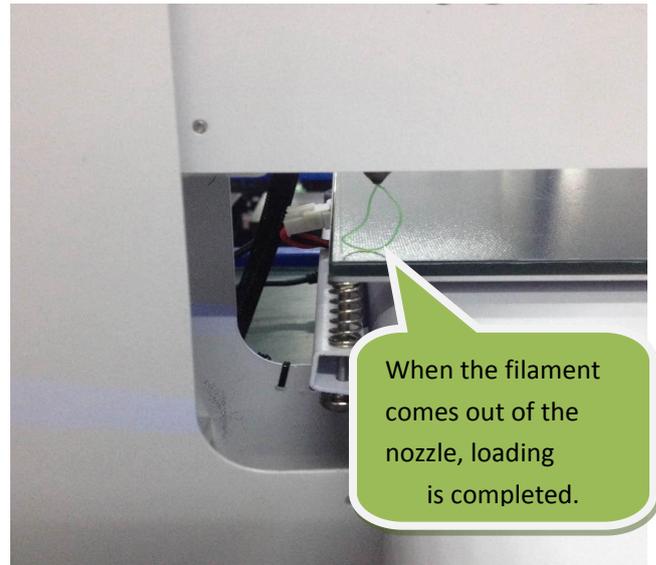


While waiting for the nozzle to heat, you can install the onboard filament holder

After the extruder nozzle has finished preheating, filament can then be fed into the filament inlet port at the bottom of the filament drive assembly, as shown in the pictures below. It is recommended to straighten the filament before insertion.

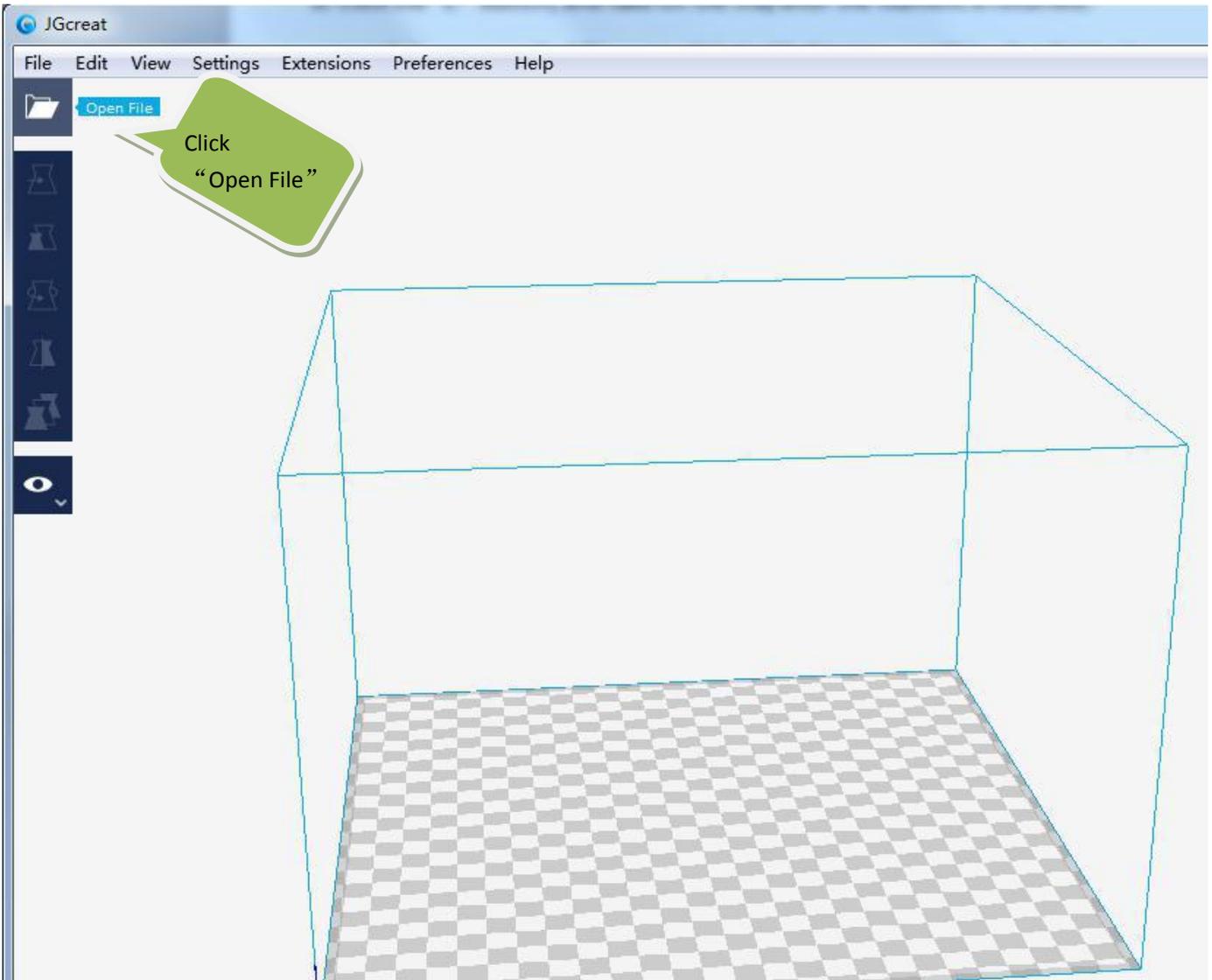


Note: For smooth operation, ensure the spool is installed correctly, so that it rotates clockwise during printing.



4.5 Trial printing

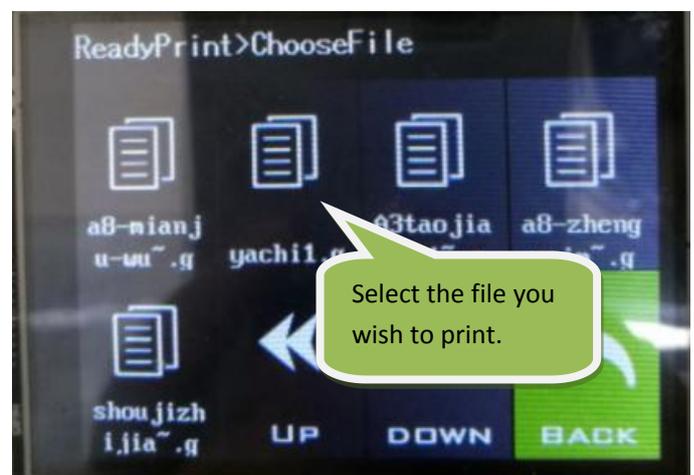
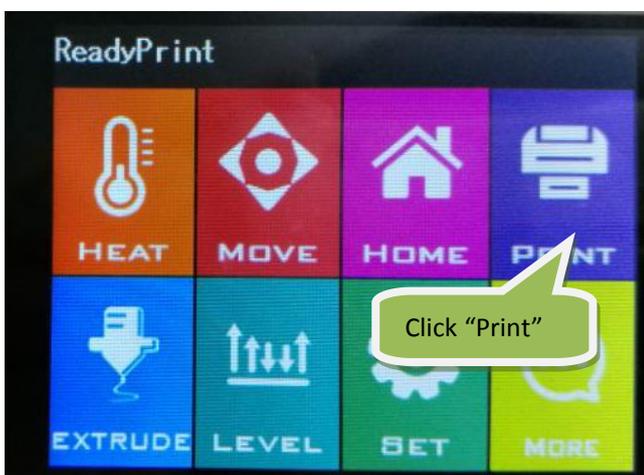
1) Model loading: Select and load the 3d file you want to print, or drag it directly into the software window.



2) G-code save: After slicing of the 3d file is finished, click the “Save to File” button in the lower right corner to save the file onto the USB stick, with an appropriate file name.



3) Insert the USB stick into the USB port on the A5, and then click "PRINT" on the Main Menu , and then select the 3D Gcode file. Click "START" and the A5 will begin to preheat the nozzle and printing platform. When the temperature of the nozzle reaches the temperature set in the slicer software, the 3D printing of the model will begin.



Note: When printing, if the first layer does not adhere to the platform, please stop printing and re-level the printing platform and the nozzle, to set the correct gap.

4.6 Filament replacement notes

- 1) While printing a model, if the filament is close to running out, please follow these steps for reloading filament:
 - a: Click “Option” at the printing menu, and then click the “Pause” icon on the A5 screen. The X axis will then go to the home position.
 - b: Next, click the “More” icon and select “CHANGE” , then click “OUT” to eject the filament out and remove the spool after the filament is ejected.
 - c: Install a new roll of filament, then click the “IN” icon until feeding is completed. Once the filament reaches the nozzle, as small amount of plastic should start to extrude from the nozzle, in order to ensure the nozzle is primed for printing. If this does not occur, extrude plastic manually until the nozzle is primed.
 - d: Click the “Back” button twice to enter into the model printing mode, then click the “RESUME” button to resume printing.

2) When replacing filament, please ensure the nozzle has been preheated to operating temperature first, before performing the filament change. **Please do not pull it out violently, otherwise it will cause severe damage to the nozzle and extruder assembly.**

5. Common problems and solutions

Item	Problem description	Reason	Solution
1	Filament breaks at the top of extruder mouth	<p>A. Filament has run out .</p> <p>B. Filament was exposed to moisture, and has become brittle..</p> <p>C. Filament was plugging the throat.</p>	<p>A. Replace filament before its gone.</p> <p>B. Store filament in air-tight container when finished printing. Replace with fresh filament spool.</p> <p>C. Clean the throat. Refer to video on the USB stick for instructions.</p>
2	Filament slips in extruder	Filament is too thin, or has been ground down by extruder gear.	Retract filament and cut out the thin filament section.
3	Temperature is incorrect.	Temperature sensor is malfunctioning.	Contact support for advice on replacement of temperature sensor.
4	Model is malformed	Timing belts may be too loose. Timing belt pulley may be loose.	Check and tighten the screw and belts.
5	Model is warped	The print bed is not level	Re-level print bed, and retry print.
6	G-code generation failed	Incorrect setting or wrong save path	Choose the correct machine type and select the correct save path
7	Software Installation failed	OS may not be supported	Install only on compatible OS

6. 3D printer maintenance

1. Daily maintenance

- 1) Before using the machine to print, make observe the safety recommendations.
- 2) Regularly clean and maintain the equipment. Clean the surface of the nozzle, print bed, moving parts and other parts, to help prevent wear caused by excessive dust.
- 3) After each repair and maintenance, ensure all disassembled parts have been put back in their original place to avoid mechanical failures that may be caused by missing parts or incorrect re-assembly.

2. Basic maintenance

- 1) Before operating the 3D printer, it is necessary to inspect the printer, and perform maintenance before use:
 - Inspect the nozzle for blockage or damage
 - Check the printing platform is calibrated and clean.
 - Check the printer is on a flat surface and is stable.
 - Check that screws and nuts are tight, and that no parts of the printer are loose or wobbly.
 - Check whether motion rails require cleaning or lubrication with oil.
 - When parts or lines are damaged or worn out, you should replace them before printing.
- 2) In the operation of the 3D printer, ensure not only that the design of each print model does not exceed the actual printable volume of the device, but also do not allow the machine to work in too high a temperature or under too much load. Otherwise, not only will it not print the object, but it can also damage the machine because of overloaded work.
- 3) For best print results, please remove the filament remaining in the extrusion head after finishing printing. Seal filament in air-tight containers to prevent material from absorbing moisture, which can cause filament to become brittle and break during printing.

3. Maintenance of Moving Components

If you notice the printer has become noisy, or vibrates excessively, you may need to clean the rail rods and add some lubricating oil to reduce friction.

To Clean and Lubricate: first, with a clean dust cloth, clean the grease or dust from the moving parts. Then apply 3-5ml (about 5-8 drops) lubricating oil along the motion rails. Brush the oil along the respective parts or rail axis, and move the moving parts along the rails back and forth, in order to distribute oil within the bearings and to lubricate the entire length of the guide rails and polished rods.

7. Supports and service

1. Please see the Warranty Card for details on our policies for repair and support.
2. If your printer is malfunctioning or damaged, for your safety, and to avoid further damaging the printer, please contact the after-sale service center or our support team for advice first, before attempting any repair.

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Tel of after sales service center/support team: 0755-29735649 / 66607459

Email of support: support@zgew3d.com or after-sales@3derwo.com



Official website



Official Facebook