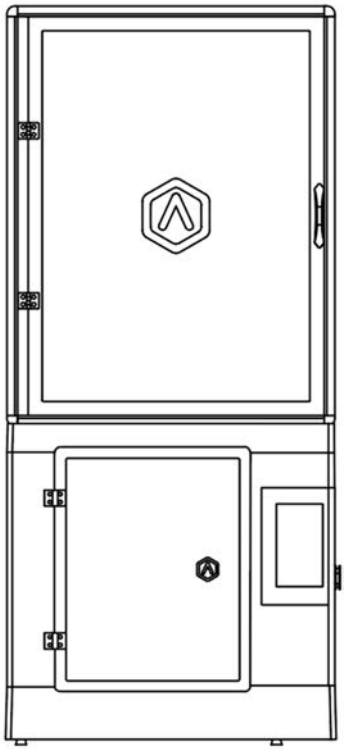
Forge1 3D Printer

User Manual

* Please review this entire guide before operating the printer.

WARNING

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.



RAISE3D

www.raise3d.com

V 0.11

2022.03.18

CONTENT

Safety Precautions

Please read the safety information to ensure that you use the appliance safely.

General information

You can find general information about this instruction manual here.

- Read this instruction manual carefully. Only this will ensure you use the appliance safely and efficiently.
- This manual is intended for the installer and the user of the appliance.
- Follow the safety instructions and warnings.
- Keep the instruction manual and the product information safe for future reference or for the next owner.
- Check the appliance after unpacking it. Do not connect the appliance if it has been damaged in transit.
- If you have any questions, please contact our local service center or distributors.
- Any failure and losses caused by ignoring the following mentioned items, and cautions mentioned in the operation and installation instruction are not covered by our warranty and any liability.

Intended use

Read the information on intended use to ensure that you use the appliance correctly and safely.

Only use this appliance:

- According to this installation and instruction manual. Make sure to follow the installation and instruction manual for the hardware installation and filament loading, as detailed on page 15 and 25.
- In a well-ventilated and dry environment;
- The environmental conditions used are:
  - The ambient temperature is: 0-35□;
  - The relative humidity of the air is below 95% (when the temperature is 25□).

Restriction on user group

Avoid risks to children and vulnerable persons.

This appliance may be used by people who have reduced physical, sensory or mental abilities or inadequate experience and/or knowledge, provided that they are supervised or have been instructed on how to use the appliance safely and have understood the

resulting dangers.
Children must not play with the appliance.
Keep children and pets away from the appliance.

Safe installation

Take note of the safety instructions when installing the appliance.

⚠ WARNING – Risk of electric shock!

- Improper installation is dangerous.
  - Connect and operate the appliance only in accordance with the specifications on the rating plate.
  - Connect the appliance to a power supply with alternating current only via a properly installed socket with earthing.
  - The protective conductor system of the domestic electrical installation must be properly installed. The installation must have a sufficiently large cross section.
  - Please ensure that the power supply system (current, voltage and cables) can meet the normal load requirements of the electrical appliances.
  - Never equip the appliance with an external switching device, e.g. a timer or remote control.
  - When installing the appliance, check that the power cable is not trapped or damaged.
  - Select the fuse according to the fuse safety identification requirements.
  - The power plug and the socket must be matched and the grounding blade must work properly, and the body must be properly grounded.

- If the insulation of the power cord is damaged, this is dangerous.
  - Never let the power cord come into contact with hot appliance parts or heat sources.
  - Never let the power cord come into contact with sharp points or edges.
  - Never kink, crush or modify the power cord.
- When the machine is energized, touch the machine shell and find that there is electrostatic inductance. This indicates that the machine in the home is not well grounded. Please stop the machine and repair the power connection immediately to ensure a good grounding.

- Do not connect the power supply with wet hands.

- If you have any questions, please consult a professional electrician.

⚠ WARNING – Risk of fire!

It is dangerous to use an extended power cord and non-approved adapters.

- Do not use extension cables or multiple socket strips.
- If the power cord is too short, contact Customer Service.
- Only use adapters approved by the manufacturer.

⚠ WARNING – Risk of injury!

- The high weight of the appliance may result in injury when lifted.
  - Do not lift the appliance on your own.

⚠ WARNING – Risk of suffocation!

Children may put packaging material over their heads or wrap themselves up in it and suffocate.

- Keep packaging material away from children.
- Do not let children play with packaging material.

⚠ CAUTION – Risk of injury!

- The appliance may vibrate when in use.
  - Place the appliance on a clean, even, solid surface.
- If tubes and power cords have been laid incorrectly, this causes a tripping hazard.
  - Lay tubes and power cords in such a way that there is no risk of tripping.
- If the appliance is moved by holding onto protruding components, such as the appliance door, the parts may break off.
  - Do not move the device by holding onto protruding parts.

⚠ CAUTION – Risk of cutting!

Touching sharp edges on the appliance may lead to cuts.

- Do not touch the sharp edges on the appliance.
- Wear protective gloves when installing and transporting the appliance.

Safe use

Follow these safety instructions when using the appliance.

⚠ WARNING – Risk of electric shock!

- If the appliance or the power cord is damaged, this is dangerous.
  - Never operate a damaged appliance.
  - Never pull on the power cord to unplug the appliance. Always unplug the appliance at the mains.
  - If the appliance or the power cord is damaged, immediately unplug the power cord.
  - Call Customer Service, please refer to page 39.
  - Repairs to the appliance should only be carried out by trained specialist staff
- An ingress of moisture can cause an electric shock.
  - Never expose the appliance to intense heat or humidity.
  - Do not use steam cleaners or sprays to clean the appliance.

⚠ WARNING – Risk of harm to health!

Children can lock themselves in the appliance, thereby putting their lives at risk.

- Do not install the appliance behind a door as this may obstruct the appliance door or prevent it from opening.
- With redundant appliances, unplug the power cord and cut through the cord.

⚠ WARNING – Risk of suffocation!

Children may breathe in or swallow small parts, causing them to suffocate.

- Keep small parts away from children.
- Do not let children play with small parts.

⚠ CAUTION – Risk of injury!

- The covering plate may break if you stand on or climb onto the appliance.
  - Do not stand on or climb onto the appliance.
- The appliance may tip over if you sit on or lean against the open door.
  - Do not sit on or lean against the appliance door.
  - Do not place any objects on the appliance door.
- Reaching into the chamber while the three-axis system is still moving may cause hand injuries.
  - Wait for the three-axis system to come to a complete stop before reaching inside.
- The spatula provided in the accessory box has sharp parts. If the spatula is used improperly, the user may be injured.
  - Do not touch the edge of the spatula.
  - Keep children away from the spatula.

- Some parts in the printer are sharp and may cause injury.
- When removing the printing model, please refer to the Chapter L.

⚠ CAUTION – Risk of burns!

- When operating or printing at high temperatures, the shell of the appliance becomes hot.
  - Do not touch the shell of the appliance when it is hot.
  - Keep children away from the appliance when it is hot.

⚠ CAUTION – Risk of scalding!

- When operating or printing at high temperatures, the print bed becomes hot.
  - Do not touch the print bed of the appliance when it is hot.
  - Please operate with the heat - resistant gloves in the attachments box
  - Keep children away from the print bed when it is hot.
- When operating or printing at high temperatures, the extruder head becomes hot.
  - Do not touch the extruder head of the appliance when it is hot.
  - Please operate with the heat - resistant gloves in the attachments box
  - Keep children away from the extruder head when it is hot.

Safe maintenance

Take note of the safety instructions when performing maintenance work on the appliance.

⚠ WARNING – Risk of electric shock!

- Improper repairs are dangerous.
  - Repairs to the appliance should only be carried out by trained specialist staff.
  - Only use the manufacturer's original spare parts and original accessories when repairing the appliance.
  - If the power cord of this appliance is damaged, it must be replaced by the manufacturer, the manufacturer's Customer Service or a similarly qualified person in order to prevent any risk.
- An ingress of moisture can cause an electric shock.
  - Do not use steam cleaners or sprays to clean the appliance.

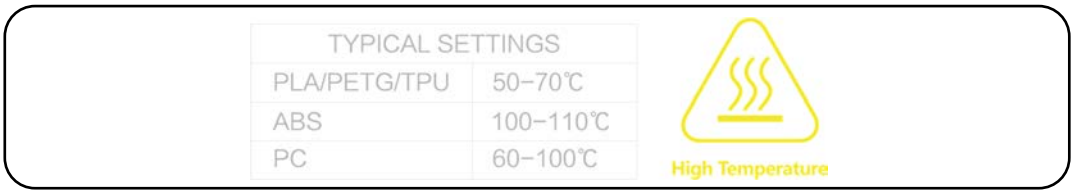
⚠ WARNING – Risk of injury!

The use of non-original spare parts and non-original accessories is dangerous.

- Only use the manufacturer's original spare parts and original accessories.

Marks

Hot Surface: The hot surface sign indicates the presence of devices with high temperatures. Always use extra care when working around heated components.
Burned fingers when handling the parts, please wait one-half hour after switching off before handling parts.



Moving Parts: This equipment is not intended for use by children; Avoid touching the media feed opening with the hands, clothing or hair; Unplug this equipment when not in use for an extended period of time.

High Voltage: The high voltage sign indicates the presence of high voltages. Always stay away from exposed circuitry. It is recommended that all conductors be removed.

Replacement fuse identification and rating markings: identification of a suitable replacement fuse shall be marked adjacent to the fuse holder.

Protective earthing conductor terminal: Marked near the Protective earthing conductor terminal.

A. Declarations and Safety Statements

FCC Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Electromagnetic Compatibility-EMC

Simplified EU Declaration of Conformity

Raise3D declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. Full text of the EU declaration of conformity is available at https://www.raise3d.com.

CE Mark Warning

This is a Class A product, in a domestic environment, may cause radio interference, in which case the user may be required to take adequate measures.

CE						
AT	BE	BG	CZ	DK	EE	FR
DE	IS	IE	IT	EL	ES	CY
LV	LI	LT	LU	HU	MT	NL
NO	PL	PT	RO	SI	SK	TR
FI	SE	CH	UK (NI)	HR		

CE Output power table:

Function	Frequency	Maximum Output Power (EIRP)
Wi-Fi	2412-2472 MHz	18 dBm(b)/ 18 dBm (g)/ 13 dBm (HT)
	5150-5250 MHz	19 dBm(a)/ 18.5 dBm(HT20)/ 17.5 dBm(HT40)
	5725-5850 MHz	14 dBm(a)/ 14 dBm(HT20)/ 14 dBm(HT40)

FCC Output power table:

Function	Frequency	Maximum Output Power (EIRP)
Wi-Fi	2412-2462 MHz	18.31dBm(b)/ 15.62dBm (g)/ 14.9dBm (HT 20)
	5150-5250 MHz	15.36 dBm(a)/ 14.79 dBm(HT20)/ 14.41 dBm(HT40)
	5725-5850 MHz	15.48 dBm(a)/ 14.49 dBm(HT20)/ 14.06 dBm(HT40)

Installation

To facilitate operation and maintenance, please keep a proper distance of 50cm on the side of the printer, 80cm on the front, 20cm on the back, and 60cm on the top during installation. No flammable materials are allowed around the installation location.

Note: During low-temperature transportation, the printer may encounter frost or icing hazards. The printer can be stored at room temperature for 4-6 hours before operating.

Filament and Electrical Precautions

It is strongly recommended to use Raise3D official filaments and/or default settings for better performance. The Raise3D printer is designed with strong compatibility with filaments. However, please be very careful when using unverified filaments and settings. This may cause abnormal printing tasks or damage the printer.

Please consult Raise3D or authorized dealers in your area for technical support and services.
Warning: The printer belongs to EN55032 Class A. In a residential environment, the printer may cause radio interference.

Odor

When the printer is operating, it emits a thermoplastic smell.

NOTE: Please place the printer in a well-ventilated and dry environment.

Oil in the air accumulating inside the printer may damage plastic parts. Air in a cavity with excessive solid particles (conductive or non-conductive) may cause damage to the printer.

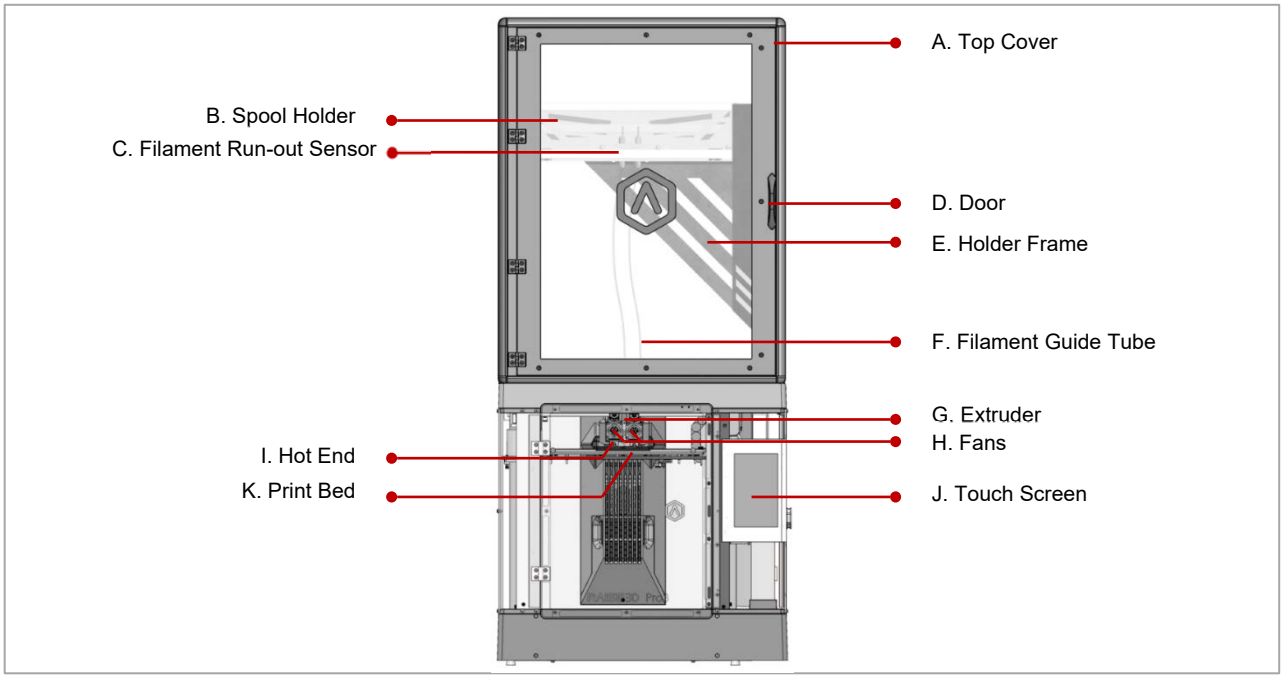
B. Technical Specification

ITEM	**Forge1**	
CONSTRUCTION	Build Volume (W×D×H)	
	Single Extruder Print	300 × 300 × 300 mm/ 11.8 × 11.8 × 11.8 inch
	Dual Extruder Print	255 × 300 × 300 mm/ 10 × 11.8 × 11.8 inch
	Machine Size (W×D×H)	
	620 × 626 × 1390 mm / 24.4 × 24.6 × 54.7 inch	
ELECTRICAL	Power Supply Input	100-240 V AC, 50-60 Hz 230 V @ 3.3 A
	Power Supply Output	24 V, 600 W
PRINTER	Print Technology	FFF (Fused Filament Fabrication)
	Print Head System	Dual-head with electronic lifting system
	Filament Diameter	2.85 mm
	XYZ Step Size	0.78125, 0.78125, 0.078125 micron
	Print Head Travel Speed	30-150 mm/s
	Build Plate	Glass Build Plate
	Max Build Plate Temperature	120°C
	Heated Bed Material	Silicone
	Build Plate Leveling	Auto-Leveling
	Supported Materials	Metals (Ultrafuse 316L, Ultrafuse 17-4PH)
	Nozzle Diameter	0.4 mm (Default), 0.6 mm (Available)
	Max Nozzle Temperature	300°C
	Connectivity	Wi-Fi, LAN, USB port, Live camera
	Noise Emission (Acoustic)	< 55 dB (A) (when building)
	Operating Ambient Temperature	15-30°C, 10-90% RH, non-condensing
	Storage Temperature	-25°C to +55°C, 10-90% RH, non-condensing
SOFTWARE	Slicing Software	ideaMaker for Metal
	Supported File Types	STL/ OBJ/ 3MF/OLTP
	Supported OS	Windows/ macOS/ Linux
	Machine Code Type	GCODE
PRINTER CONTROLLER	User Interface	7-inch Touch Screen
	Network	Wi-Fi, Ethernet
	Resume Print after Power Outage	Firmware recording, no need for battery installation
	Screen Resolution	1024×600
	Motion Controller	Atmel ARM Cortex-M4 120MHz FPU

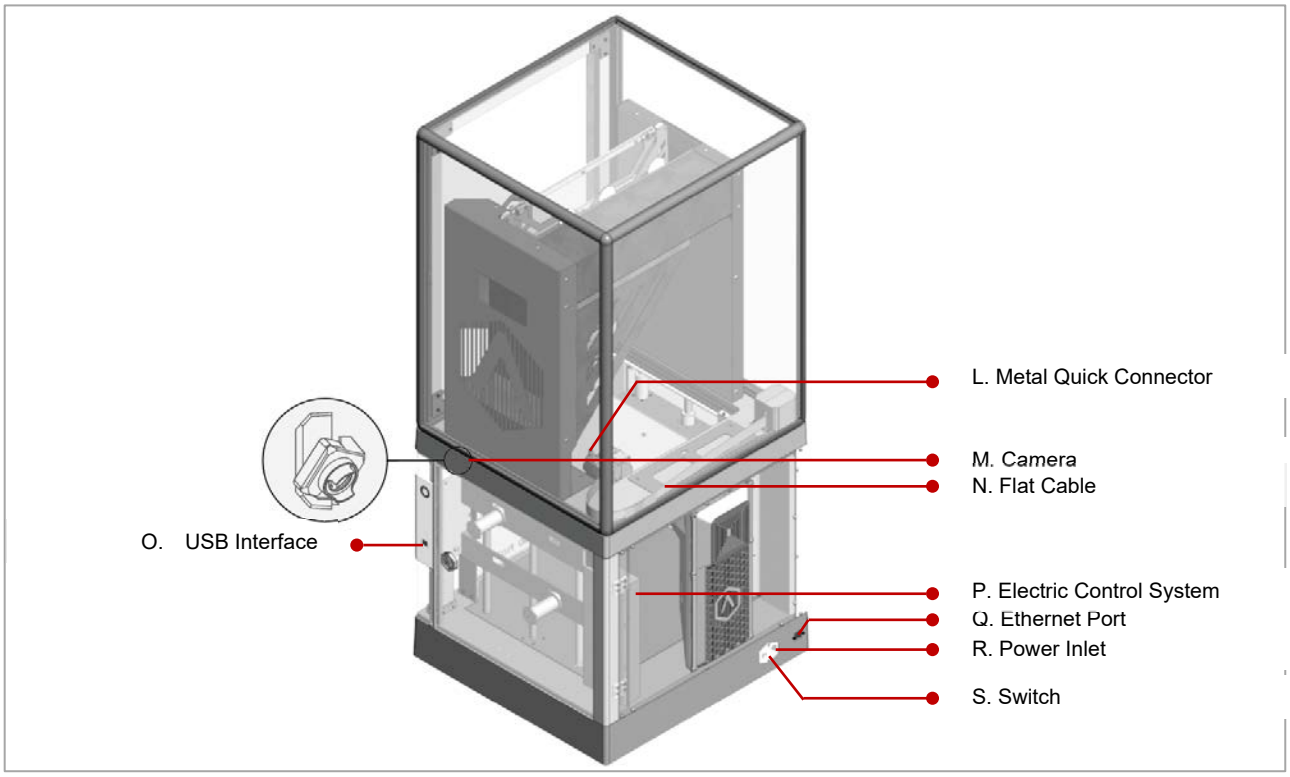
	Logic Controller	NXP ARM Cortex-A9 Quad 1 GHz
	Memory	1 GB
	Onboard Flash	16 GB
	OS	Embedded Linux
	Ports	USB2.0×2, Ethernet×1

C. List of Parts

Front View



Top View



A. Top Cover

The upper cover of the printer. The filament can be placed here, which can accommodate 2 rolls of 3kg filaments at the same time.

B. Spool Holder

Filament holder with wheels to allow filament spool rolling free when feeding.

C. Filament Run-out Sensor

An automated optical detection system is adopted to detect whether the filaments are sufficient. When the filaments are running out, the printer will automatically stop printing.

D. Door

Door to open filament box.

E. Holder Frame

The frame lifting weight of filament.

F. Filament Guide Tube

Protects and guides filaments.

G. Extruder

The part extruding filament to the hot end; brand-new unitized extruders, which are more convenient to disassemble; a dual extrusion structure is adopted to adapt to a variety of filaments.

H. Fans

Used to cool the heat down.

I. Hot End

The part that melts filaments; with the quick-release design, even beginners can quickly remove the hot end within one minute; it is more convenient to repair the hot end after removing it.

J. Touch Screen

To control the printer and check the status of the printer.

K. Print Bed

A plate for printing the model.

L. Metal Quick Connector

Can automatically lock inserted filament and release filament by push.

M. Camera

Used to observe the operation of the printer.

N. Flat Cable

The integrated cable that transmits the signal from the motion controller board to the extruder. A new flat cable is adopted to replace the large drag chain of Pro2 series printers, reducing the weight of the extruder and avoiding the sagging of the cross shaft.

O. USB Interface

2 USB2.0 interfaces.

P. Electric Control System

Stores the motion controller board.

Q. Ethernet Port

RJ45 port to connect the printer to a network.

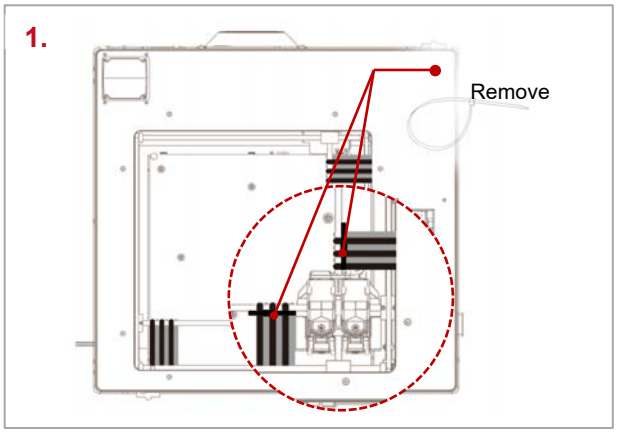
R. Power Inlet

The place to connect power cable.

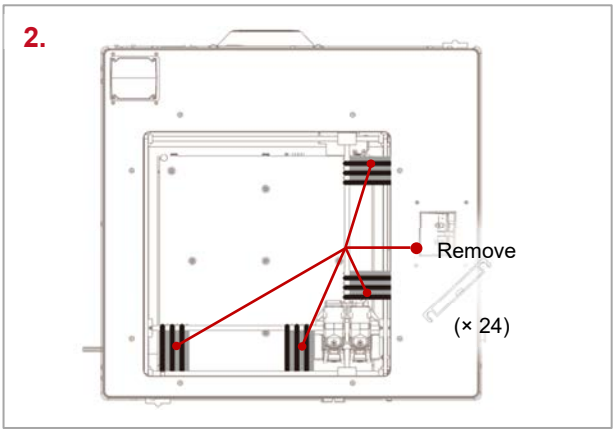
S. Switch

Power switch to turn on or off the printer.

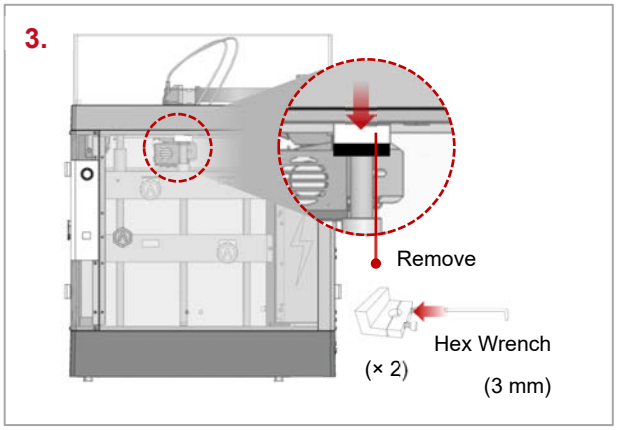
D. Hardware Installation



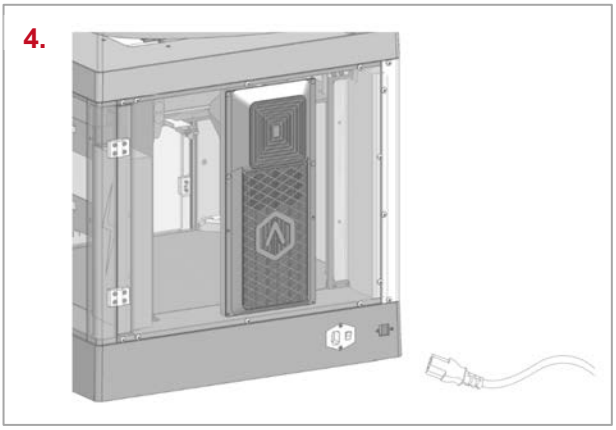
Locate the four shipping zip ties, and remove them.
It is recommended to unclip these as opposed to cutting them. They can be reused if you need to transport your machine in the future.



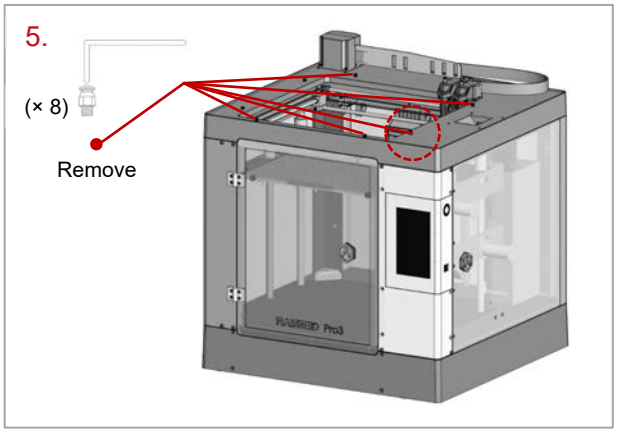
Peel off the yellow stickers and remove the 24 security spacers.
These clips are designed to hold the extruder assembly in place during shipping, and should be saved for future transport. Do not operate the printer with the clips installed.



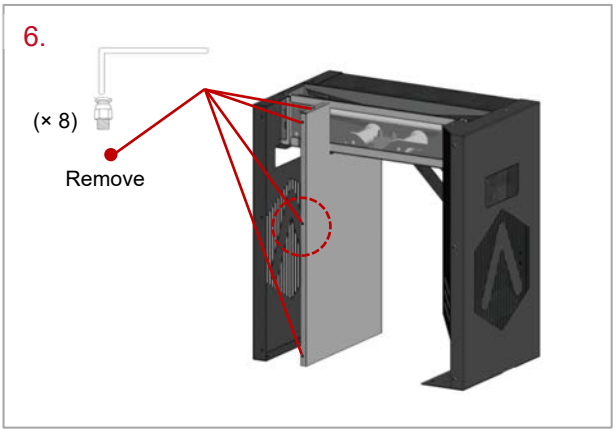
Select the largest of the included hex-head wrenches (3mm), and remove all four hex head security bolts from Z-axis clamps (2 bolts each).
These are located on the left and right sides of the printer of the ball screw thread.



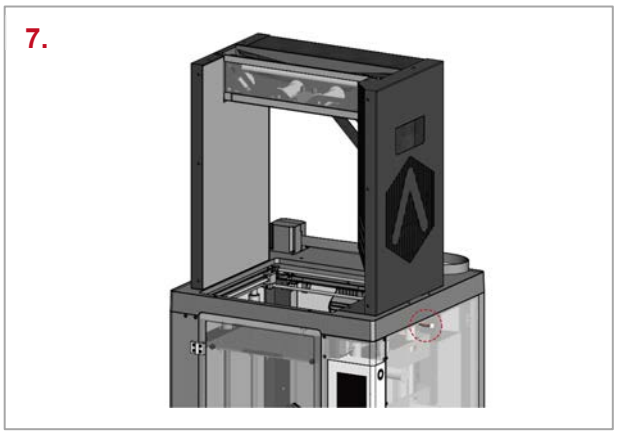
Plug the machine into a wall outlet using the power adapter for your designated country (5 included).
Flip the switch to power the unit on.



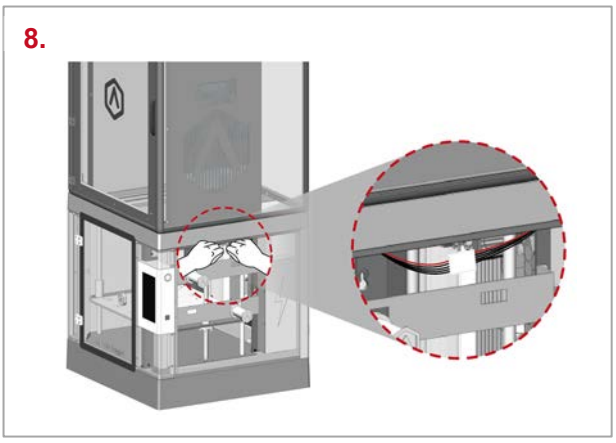
Loose 8 screws on top of printer with 2.5mm hex wrench.



Loose 8 screws on left panel of holder fame with 2.5mm hex wrench.
Take off the cover of left panel.

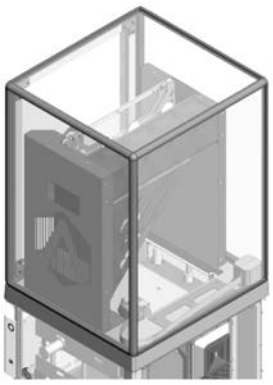


Place holder frame on top of printer with all 4 screw holes on each piece are aligned.
Tighten 4 M4x25 screws with 3mm hex wrench through the screw holes to fix the holder frame on printer.
Reinstall removed cover back to left panel with original screws and 2.5 mm hex wrench.
Note: Find and pull out the ends of filaments run-out sensor cable from bottom of holder frame right panel during installation.



Find the pairing socket out of the cover of Electric Control System. Connect the two ends and the socket. Hide the run-out senser cables on the bottom of the printer.

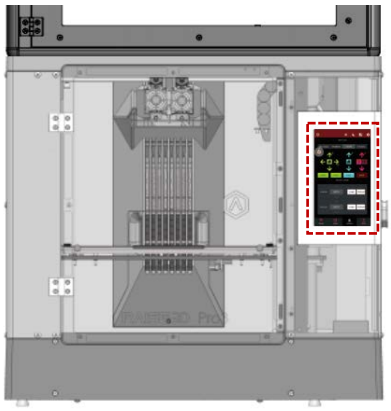
9.



Place top cover on top of printer with all 4 screw holes on each piece are aligned.
Tighten 4 M4x25 screws with 3mm hex wrench through the screw holes to fix the top cover on printer.

Note: For safety and convenience consideration, we suggest two people in operation.

1.

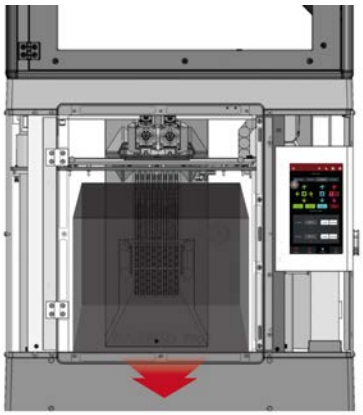


When the touch screen displays the "Home" screen, the printer is ready.
Once the unit is powered on, the printer will go through a start-up sequence.
Your Raise3D printer will take approximately 60 seconds to boot up. When the touch screen displays the "Home" screen, the printer is ready.

2.

Tap the "Utilities" tab, and press the Z Homing button.
Press OK for the print bed to begin to "Home" to the origin position.
This will allow you to access your accessory packages.

3.



Open the front door, and remove the starter box and glass plate package from the printer 's base.
Open these packages, and compare them with the following Raise3D Supplies and Accessories list.

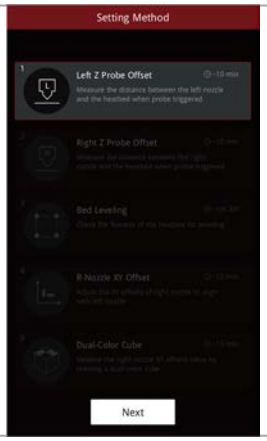
After removing the starter box, keep following the start-up wizard to finish the network connection, printer settings and RaiseCloud settings.

After the start-up wizard, the printer will carry out 5-steps Offset Calibration, and the whole process takes about 1 hour.

Calibrating the offset value of the printer can increase the printing success rate. Offset Calibration includes Left Z Probe Offset, Right Z Probe Offset, Bed Leveling, R-Nozzle XY Offset and Dual-Color Cube. The calibration process also includes loading the filament. After all calibrations are completed by following the instructions on Raisetouch, subsequent printing can be performed.

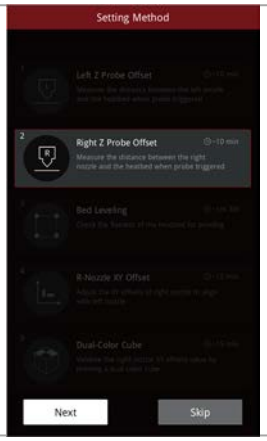
NOTE: Once all the basic settings are completed, a window introducing EVE will pop up. Please follow it to move to the next step.

1.



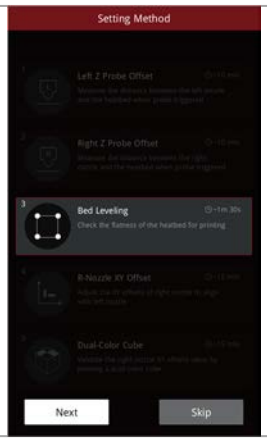
Adjust the distance between the left nozzle and the build plate. If one corner of the bottom plate is a few millimeters higher or lower than the other corner, this gap can be compensated by calibration.

2.



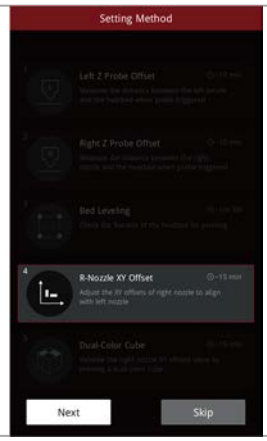
Adjust the distance between the right nozzle and the build plate.

3.



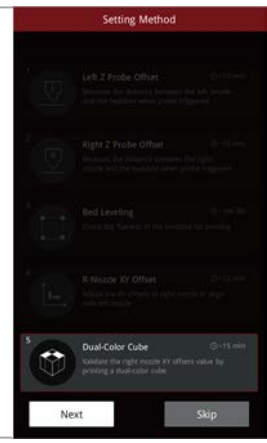
Adjust the flatness of the build plate. Precise flatness helps to get a better bottom surface of the model, avoiding warping or the model detaching from the build surface.

4.



Adjust the matching gap between the left and right nozzles to ensure that the model will not be staggered in dual color printing.

5.



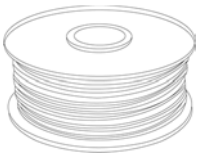
It aims to verify whether the adjustments in the previous four wizards are appropriate.

Raise3D Supplies and Accessories

Power Cable

(x 5)

Hex Wrenches



Filament

(x2)

Filament Guide Tube

(x2)

USB Storage

Heat Resistant Gloves

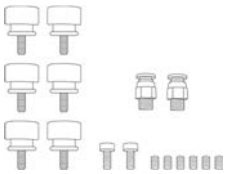
Filament Holder

(x 2)

Spatula

Nozzle Clean Kit

Tweezers



Thumb Screws

& Other Accessories

(Spare)

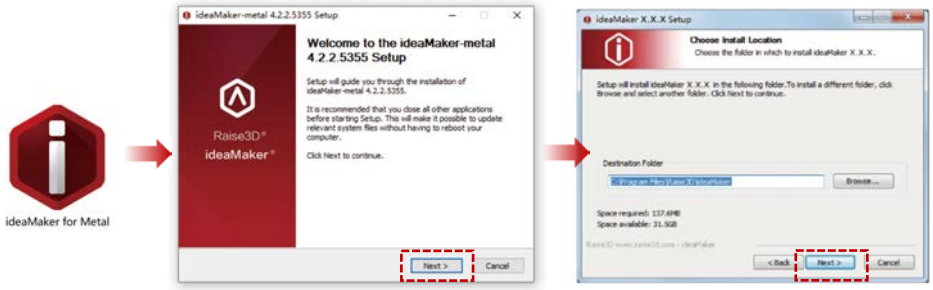
0.3 mm Feeler Gauge

E. ideaMaker for Metal Installation

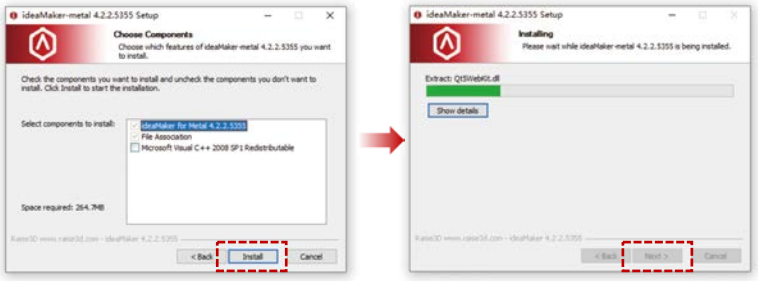
The slicing software, ideaMaker for Metal, is available on the USB storage device included with your printer.
Additional downloads and versions are available online at:
https://www.raise3d.com/download/

WINDOWS

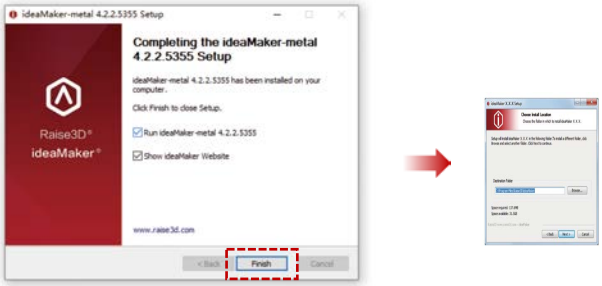
1. Install ideaMaker for Metal, and click "Next".



2. Follow the instructions provided by the guide, and click "Install". After the installation is finished, click "Next" to go to the next step.

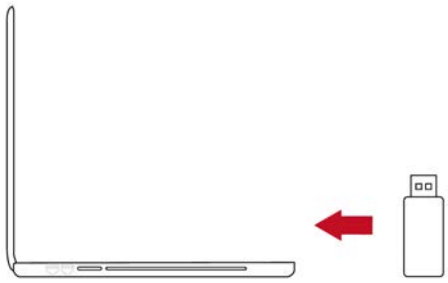


3. Click "Finish" and ideaMaker for Metal is installed

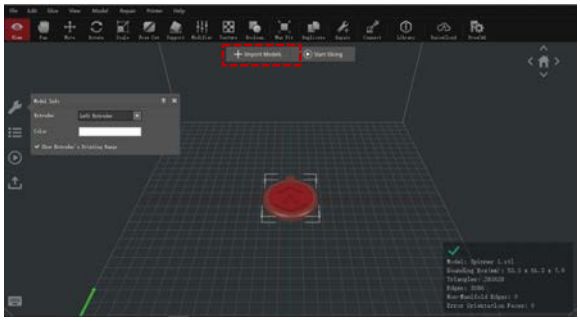


F. Using ideaMaker for Metal

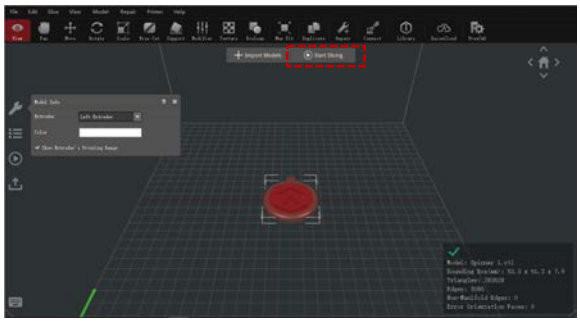
1. Insert the USB key before lunching ideaMaker for Metal and keep it connecting with the computer running ideaMaker for Metal. Don’t unplug the USB key during running, otherwise software will freeze and pop up hint window.



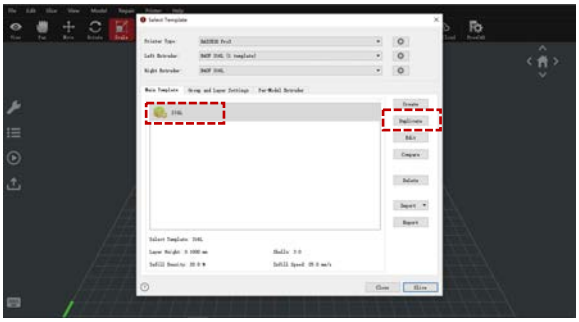
2. Click the "+" button to import STL file designed for print.



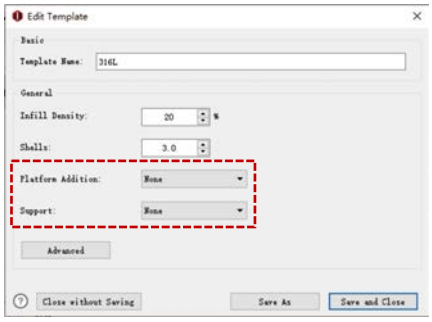
3. Click the "Start" " " button to begin slicing the model.

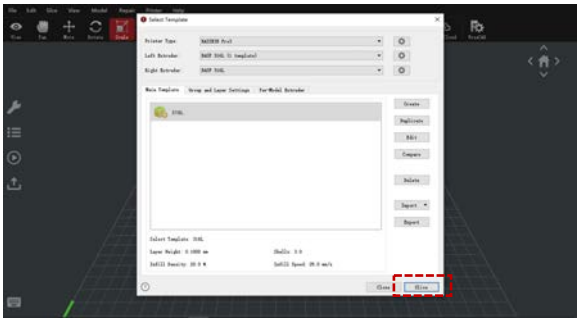


4. Confirm that the selected printer type and material are correct, then select the standard slicing template. Click "Edit" to select the type of Platform Addition and the type of Support.

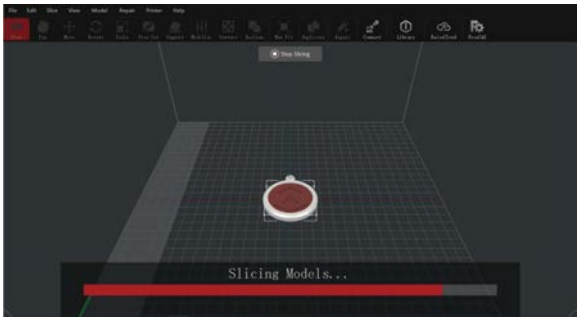


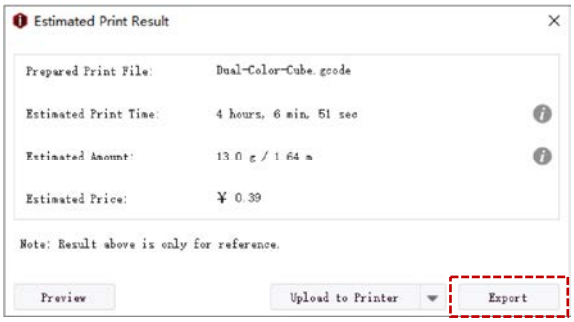
5. Select your type of Platform Addition and Support in the "Edit" window. Click "Save and Close" to return to the previous menu. Click "Slice" to generate your file.



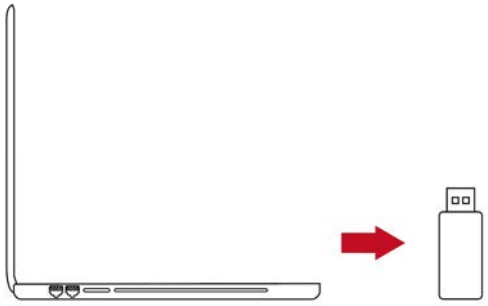


6. Save the sliced files (.gcode and .data) by exporting them on the USB storage device.
NOTE: File names that do not conform to the Western Latin character set may not display properly.



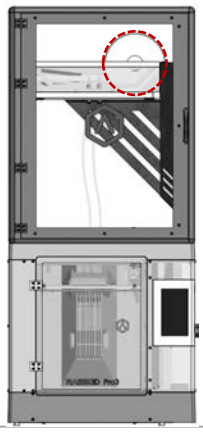


7. Confirm that the files are saved and eject the USB storage device.



G. Dual Extruder Printing-Loading

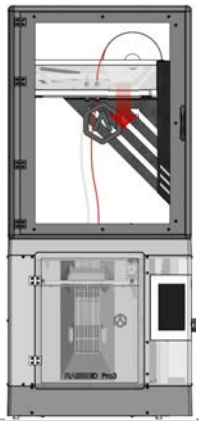
1.



Open the door, put the transparent panel down. Place filament spools on rolling wheels in the spool holders, with open end of filaments facing towards the metal quick connector next to spool holder.

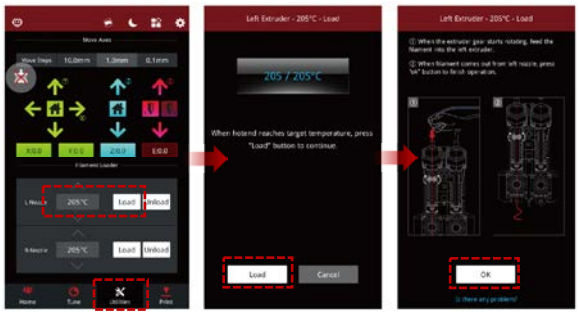
Note: the filament spool weights 3kg, grip it tightly in case of injury of filament spool sliding.

2.



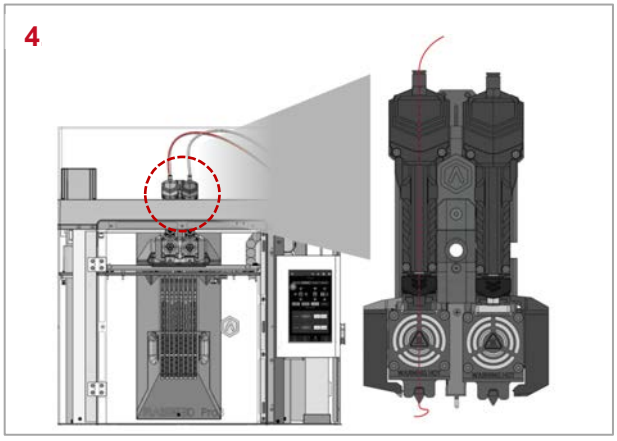
Feed open end of filaments into the guide tube through quick metal connector until they pass through quick metal connector.

3.



Unplug the guide tube from extruder and keep feeding the filament until it reaches end of extruder.

NOTE: The operation of the left extruder is the same as that of the right extruder. Here we take the left extruder as an example.



After loading both sides of extruders, press the "Utilities" tab on the bottom of the screen, and set the temperature of the left nozzle to match the requirements of the filament that you are using.

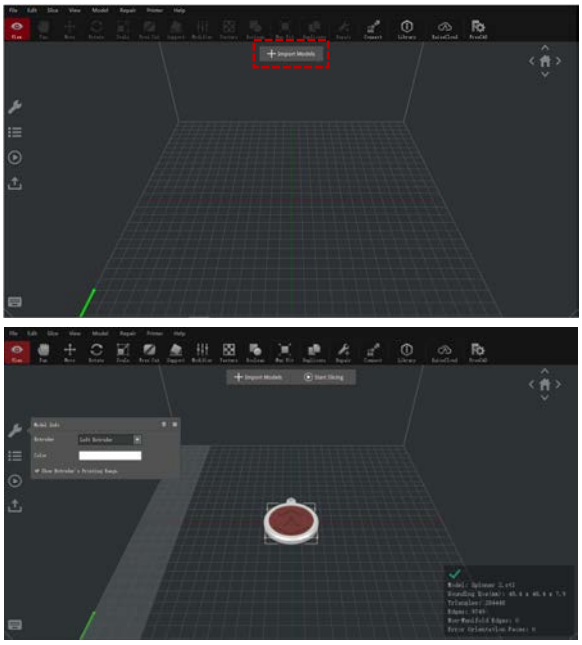
Press the "Load" button, and the printer will begin to heat. When the target temperature is reached, press "Load".

Complete the feeding operation according to the instructions on the screen.

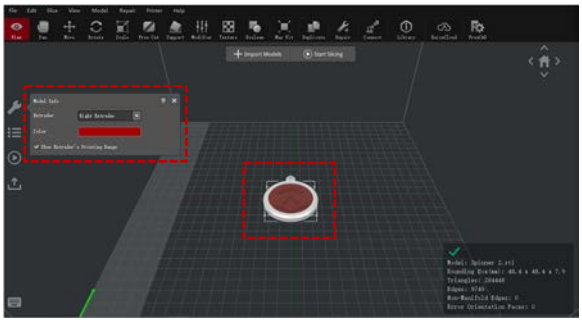
NOTE: This document's instructions are based on the properties of Raise3D PLA filament. This is the standard filament included with your product and it is advised to use Raise3D PLA for testing and initial setup.

H. Dual Extruder Printing-Slicing

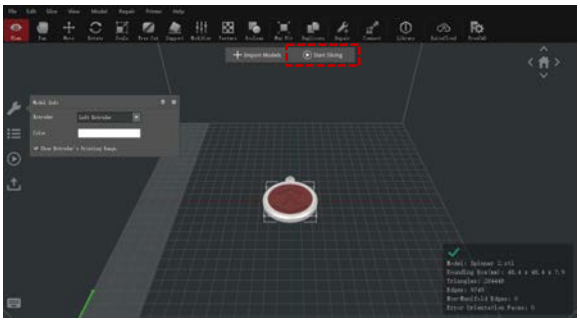
1. Choose one of the models and set its designated extruder as Left Extruder from the left side "Model Info" window.



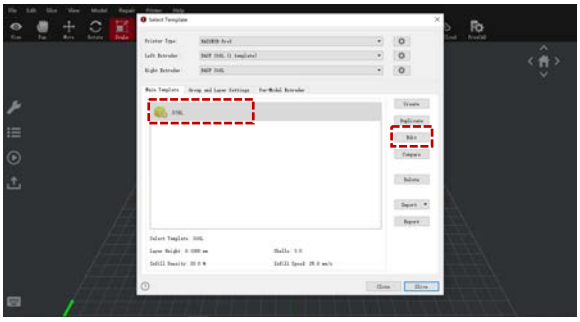
2. Choose the other model and set extruder as the Right Extruder using the "Model Info" window.



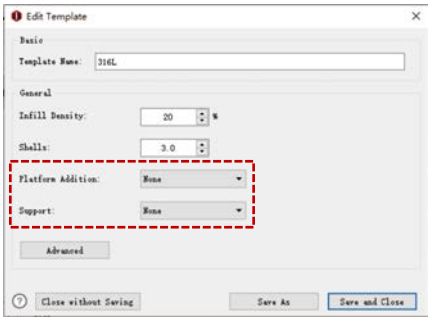
3. Click the "Start" or "▶" button to begin slicing the model.

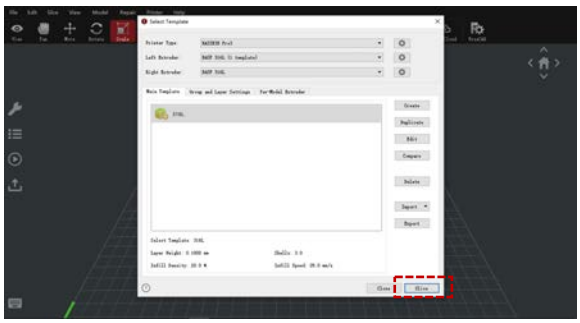


4. Confirm your printer type and materials for both extruders, then select the standard slicing template.
   Click "Edit" to select the type of Platform Addition and the type of Support.

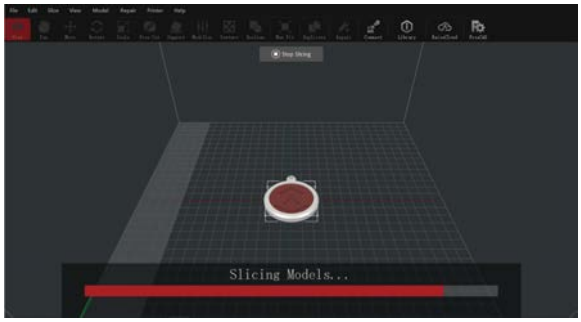


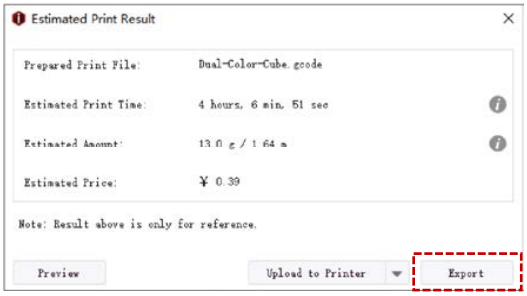
5. Select your type of Platform and Support in the "Edit" window. Click "Save and Close" to return to the previous menu. Click "Slice" to generate your file.



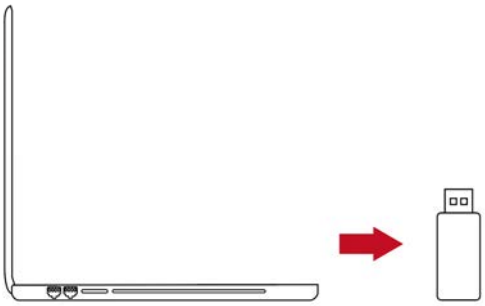


6. Save the sliced files (.gcode and .data) to your USB storage device.
   NOTE: File names that do not conform to the Western Latin character set may not display properly.

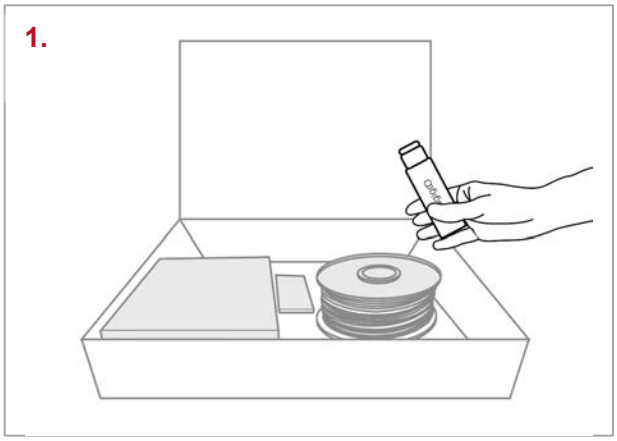




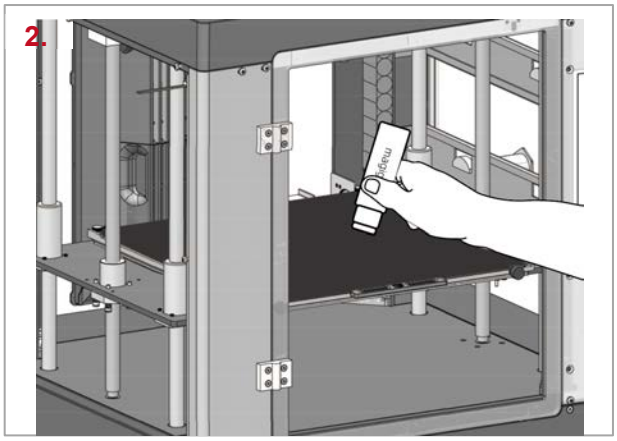
7. Confirm that the files are saved and eject the USB storage device.



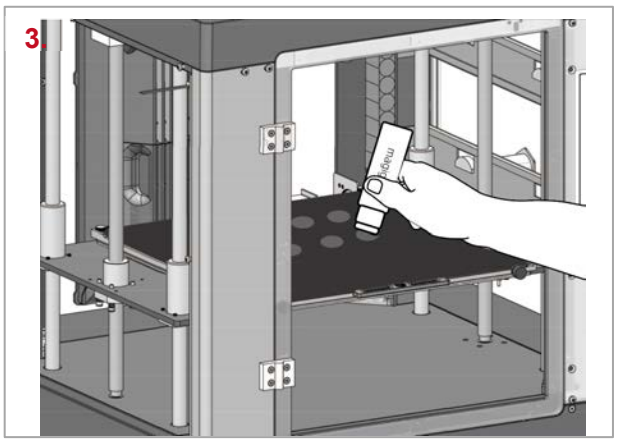
I. Dual Extruder Printing- Gluing



Find the Magigoo Pro Metal glue from accessory box.



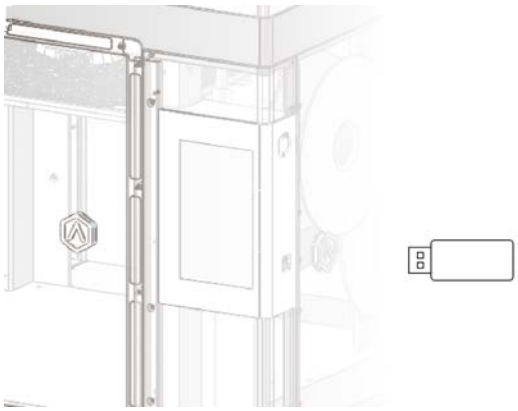
Shake the Magigoo bottle. Magigoo is best applied on a cold glass print surface.



Dab the applicator 3-6 times on the surface to produce 3-6 spots of glue then spread the application to the whole printing area of the glass print bed surface to a thin even coat.
Note: If Magigoo does not flow one can apply a small amount of pressure on the bottle to make sure that the valve is activate.

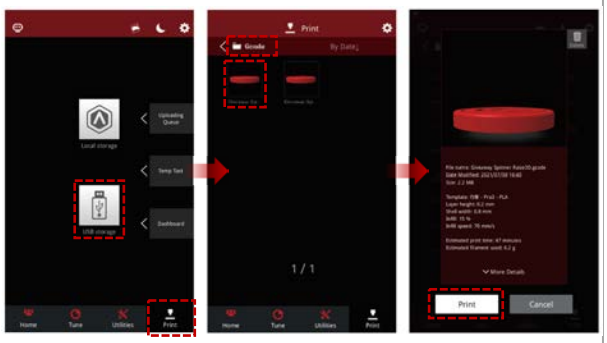
J. Dual Extruder Printing- Starting Printing

4.



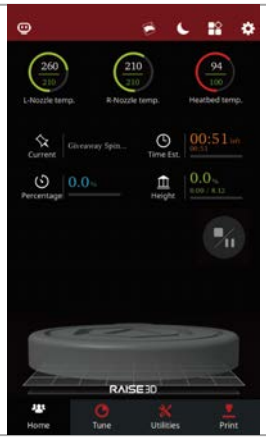
Insert the USB device that contains your sliced model files (.gcode or .data) into the USB slot on the side of the touchscreen.

5.



Open the "Print" tab, and choose "USB Storage" to open the file storage path.
Select your dual extrusion file to check the printing parameters and settings.
Press "Print" to start printing the test file

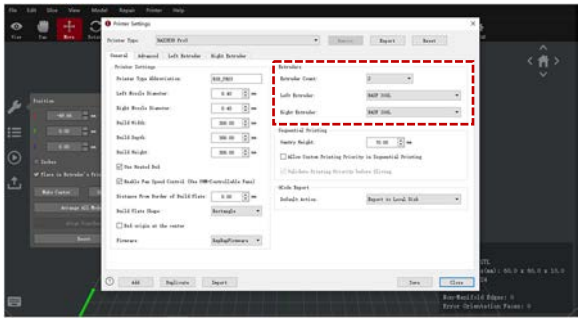
6.



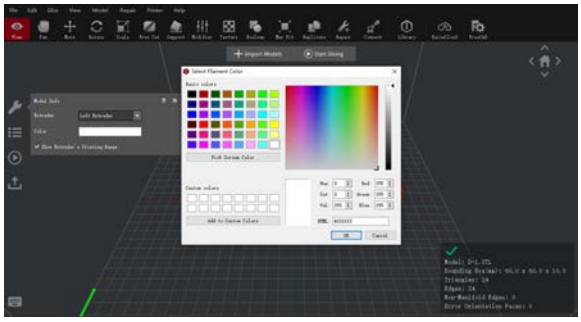
During printing, you can check the status from the "Home" interface on the touchscreen, including the remaining print time and other parameters.
NOTE: The touch screen will display an image of your model on-screen while printing. This image will only be shown when the file is sliced by ideaMaker and the .data file is saved in the USB storage device or uploaded to the screen.

K. Dual Extruder Printing-Advanced Slicing

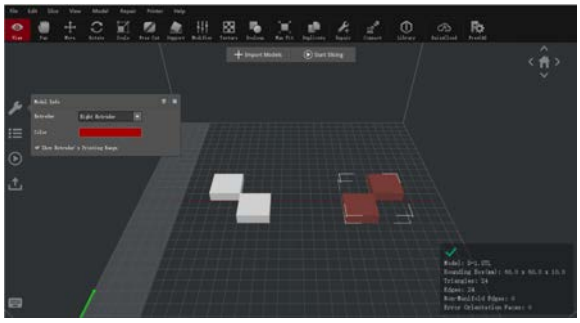
1. To perform higher-level dual-color printing and carry out offset calibration at the same time, please do the following.
   Load your filament type for both the left and right extruders.



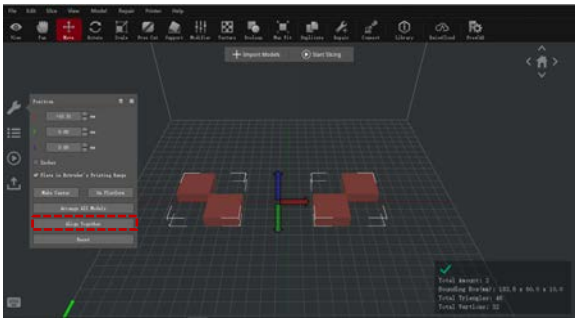
2. Each nozzle has a different printing range. To check the printing range of each nozzle when aligning models, tick the "Show Extruder 's Printing Range" box.



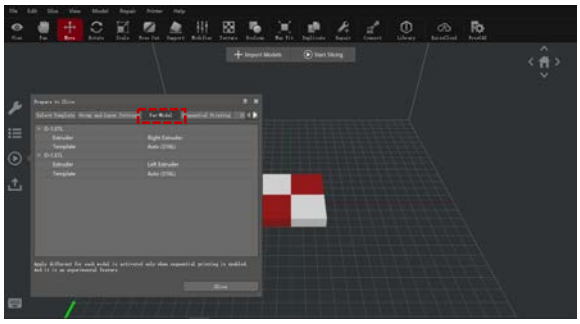
3. Multiple colors are available for different nozzles' printing range.



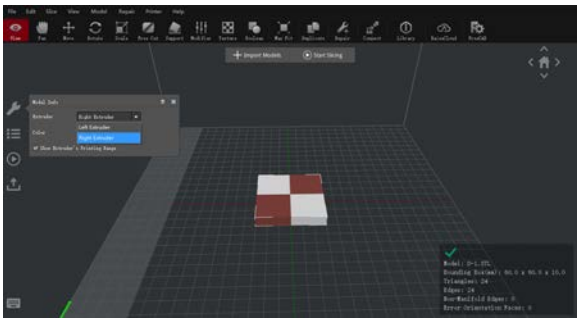
4. The "Align Together" feature can align multiple models to their original relative position (as defined during modeling) with each other. It can be located in the "Position" pop-up menu.



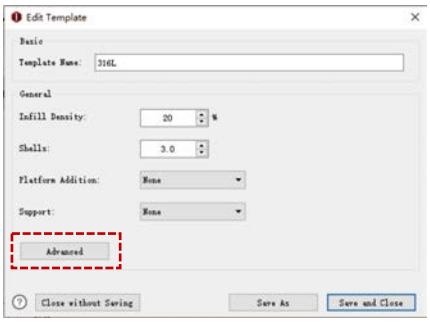
5. Select the "Start" button, select your printing template, then open the "Per-Model Extruder " tab to set the nozzle settings per extruder.



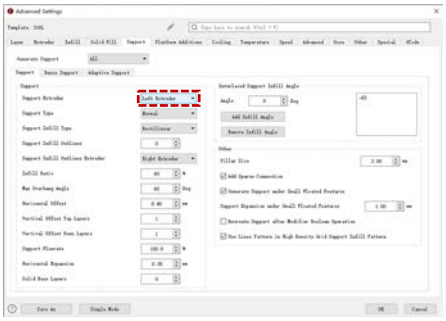
6. You may also set the extruders though the "Model Info" menu from the main window.



7. Double click a printing template in the "Select Template" windows, and click the "Advanced" button to access the Advanced Settings.

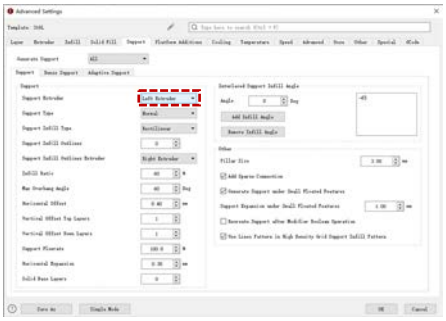


8. You can specify a nozzle to print support structure under Support tab.



9. ideaMaker is not able to detect when a floating model is being supported by the opposite extruder and will prompt the user to add supports. The user should select not to add support structure as it will not be needed.

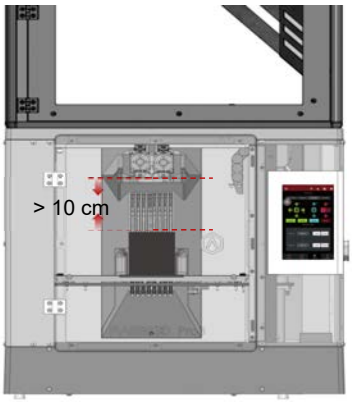
10. You can select your extruder and platform structure choice in the "Platform Additions" tab. These structures include: Raft, Brim, Skirt.



11. Wipe Wall
Enable Wipe Wall will add extra shell(s) around the model during dual-extruder printing. This wall(s) can help clean the oozing filament from the unused nozzle to reduce the effects of excess material on the final model.
Wipe Wall Offset refers to the distance between Wipe Wall and the outer shell of the model. If the wall is positioned too closely, the Wipe Wall may stick onto the model. If the wall is set too far, the wiping results may be affected.
Wipe Wall Angle refers to the maximum angle for generating the Wipe Wall. If the maximum angle is set too low, the wall may have a difficult time obeying the shape of the model, especially around curved surfaces.
Wipe Wall Loop Lines adjust the thickness of Wipe Wall.
Wipe Wall Type changes the shape of Wipe Wall. The difference among the following 3 types are the distance between Wipe Wall and the model.
Contoured type will generate a Wipe Wall structure with almost the same shape of the outlines of the model. In some cases, it will be too close to the model which may be difficult to remove especially with inner structures.
Water Fall will attempt to follow along the horizontal model contour.
Vertical will create a vertical wall at the height of the model. It is ideal for simple structures like tubes or cubes.

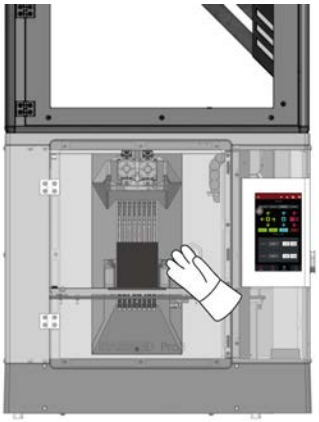
L. Removing Prints

1.



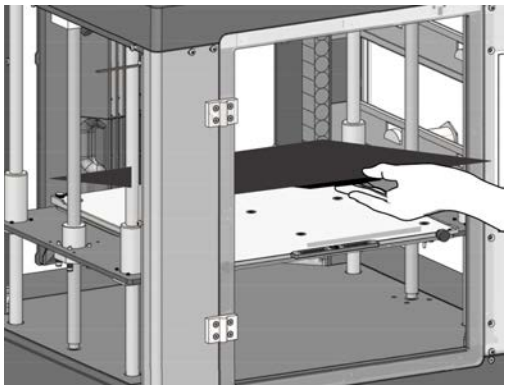
Make sure the printer is idle, and that there is at least a 10 cm gap between the prints' top and the nozzle.

2.

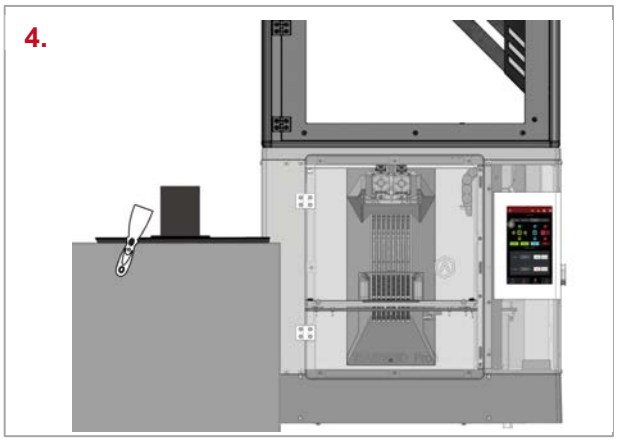


Wait for the build plate and nozzles to cool down to room temperature before removing any prints. If you wish to remove prints before they have sufficiently cooled down, wear the heat-resistant gloves from the attached accessories.

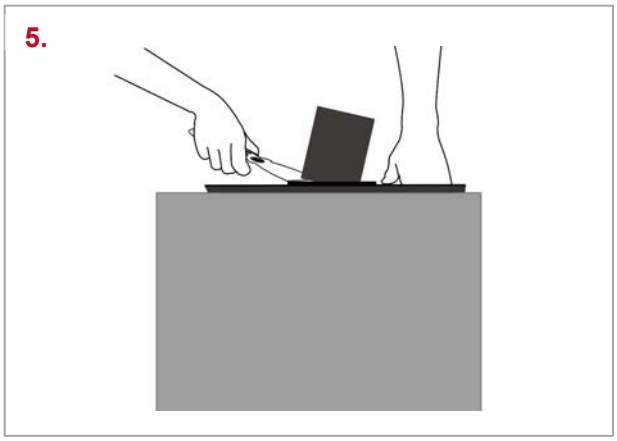
3.



Lift the build plate handle a little bit to detach the build plate from the Z platform.



Wait for the cooling of glass, spill water on glass print plate around part to dissolve the glue. Part should be easy to take off. You can refer to user guide of Magigoo Pro Metal Glue: https://magigoo.com/products/magigoo-pro-metal/



Use a damp cloth to wipe off any residue on glass print plate.

M. User Interface

· Status Bar, EVE
· Menu title, Settings button

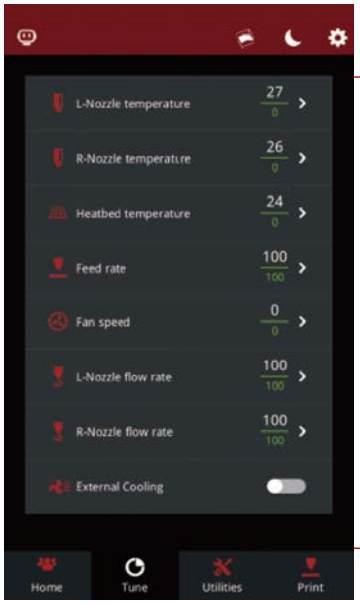
· Hot End and heated bed temperatures

· Current model name, total print time, current printing status and height

· Visual display of current model
· Pause/ Resume button

· Taskbar

Home



· Printing parameters and adjustments

Tune

· Moving step distance

· Disable Motor button

· Load and unload

Utilities

· Choose where to load the print job from

· Check uploading list, recovery task list, printing statistics

Print

Experiencing Difficulties/Contact Information

If you run into any issues during this guided setup, please contact our expert technicians by creating a ticket at support.raise3d.com. Customers outside of the US, please contact your local Raise3D distributor or reseller.
For sales information please contact us at sales@raise3d.com.
Other inquiries: for any other inquiry please send an email to inquiry@raise3d.com.

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