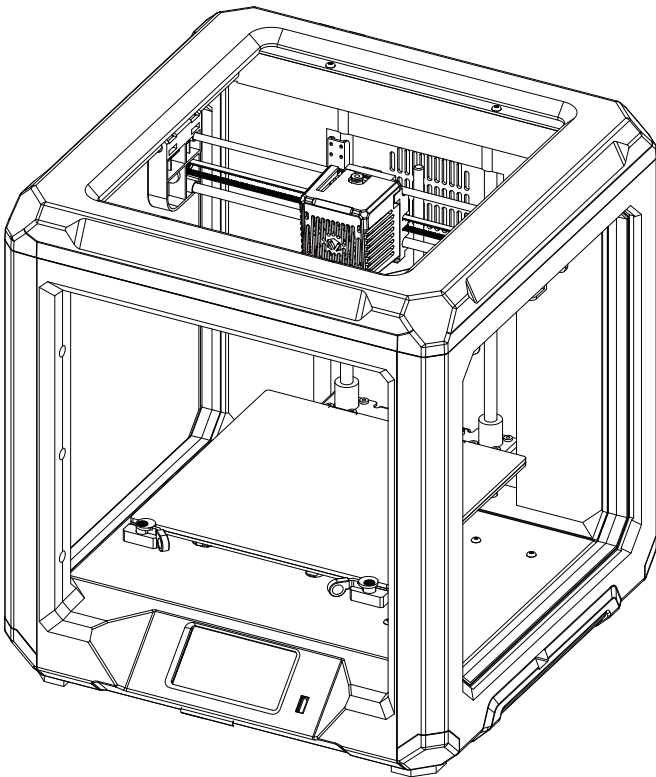


3D Printer User Manual

**⚠ WARNING**

Each printer must be tested before leaving factory. If there are some residues in extruder or some tiny scratches on the build plate, it is normal and won't affect the printing quality.

This manual is only applicable to Voxelab Aries 3D printer

Foreword

Thank you for choosing and using the products of Voxelab Technology. For your convenience, please read this manual carefully before use and follow the manual strictly. The Voxelab team is always ready to provide you with the perfect service. Please contact us by email listed, if you have any problems.

Email: support@voxelab3dp.com

You can also get operational knowledge of the equipment from the following way:

Voxelab website: www.voxelab3dp.com

Users can get the software, firmware, device maintenance and relevant contact information via Voxelab website.

Unpacking



1. Open the box, take out the user manual, the USB flash disk and the platform.



2. Remove the foam.



3. Lift the printer and put it on the desk, then take Aries out of the plastic bag.



4. Remove the top foam, there should be a power cable included.



5. Take out the foam under nozzle as showed in the image.



6. Hold the platform and lift it carefully to remove the foam below it.



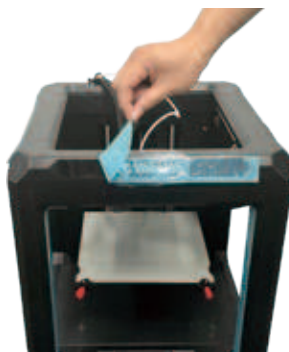
7. Double check the foam, it should contain: filament, material rack, nozzle, remove tool, needle, wrenches and screwdrivers.



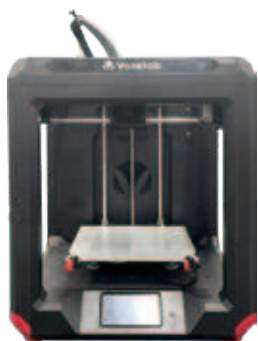
8. Cut the three black cable ties: one for fixing X-axis synchronous belt, two for fixing Y-axis synchronous belts on both sides.



9. Cut four white cable ties that used to hold the rods in place.



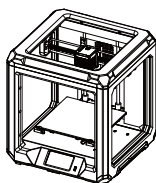
10. Discard the blue protective tapes all around.



11. Congratulations! You've unpacked your printer. Please keep the kit and packing for future use.

1. Do not make any modifications to the printer. To avoid personal injury or property damage please ensure your operation followed by the Manual.
2. Dress properly. Do not wear loose clothing or jewelry. Keeping your hair, clothing and gloves away from moving parts.
3. Do not directly touch the nozzle and build plate to avoid high-temperature burn.
4. Do not expose the printer in flammable liquid, gas or dust environment (The high temperature generated by operating printer may react with dust, liquid, and flammable gas in the air and cause fire).
5. Do not put the printer on a shaking place. It may affect the printing quality.
6. Children and untrained personnel are not allowed to operate the printer alone.
7. Operate the printer in a well-ventilated environment. Some materials may emit odors during the printing process.
8. Do not manually move the nozzle or printing platform while booting up, lest printer damage.
9. Never use the printer for illegal activities.
10. Never use the printer to make any food storage.
11. Never put the printed model into mouth.
12. Lower the build plate before loading/unloading filament. The distance between the nozzle and build plate should be at least 50 mm.
13. Ensure regular maintenance for the printer; use dry cloth to remove dust and adhered residues.

Kit Contents



3D Printer



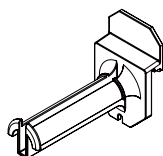
Power Cable



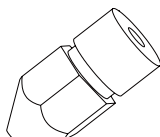
Filament



User Manual



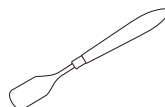
Material Rack



Nozzle



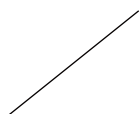
Glass Build Plate



Remove Tool



**Wrenches and
Screwdrivers**



Needle

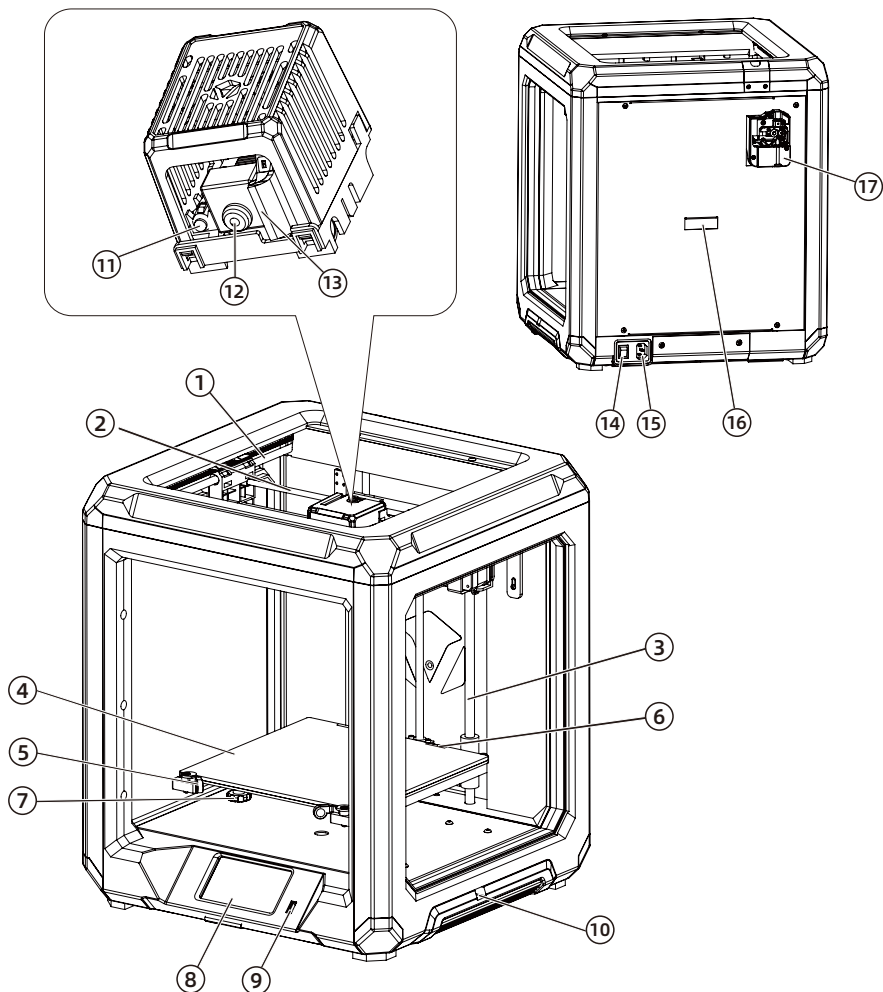


USB Flash Disk

Equipment Parameters

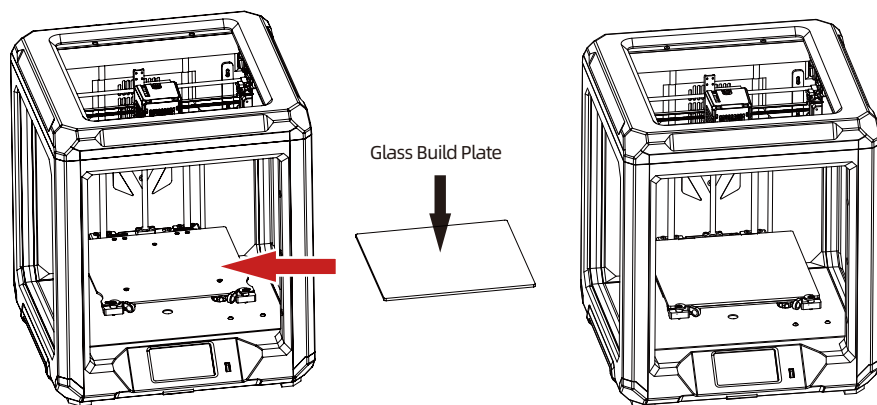
Model	Voxelab Aries
Print size	200*200*200 mm
Forming technology	FDM
Number of nozzle	1
Layer thickness	0.05 mm - 0.4 mm
Nozzle diameter	Standard 0.4 mm
XY axis precision	±0.2 mm
Filament	φ1.75 mm PLA / ABS / PETG
File format	stl / obj / amf / 3mf / fpp / bmp / png / jpg / jpeg
Working mode	Internal memory printing / USB stick printing / WIFI connection printing
Slicing software	VoxelMaker / Cura / Simplify 3D
Power specification	Input: AC 115/230V 50/60Hz Output: DC 24V
Total power	350W
Hotbed temperature	≤110°C
Nozzle temperature	≤250°C
Resume printing function	Yes
Filament sensor	Yes
Screen	4.3" colorful touchscreen
Language switch	Chinese / English
Computer operating system	Windows 7/10 / Mac OS
Print speed	≤180 mm/s, 50-80 mm/s normally
Position precision	Z-axis 0.0025 mm, X/Y-axis ±0.011 mm
Output file	.gx / .g / .gcode

Product Introduction



- | | | | |
|---------------------|----------------------------|---------------------|-----------------------------|
| 1. Y-axis Guide Rod | 2. X-axis Guide Rod | 3. Z-axis Guide Rod | 4. Build Plate |
| 5. Clip | 6. Limit position assembly | 7. Nut | 8. Touch Screen |
| 9. USB Stick Input | 10. Power Voltage Switch | 11. LED Light | 12. Nozzle |
| 13. Turbofan Baffle | 14. Power Switch | 15. Power Input | 16. Spool installation port |
| 17. Drive assembly | | | |

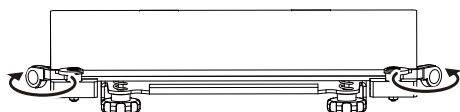
Hardware Assembly



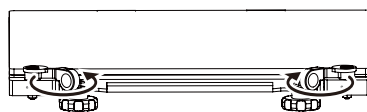
1. Put the glass build plate on the heating platform and insert it into the limit position assembly, then locked by clips. The four edges of glass build plate need to be aligned with the platform.

Unlocked

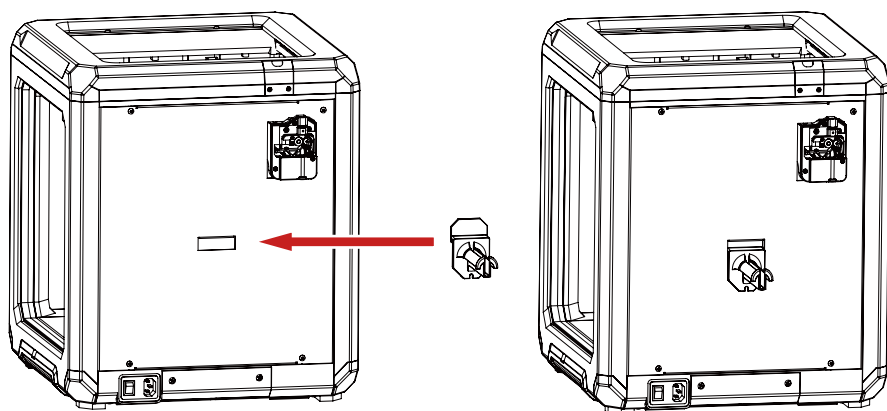
Locked



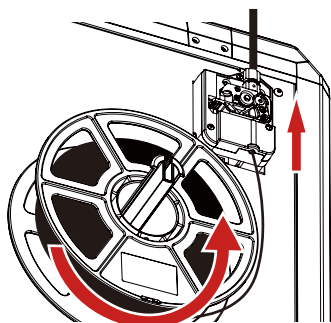
Rotate 180° to the outside



Rotate 180° to the inside



2. Install the material rack on the back of printer.

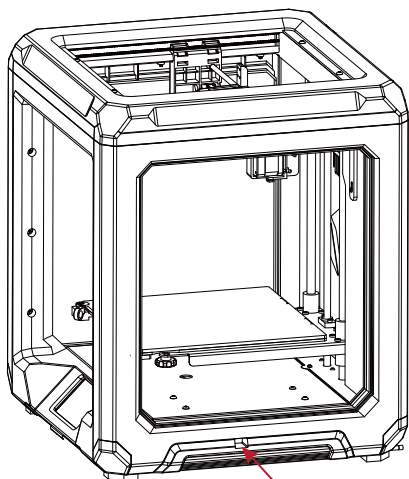


3. Follow the filament loading direct strictly(as showed) and insert the filament into the intake. It needs to press the handle to push filament into filament feeding roller until certain resistance is sensed.

Note: Please ensure the filament direct is the same as the picture showed, or it will cause the print failure.

Power On

Plug in the power cord and toggle the switch to turn on the power. Do not disconnect the cables when Aries is powered on.



Attention

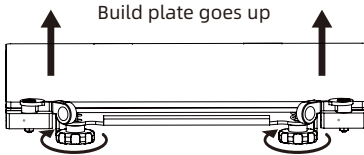
- Damage might occur if voltage setting is incorrect. Make sure the current input voltage matches to your local power supply (115/230V).
- Plug in power cord and turn power switch to 1 to turn it on.



Leveling Build Plate

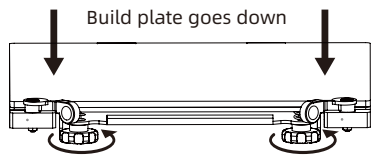
Before leveling, let's learn the function of nuts.

How to use the nuts



Rotate the nuts clockwise

Raise the build plate to reduce the distance between the nozzle and build plate.

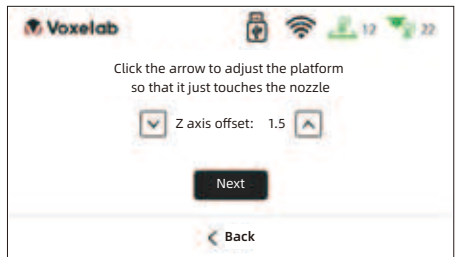
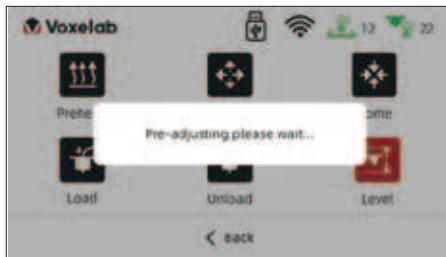


Rotate the nuts Anticlockwise

Lower the build plate to increase the distance between the nozzle and build plate.



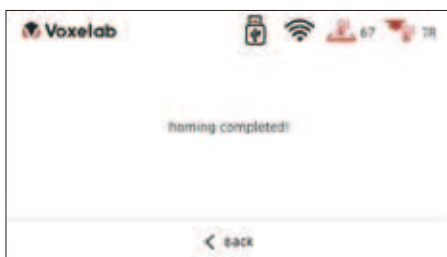
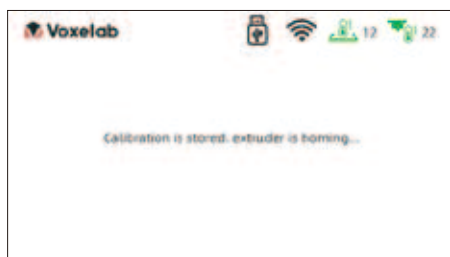
1. Put a piece of A4 paper on the build plate, tap the touchscreen [Control] - [Level] and wait for the extruder moving to the first leveling point.



2. Lightly pull the A4 paper and feel the friction. If the friction is too big to move, tap [↓] to increase the distance of nozzle and build plate; if the friction is too small, tap [↑] to reduce the distance of nozzle and build plate. It is better that pulling the paper and feel the significant frictional resistance until the slight scratches appear without damage. Tap [Next] to do the second level point.



3. When the extruder move to the second point, pull the A4 paper to feel the friction resistance. If the friction is too big to move, rotate nut anticlockwise to increase the distance of nozzle and build plate; if the friction is too small, rotate nut clockwise to reduce the distance of nozzle and build plate. It is better that pulling the paper and feel the significant frictional resistance until the slight scratches appear without damage. Tap [Next] to do the third level point.

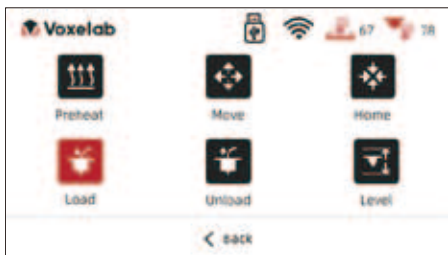


4. The third leveling point repeats the second point leveling operation until the three-point leveling is completed.

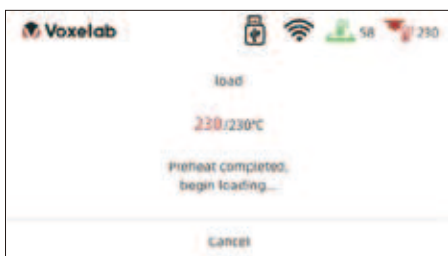
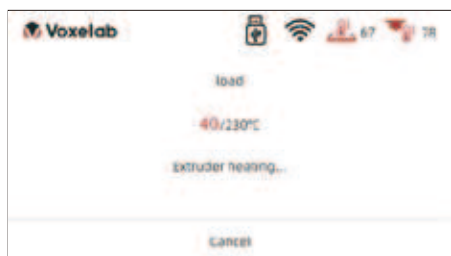
Loading Filament



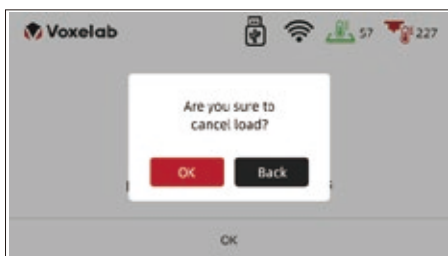
1. Tap [Control].



2. Tap [Load].



3. The extruder is heating to the targeted temperature automatically.



4. The auto-load is start to load the filament when the targeted temperature reached. Do not stop loading when the nozzle extrudes the filament. It is suggested that load the filament evenly then tap [OK].

5. Tap [OK] to back to the homepage.

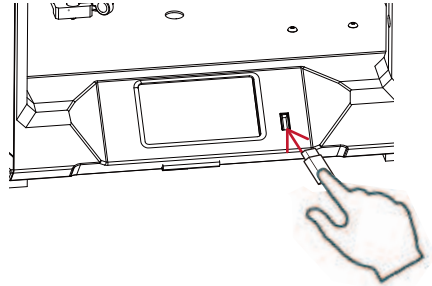
First Print

Suggestions

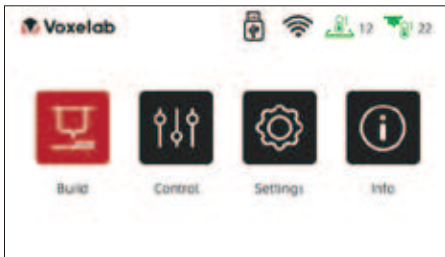
1. Ensure that the build plate has been leveled before printing.
2. Ensure that the filament has been loaded in an appropriate approach.
3. Please clean extruder before printing (Load the filament for a while to extrude all the melted filament you printed last time out of the extruder).
4. Do not leave the printer unattended during operation.



Decompressed the slicing software package in the USB flash drive and install it to your computer. Open the software, load the stl file for slicing, then saved the sliced file to the USB flash drive.



Insert the USB flash drive, tap [Print], select a file to print.



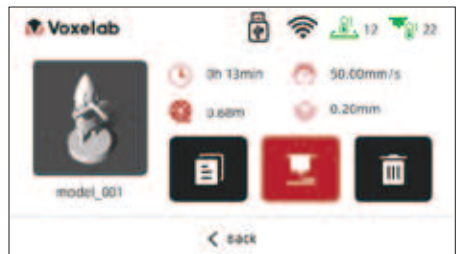
1. Tap [Build].



2. Tap [Disk].



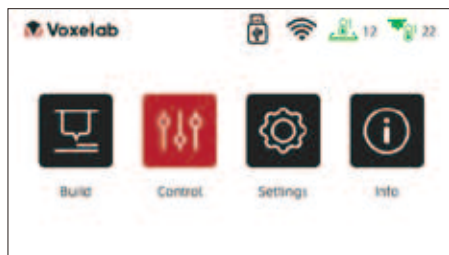
3. Select model.



4. Tap [Build] icon.

Unloading Filament

Please follow steps below if you need to unload filament in daily use.



1. Tap [Control].



2. Tap [Unload].

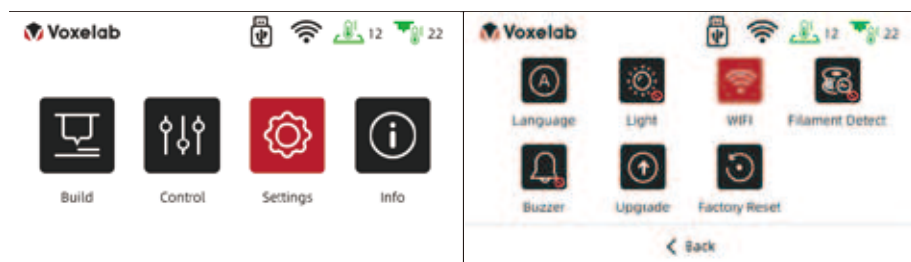


3. When the filament unload out of the filament feeding port, the unload operation is finished.



Note: After unload completed then load again, it can finish the filament replacement.

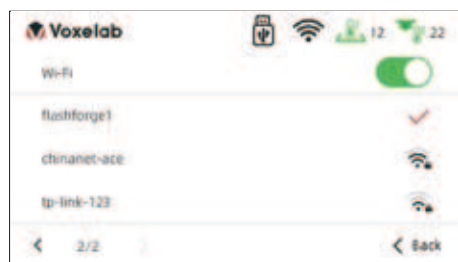
WIFI Connection



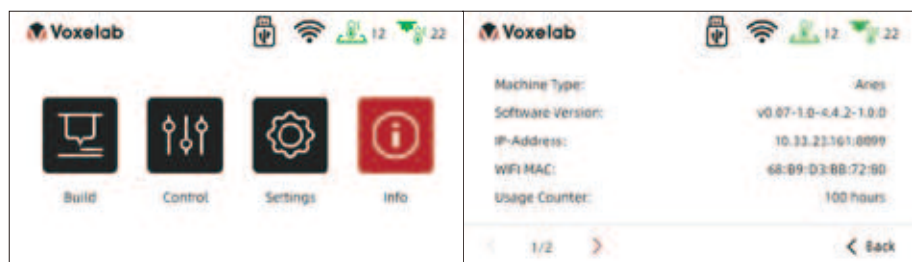
1. Tap [Settings] - [WIFI], open the WIFI function.



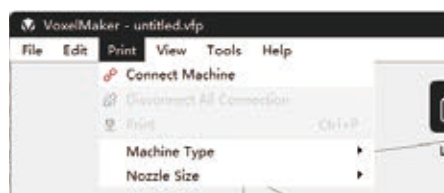
2. Choose the Internet and save the password.



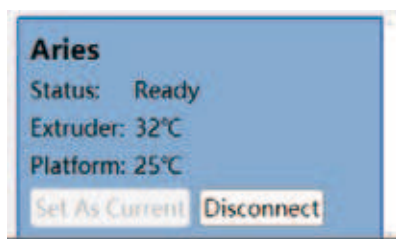
Connect Printer by WIFI



1. After the WIFI connected successfully, tap [Info] and check the IP Address.



2. Open the VoxelMaker, click [Print] - [Connect Machine], input the IP address and click the connect.



3. There is a connect icon when it connected successfully.

Firmware Upgrade

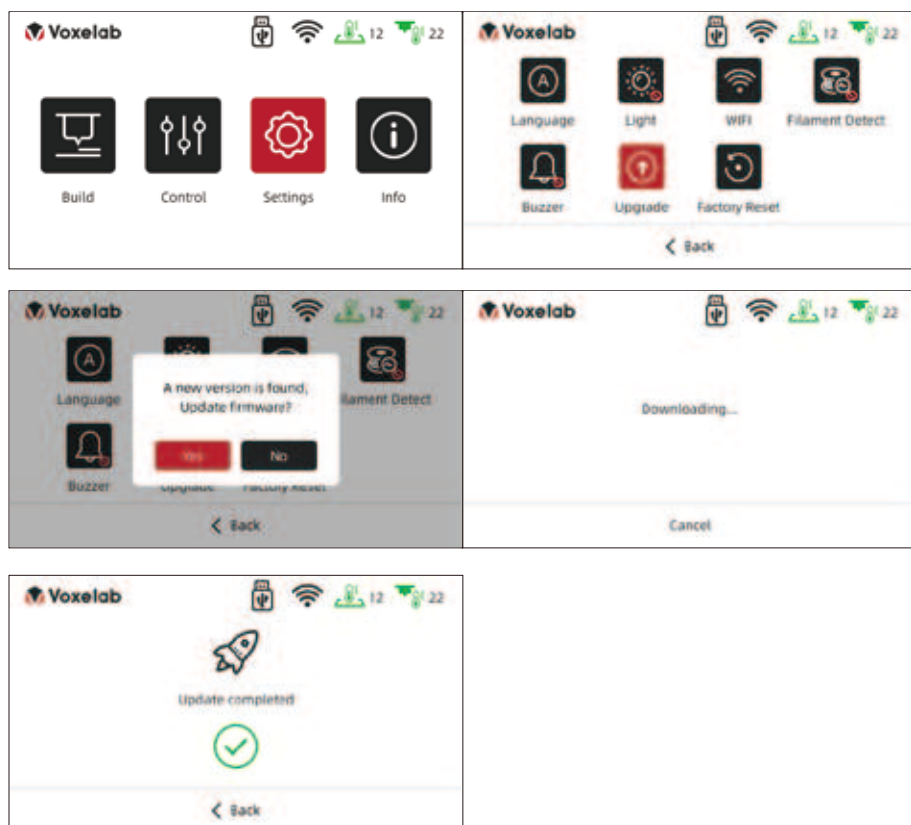
Get the firmware files: Enter the official website <www.voxelab3dp.com> and download them at <Download Center>.

Method 1:

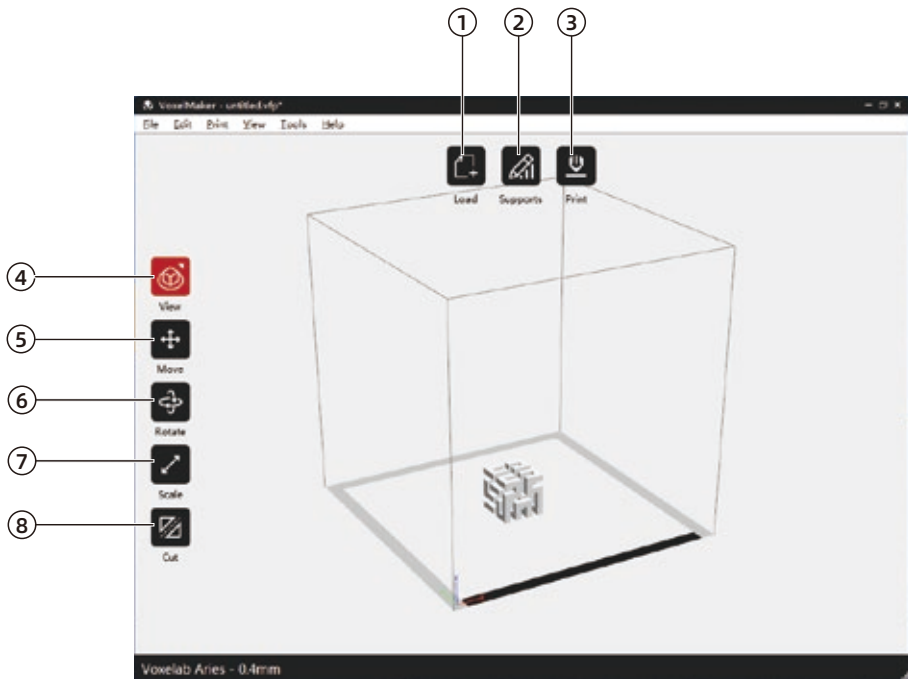
1. Copy the firmware into the blank USB flash disk.
2. Plug in the USB flash disk into the USB port of printer and reboot the printer, waiting for the upgrade process finished.
3. Plug out the USB flash disk after hearing three buzzes, reboot printer again.
4. After the upgrade completed, please delete the firmware file in the USB flash disk to avoid upgrading repeatedly next time.

Method 2:

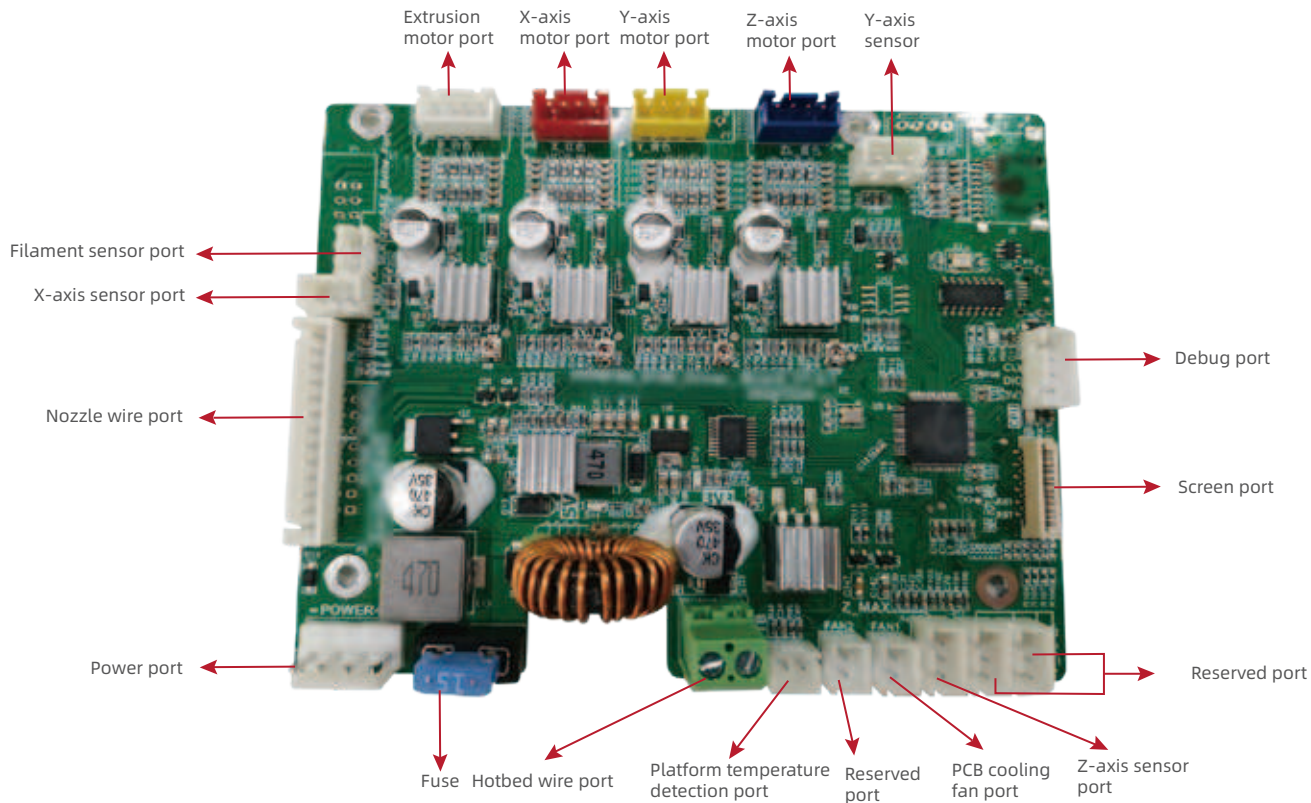
1. Connect the WIFI successfully.
2. Tap [Settings] - [Upgrade], check the latest firmware; if there is a new firmware need to be upgraded, please tap [Yes] to upgrade.



Slicing Software



1. Load the STL file.
2. Enter the support setting mode.
3. Enter the slicing setting mode.
4. Observe the STL file in different views mode.
5. Move the STL file in the X or Y axis directly, it can be moved in Z -axis directly by long pressing shift and the mouse.
6. Rotate the STL file.
7. Scale the STL file.
8. Cut the STL file in different angles.



Printing Notice

1. The adhesion of glass build plate may decrease after long time using. Please apply proper amount of glue to keep and improve the adhesion.
2. Warping issues may occur when print ABS filament in cold environment, you may use glue to enhance the adhesion. It's not recommended to print ABS filament at extremely low temperature environment, as print will fail when printed model getting away from the build plate.
3. There is a certain quivering on the build plate during the printing which may cause flatness changed. Thus please pay attention to the adhesion of the first layer when printing model; if the distance of build plate and nozzle is improper, please re-level it.
4. If printing effect is not accurate enough, check the tension of synchronous belt and make it neither too loose nor too tight. When synchronous belt working well, check the transmission ratio under Setting. Turn up the transmission ratio if the size gets smaller, or turns down the ratio if the size gets larger.
5. If X-axis assembly shakes, adjust the distance between the pulley and the structural section properly using an open-end wrench; the pulley is well adjusted when you cannot go on rotating it.
6. Optimal temperature for printing is 18~30°C. Too high or too low temperature is not good for printing results.

Q: How to get the firmwares?

A: Enter the official website <www.voxelab3dp.com> and download them at the <Download Center>.

Q: What if the model warps or is unable to stick to the build plate?

A: 1. The temperature of the build plate was too low; please increase its temperature;
 2. Filament failed to adhere or bond on the build plate, use glues to enhance the adhesion;
 3. Distance between the build plate and the nozzle is too far or the build plate is not leveling enough; re-leveling the build plate accordingly.

Q: What if the accuracy of model is not good?

A: Please ensure proper tension of the synchronous belt, neither loose nor tight.

Q: What if the screen turns dark?

A: 1. Please check whether the wire of screen has those questions: loose, plugged in reverse, plugged in wrong position, tilted plugging;
 2. Refresh the firmware to see if the screen can recover to normal.
 3. Contact the after-sales personnel if necessary.

Q: What if the build plate cannot be heated?

A: Please check the digital display of the temperature. If the temperature is improper, please replace the thermistor. Otherwise, please replace the heating wires.

Q: What if the nozzle cannot be heated?

A: 1. Please check the temperature on display screen; if the temperature is shown abnormal, it is in the reason of thermistor. Please replace the thermistor and try again;
 2. If the temperature is shown normal, it may be in the reason of heating cable. Please replace the heating cable and try again.

Q: What if the axis cannot be moved?

A: 1. Check the wire of the electric motor;
 2. Contact us by email listed.
 Email: support@voxelab3dp.com

Q: What if the files on the USB flash disk cannot be identified?

A: 1. Clean and wipe the USB flash disk;
 2. Format the USB flash disk;
 3. Replace the USB flash disk.

Q: What if the files are garbled and cannot be read?

A: 1. The format of files after slicing is not compatible;
2. Repair the model before slicing.

Q: What if knock and noise occur when nozzle returning to zero point?

A: 1. Check whether the zero sensor is knocked and broken;
2. Check the lines and see whether the noises stop when pressing the sensor by hand;
3. Contact us by email.

Email: support@voxelab3dp.com

Q: What if offset occurs on the finished model?

A: 1. Check the tightness of the synchronous belt and ensure it is correctly installed;
2. Slice the model again;
3. Reduce print speed;
4. Make sure operating temperature doesn't exceed its assigned set-point temperature 30°C.

Q: Printer gets broken at the time of turning it on?

A: It might be caused by dialing error from switch power supply, please check whether the voltage is set to the correct value. If the voltage is 110V and the power supply is 220V, damage will occur. Please select 115V/230V by switch before power on.

Q: Too much filament oozing?

A: 1. Lower print temperature by 5~10°C;
2. Increase traveling speed, or increase the retraction length and speed.

Q: No filament coming out during printing?

A: 1. Lower the retraction length to avoid any abrasion;
2. Check whether the extruder is clogged, use a needle to clean it if necessary.



After-sales Service

Note: The one who sells you the printer should be responsible for your after-sales service.

1. Voxelab grants all end-users a 12-month limited warranty for all Voxelab 3D printers (except the Voxelab extruder) and a 3-month warranty for Voxelab FFF Extruder.
2. If Voxelab 3D printer fails during normal and proper use within the warranty period (judged by Voxelab engineers), Voxelab will provide users with free maintenance services or remote after-sales support.
3. The warranty period starts from the outbound date, or starts from the invoice date if clear and confirmed invoice is provided.
4. Voxelab will repair or replace only the defective parts with new or reconditioned parts or products that are functionally equivalent or superior to those originally supplied. If a part is repaired or replaced during the warranty period, the warranty period still remaining for the entire printer will apply to this part.

Parts Excluded from This Warranty

Build Tape	Plastic Scraper
Build Plat	Metal Scraper
USB Stick	Allen Wrench
USB Cable	Stamping Wrench
TF Card	Tools Bag
Card Reader	Accessories
Filament	Glue
Filament Spool	
Voxelab extruder kit shall be purchased independently due to upgrading.	

What is not covered

- Unable to provide valid After-sales Service Card or serial No.(Including but not limited to lost, alter or fuzzy cannot be confirmed);
- Damage(s) caused by improperly or incorrectly performed modifications, alterations or repair;
- Damage(s) due to operation under improper environment(damp, wet or other extreme weather);
- Exterior scratch or flaw caused by abrasion, aging or normal use;
- The warranty period of printer or part has expired;
- Damage(s) caused in service shops unauthorized by Voxelab;
- Damage(s) caused by improperly installation, use or operation;
- Damage(s) caused by abuse(overloaded working), misuses;
- Damage(s) caused by using unauthorized spare parts or poor quality filament ;
- Damage(s) caused by using 3rd party software;
- Damage(s) caused by force majeure(such as a lightning strike, fire, earthquake, floods or any other event beyond human control);
- Damage(s) caused by using 3rd party parts;



After-sales Service Registration Form

Series No.: _____ Purchase from: _____

Fault Description: _____

Tel.: _____ Contact: _____

Add.: _____

! Please fill in this form carefully, cut out this form and mail it back to Voxelab together with the printer, or download this form from www.voxelab3dp.com, fill in this form and mail it to aftersales@voxelab3dp.com. After-sales service shall not be provided without this form.

! Please contact your printer's reseller to get After-sales service help if your printer is not purchased on official Voxelab website.



**Scan QR to Get More
After-sales Support**

FCC Caution.

(1) § 15.19 Labelling requirements.

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.

§ 15.21 Changes or modification warning

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

§ 15.105 Information to the user.

Note: 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.

RF warning for Mobile device:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

