# 🖈 Voxelab

# V1.1 20210524

Aries

# **3D Printer User Manual**



#### 🛕 WARNING

Each device 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 guide 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 and the platform.



2. Remove the foam.



3. Lift the printer and put it on the desk, then 4. Remove the top foam, there should be a take Aries out of the plastic bag.



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.



7. Cut the three black cable ties: one for fixing X-axis timing belt, two for fixing Y-axis timing 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.

### Notes

- 1. Do not make any modifications to the device. To avoid personal injury or property damage please ensure your operation as followed as the Guide.
- 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 operate the printer in flammable liquid, gas or dust environment (The high temperature generated by printer operation may react with dust, liquid, and flammable gas in the air to cause a fire.)
- 5. Do not put the printer into the situation in which an unstable environment. The printer quality will be affected.
- 6. Children and untrained personnel are not allowed to operate the printer alone.
- 7. Operate the device in a well-ventilated environment. Some materials may produce odors during the printing process.
- 8. Do not manually move the nozzle and printing platform mechanism while booting up, otherwise the device will be damaged.
- 9. Never use the device for illegal activities.
- 10. Never use the device to make any food storage vessels.
- 11. Never put the model into your mouth.
- 12. To lower the build plate before loading/unloading filament. The distance between the nozzle and build plate should be kept for at least 50mm.
- 13. Keep the device with regular maintenance, to wipe with a dry cloth to remove dust and adhered printing items.

# **Kit Contents**













# **Equipment Parameters**

Model	Voxelab Aries
Print size	200*200*200mm
Forming technology	FDM
Number of nozzle	1
Layer thickness	0.05mm - 0.4mm
Nozzle diameter	Standard 0.4mm
XY axis precision	±0.2mm
Filament	φ1.75mm PLA / ABS / PETG
File format	stl / obj / amf /3mf / fpp / bmp /png / jpg / jpeg
Working mode	Memory connection printing / USB connection printing / Wifi Online printing
Slicing software	Cura / Simplify 3D / VoxelMaker
Power specification	Input: AC 115/230V 50/60Hz Output: DC 24V
Total power	350W
Hotbed temperature	≤110℃
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	≤180mm/s,50-80mm/s normally
Position precision	Z-axis0.0025mm, X/Y-axis ±0.011mm
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 postion assembly, then locked by snaps. The four edges of glass build plate need to be aligned with the platform.



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



3. Strictly follow the filament loading direct (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**

Berfore leveling, let's learn the funciton 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] and [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.

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M	oveing to point 2, please wait		unti	touching the nozzle
	Next			Next
	< Back			< Back

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 anticlockwis to increase the distance of nozzle and build plate; if the friction is too small, rotate nut clockwis 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.

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Calibration is :	stored. extruder is homing	ho	ming completed!
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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 trageted temperature automatically.



- 4. The auto-load is start to load the filament when 5. Tap [OK] to back to the homepage. 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].

# **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. Load the filament for a while to extrude all the melted filament you printed last time out of the extruder.
- 4. Please clean extruder before printing.
- 5. Do not leave the printer unattended during operation.



#### 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.

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Wi-Fi		1	2	3	4	5	123
chinanet-ace	5 6	6	7	8	9		abc
tp-link-123		,	:	_	/		%#
< 2/2 >	< Back	< 1/	2 >				< Back

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.

VoxelMaker - untitled.vtp	🕏 Connect Machine 🛛 🗙
P Connect Machine	Connect Mode: Wi-Fi/Ethernet •
63 Devorement All Commerciae	IP Address (port): 10 . 10 . 100 . 254 : 8899
2 fried Child	
Machine Type	Connect
Nozzle Size	

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



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

# Firmware Upgrade

Method 1:

- 1. Copy the firmware into the blank U disk.
- 2. Plug in the U disk into the USB port of printer and wait for the copy process finished. Close the printer power when the copy is finished.
- 3. Plug out the U disk, then open the printer power and wait for the upgrade finished.
- 4. After the upgrade completed, please delete the firmware in the U disk to avoid upgrading repeatedly next time.

Method 2:

1. Connect the wifi successfully.

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2. Tap [Settings]-[Upgrade], check the latest firmware; Just tap upgrade online.



# **Slicing Software**



- 1. Load the STL file.
- 2. Enter the support setting mode.
- 3. Enter the slicing settimg 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 differect angles.

# Wiring connection



# **Printing Notice**

- The adhesion of the glass build plate may be decreased after using a long time.
   Please apply proper amount of glue to keep and improve the adhesion.
- 2. In the cold environment, abnormalities may easily happen because of warping when printing with ABS filament. Please utilize glue to enhance the adhesion; if the ambient temperature is too low, it is not recommended to print with ABS filament, which can easily make the model break away from the build plate and cause printing failure.
- 3. There is a certain quivering on the build plate during the printing which may cause the flatness to change. Thus please pay attention to the adhesion of the first layer when printing model; if the distance of build plate and nozzle is not right, please re-level it.
- If the accuracy of model is not right, please confirm the normal installation of the synchronous belt and please adjust it to its normal state if it is too loose or too tight.
- 5. If the accuracy of Z-axis height dimension is not good enough, please compensate Z-axis precisely.
- 6. The optimal temperature for printing is 18~30°C. The printing will be affected when the ambient temperature is too high or too low.

# FAQ

- 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. The filament have no adhering or bonding effect on the build plate (Glues are recommended to enhance the adhesion);
  3. The distance between the build plate and the nozzle is too far or the build plate is not leveling

The distance between the build plate and the nozzle is too far or the build plate is not leveling enough; please re-leveling the build plate.

- Q: What if the accuracy of model is not good?
- A: Please ensure the normal status of the synchronous belt, neither loose nor tight.
- Q: What if the screen turns dark?
- A: 1. Please check the wire of the screen and re-plug it;
   2. Refresh the firmware to see if the screen can back to normal. Contact the after-sales personnel if not.
- Q: What if the build plate cannot be heated?
- A: Please check the digital display of the temperature. If the temperature inproper, please replace the plate wires. Otherwise, please replace the heating wires.
- Q: What if the nozzle cannot be heated?
- A: 1. Please check the digital display of the temperature; if the temperature is not displayed normally, the temperature sensor cable need to be replaced;
  2. If the temperature is displayed normally, the heating cable need to be replaced.
- Q: What if the axis cannot be moved?
- A: check the wire of the electric motor; Replacement method: if there is nothing wrong, please check the other axis motor via the wires of the broken motor; if the axis is able to be moved normally, there is something wrong with the electric motor; if the axis is unable to be moved, there might be something wrong with the mother board. Please check to see if any burning happens.
- 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.
  - 2. Repair the model before sticing.
- Q: What if the noise occurs for the return to zero device?
- A: 1. Check the return to zero sensor to see whether it has been knocked;
  - 2. Check the lines and see whether the noises could stop if the sensor is pressed by hand;
  - 3. Take the replacement method to check.
- Q: What if the offset occurs on the finished model?
- A: 1. Check the tightness of the synchronous belt and ensure the correct installation of the synchronous belt;
  - 2. Slice the model anew;
  - 3. Reduce the printing speed;
  - 4. Ensure that the operating temperature didn't exceed its assigned set-point temperature 30°C.
- Q: Damage occurs when turn on the 3D printer.
- 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 110V/230V by switch before power on.
- Q: Too much filament oozing?
- A: 1. Reduce the printing temperature by 5~10°C;
  2. Increase the traveling speed, or increase the with 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, clean it through the needle if necessary.

		Vfter-sales Service
Note: The d	one who sells you the I	printer should be responsible for your after-sales service.
1. Voxelab grants	s all end-users a 12-month lir	mited warranty for all Voxelab 3D printers (except the Voxelab extruder) and a 3-month warranty for Voxelab FFF
exiruuer. 2. If Voxelab 3D β maintenance s	brinter fails during normal an services or remote after-sales	ld proper use within the warranty period (judged by Voxelab engineers), Voxelab will provide users with free
3. The warranty p	beriod starts from the outbou	ind date, or starts from the invoice date if clear and confirmed invoice is provided.
<ol> <li>Voxelab will re equivalent or s entire printer w</li> </ol>	tpair or replace only the defe superior to those originally su will apply to this part.	ctive parts with new or reconditioned parts or products that are functionally upplied. If a part is repaired or replaced during the warranty period, the warranty period still remaining for the
Parts Exclud	ed from This Warranty	What is not covered
Build Tape	Plastic Scraper	· Unable to provide valid After-sales Service Card or serial No.(Including but not limited to lost, alter or fuzzy
Build Plat	Metal Scraper	cannot be confirmed);
USB Stick	Allen Wrench	Damage(s) caused by improperly or incorrectly performed modifications, alterations or repair;
USB Cable	Stamping Wrench	<ul> <li>Damage(s) due to operation under improper environment(damp, wet or other extreme weather);</li> <li>Exterior scratch or flaw caused by abrasion aging or normal use.</li> </ul>
TF Card	Tools Bag	The warranty period of printer or part has expired;
Card Reader	Accessories	· Damage(s) caused in service shops unauthorized by Voxelab;
Filament	Glue	· Damage(s) caused by improperly installation, use or operation;
Filament Snool		· Damage(s) caused by abuse(overloaded working), misuses;
Voxelab extrud	er kit shall be purchased	· Damage(s) caused by using unauthorized spare parts or poorquality filament ;
vitandanandani	providence of our	· Damage(s) caused by using 3rd party software;
ווומבאבוומבוותא	ade to apgrading.	· 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;

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	After-sales Service Registration Form
Series No.:	Purchase from:
Fault Description:	
Tel.:	Contact:
Add.:	
Please fill in this form carefully, www.voxelab3dp.com, fill in th	cut out this form and mail it back to Voxelab together with the printer, or download this form from is form and mail it to <b>aftersales@voxelab3dp.com</b> . After-sales service shall not be provided without this form.
Please contact your printer's re:	eller to get After-sales service help if your printer is not purchased on official Voxelab website.



Scan QR to Get More After-Sales Support

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