# USER MANUAL

Desktop 3D Printer

## A9

**Anet 3D Printer**

# Contents

1

# Welcome Use Anet A9

This user manual will quikly guide you to use Anet A9
As a huge improvement, A9 will provide you with a more high precision print effect and more print ways
Now, start to print your idea!

# Security Considerations

## Case Ground

Warning: Make sure the power supply is grounded, otherwise it may cause the fire capacitor line to melt.

## Hotbed and Extruder head

Warning: A9 will produce high temperatures during printing or heating, including moving parts that could cause personal injury. To avoid burns, do not touch the extruder or the heating aluminum block.

Warning: Don't leave the machine too long during the printing process.If you have to do so, please follow these instructions:

- Make sure the first print layer on the hotbed correctly;
- Make sure the filament into E axis normally, no knotting or winding, in order to successfully feed.
- Regularly monitor the printer

Warning: During the printing process, some filaments produce a slight odor but make people feel uncomfortable. Please keep your ventilation in the workplace.

Warning: Unplug if there is an emergency.

Warning: Self-disassembly or modification may result in damage or performance abnormality. Any self-disassembly or modification that is not approved by will make your machine no longer subject to warranty or after-sales service.

All contents of this manual are carefully checked, if there is any printing errors or misunderstandings, the company reserves the right to explain.

# Product Details

| | |
|---|---|
| Model#：A9 | Extruder Dia.：Normally 0.4mm |
| Print Precision：0.1-0.4mm | Machine Dimensions：375mm*335mm*525mm |
| Printing Speed:10-120mm/s | Machine Weight：5.7kg |
| XY Axis Positioning Accuracy：0.012mm | Package Dimensions：440mm*385mm*200mm |
| Z Axis Positioning Accuracy：0.004mm | Package Weight： 7.5kg |
| Filament Materials： PLA,ABS | Build Size：160mm*160mm*200mm |
| Filament Tendency：PLA | LCD Monitor Screen：LCD12864 |
| Filament Dia.：1.75mm | Offline Printing：Support |
| Software Language：Chinese, English | Data Format：STL、G-Code、OBJ |
| Model Support：Generate, do not generate optional | Compatible Computer OS：windows(Linux、MAC) |
| 3D Printing Software：Repetier-Host | Ambient Temp and Humidity：10-40℃, 20-50% |

2

# Open the Package

Each A9 has been rigorously tested,
and it was carefully packed, then send it away from factory,
Hope you can read this section and assemble your A9 successfully.

# Open the Package


1.Please put the box on the enough place to assemble.

2.Please open the box, and make sure foam, carton and paperboard are not damaged

3.Please check goods and tools quantity.

# 物品清单

1.X轴型材组合件 *1

2. Chassis *1

3. Z-axis profile assembly *1

4. Z axis rod *1

5. Material racks*1

6. Rack connector*1

7. Hot bed mounting plate assembly *1

8. Hot bed *1

9. Extruder assembly *1

10. 1.5M  wire *1

11. 10M Filament *1

12. Installation package of Z-axis right fixing plate *1

15. Nippers*1


17. Installation package of left and right fixing plate holder *1

19. Nozzle kit *1

20. Linear bearing holder *1

21. 8GTF Card and Reader *1

22. Black Ribbon *1

23. 1.5M Power line*1

24. 5mm*160mm screwdriver*1

25. Transparent ruler *1

13.Screw set 3 *1

| | |
|---|---|
| M3*18 | 6pcs |
| M8 Screw nut | 2pcs |
| M3 Screw nut | 6pcs |
| R-type clip | 1pcs |

14.Screw set 1 *1

| | |
|---|---|
| M6*20 | 2pcs |
| M4*6 | 2pcs |
| M4 nut | 5pcs |

18.Screw set 2 *1

| | |
|---|---|
| M3 Hand screw nut | *4pcs |
| Spring | *4pcs |
| M3*30 | *4pcs |

16.Tool beg *1

Hex Wrench M1.5
Hex Wrench M2
Hex Wrench M2.5
Hex Wrench M3
Hex Wrench M4
Hex Wrench M5
Open-end wrench

Machine Parts

Install the video in the "Video" folder on the TF card

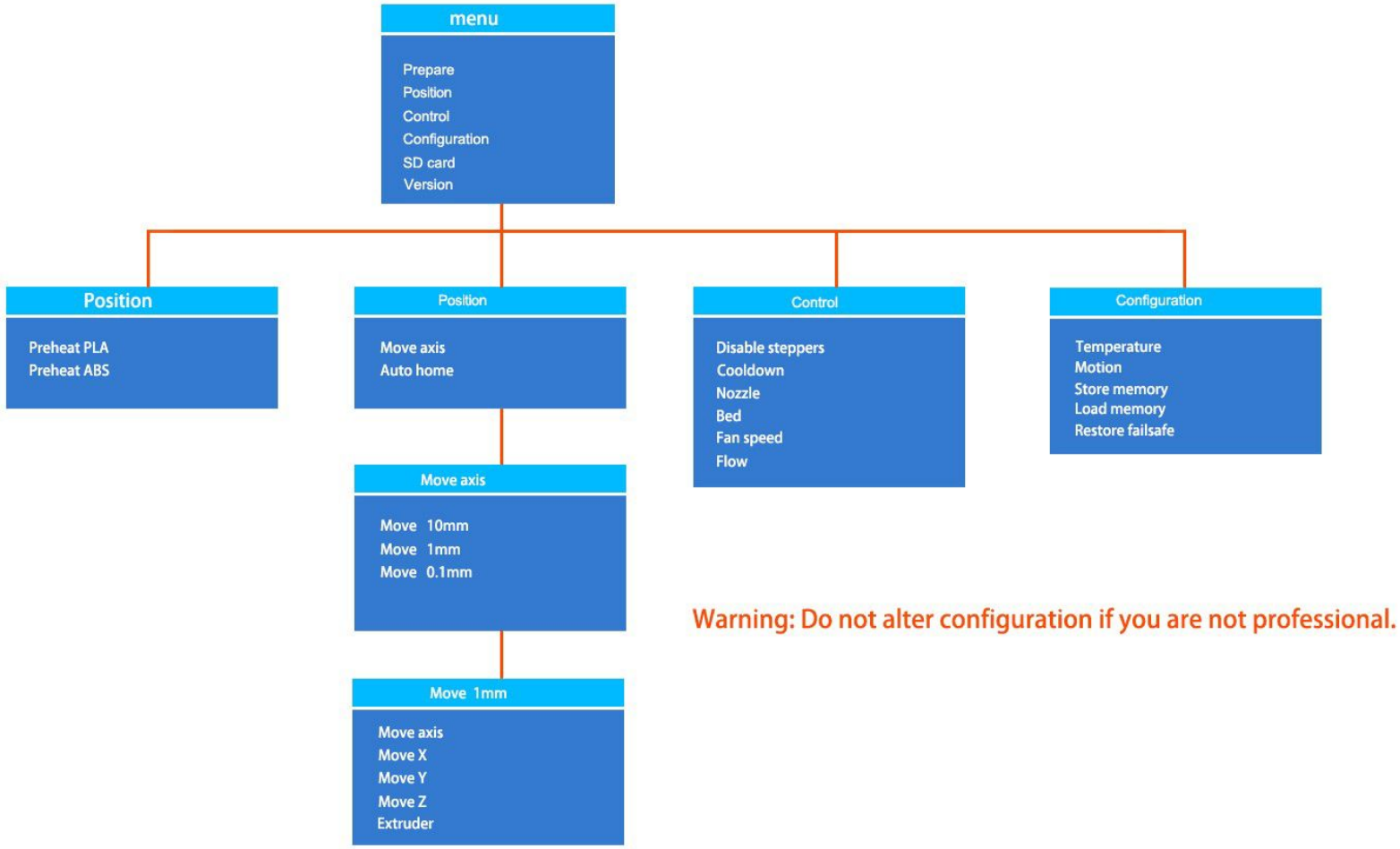
Handle need to print, print the file in the “Test file GCODE” > “Handle” .

3

# Menu Commands

In this chapter, you can learn more menu interface in detail.

# Menu




Warning: Do not alter configuration if you are not professional.

Main Interface

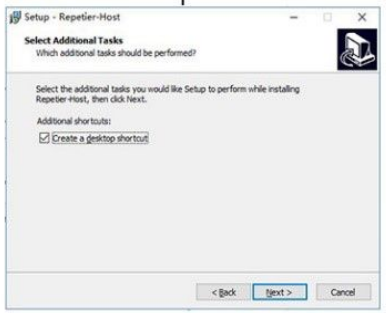
# 4

# Slice Sofeware

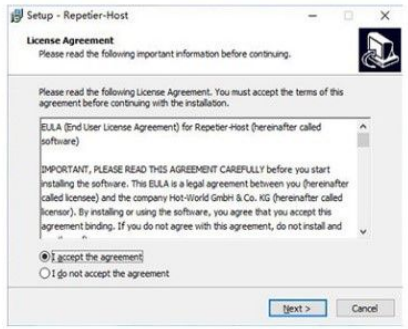
This chapter will guide you how to install and use the slice software

# Assembly and Usage

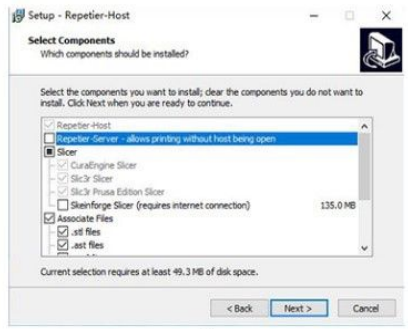

1



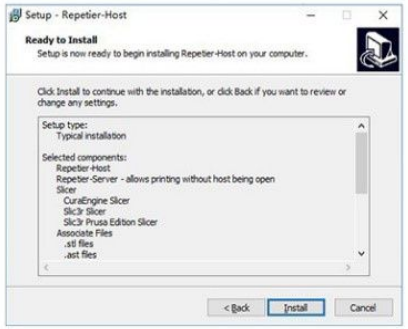

4




2




3

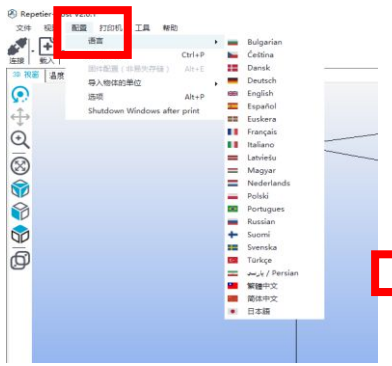



5


6

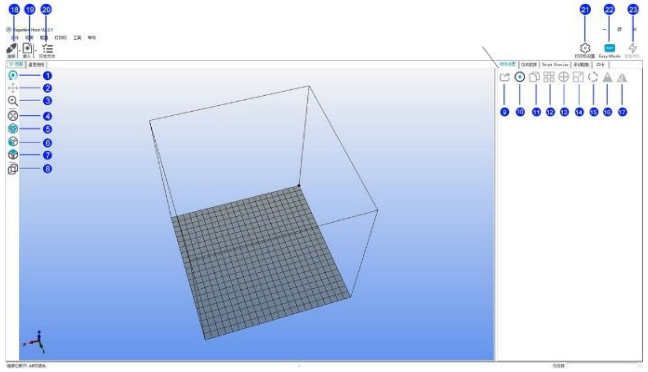
Open TF data first, then click “software” file to find “setupRepetierHost_2_0_1”file to finish your installation.

Please install referring to the pictures.



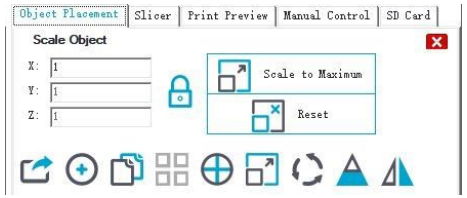

Please select your language shown

# Assembly and Usage

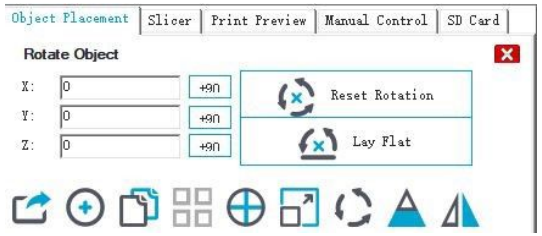


1. “Rotation”means active status, you can use your mouse to rotate the model and view the object from different angels
2. Move the object: after selected, the object can be parallelly moved all around
3. Zoom the object: Can zoom the image, wheel also can make it

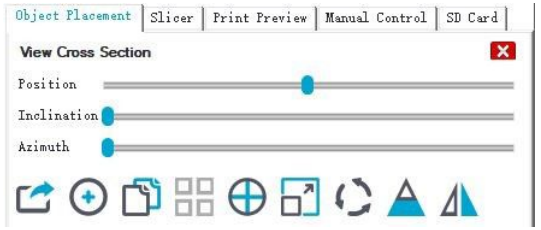
4 .Zoom: Zoom and go back to object location
5. Proportional view: back to the proportional perspective of virtual platform
6.Front view: back to the face of the virtual platform
7.Overlook: look at Hotbed from the virtual platform above.
8. Parallel projection: view is always aroud the virtual platform
9.Save as STL  file:save file as STL format format.
10. Add an object: add another print object.
11. Copy object: once you click,it will remind you of the copy number.
12.Auto Layout: it will sort automatically when the number gets to 2 or more
13. Object centring:get the object back to the center point of the platform.
14. Zoom the object: zoom in or out the object, after click to unlock, can control it unilaterally




15. Rotate the object: control object rotation in XYZ axis.



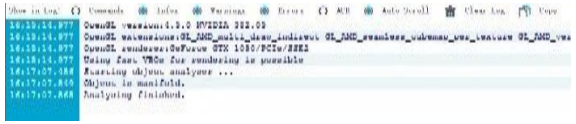

16.”C”:  Slice the object by its position,obliquity and azimuth.




17. “M”  can make the object flip oppositely

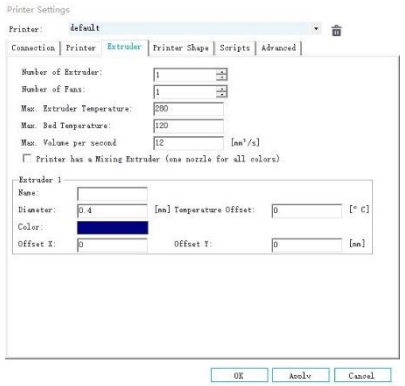
18. Connect the mahcine:after connectting the USB cable and the 3D printer,it can be operated in solfware.


19. Loading: load the GCOOD STL format file.
20. Log file: show all the records of the machine.

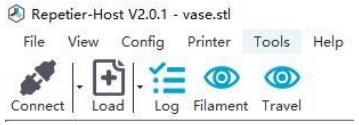


21.Printer setup: set printing properties and other configures
Please keep  the printing properties  same  as  the picture  shows.
Any problem, please contact with customer service .
Communication port: there will be a surplus port.
when connect the printer, please connect to the surplus one

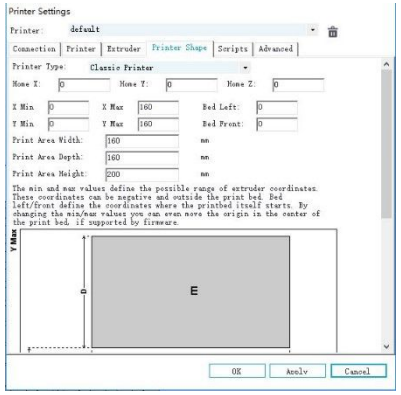
communication port:There will be an extra port when connecting the printer, please choose the extra one



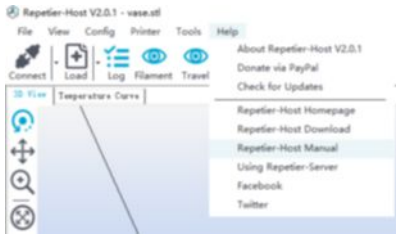
22.Easy Mode: Click to control the extrusion rate, material and trajectory 。




.23. Emergency stop: it can be used to control sudden halt machine when it is online printing



More use details, please click the instructions



# 5

# Print

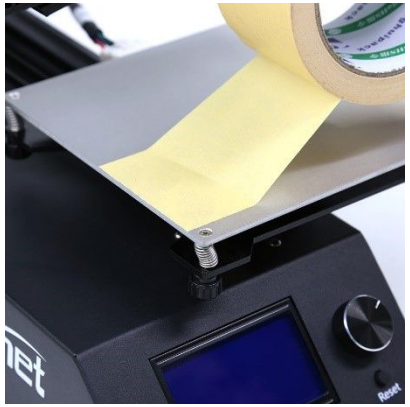
This chapter will guide you how to use A9 step by step

More use details, please click the instructions

# 贴胶纸

1.将热床表面清理干净

2.请勿将胶纸覆盖在螺丝上



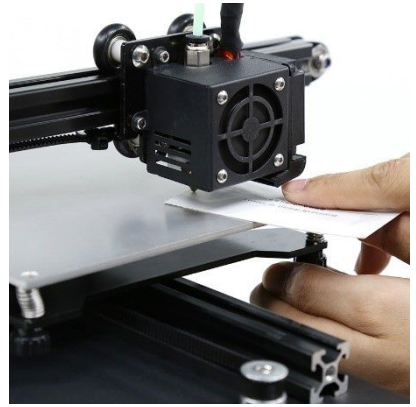
3.您可以使用小卡片来辅助刮平.

4.去掉边缘的胶带

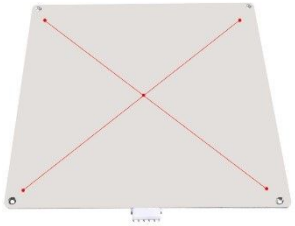
# Hotbed Leveling

1. Please tie the four screws to the bottom tightly in order to avoid the nozzle knocking the Hotbed.
Enter the Menu from “position” to “home all” . Back to the beginning , unlock the motor from “quick settings” to “ Disable stepper”

2. Move X axis to the first position of the Hotbed .
Put the card between the nozzle and the hotbed gap.
Tight the screws.



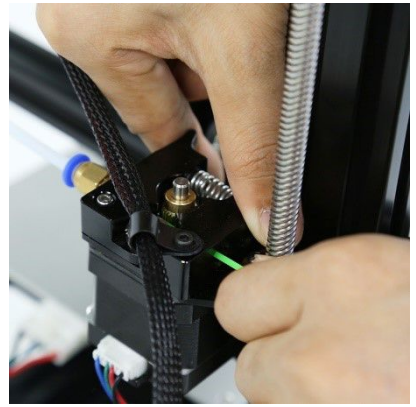
3. Clamp the card and move to the next point.( 4 points as the picture showed)



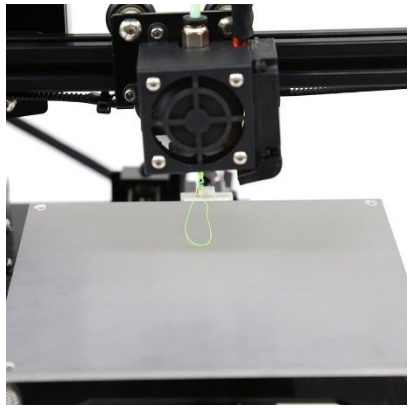
# Installation of filament

1. First preheat the nozzle:
Enter the menu from Quick settings" to "Preheat PLA(ABS)


2. Insert the filament to the extruder( or push the filament into it by hand) and control the rotation of the extruder. Make the filament get to the nozzle.



3. Keep feeding the filament till the nozzle spin.



Warning:

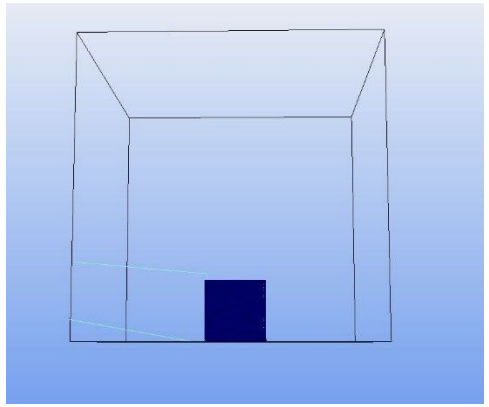
1.Make sure the clipper is not too loose or tight, otherwise the filament feeding will cause printing trouble.

2. Check if the filament twists or knots after the filament is installed. Make sure the filament feeding smoothly.

3.Lubricate X,Y axis and sliding block to avoid being stuck.

# File printing

1. Open slice software, choose STI file to slice. Put the sliced file into TF card



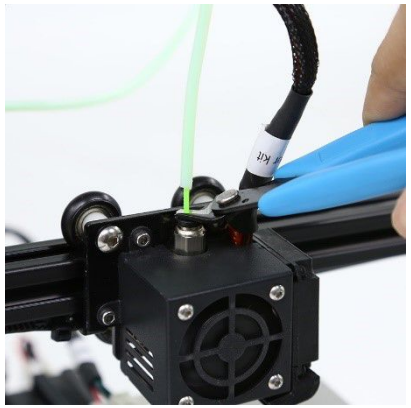
2. Insert TF into the machine.


3. Enter the menu and choose “SD card” or “print file”, choose your print file.


4. Z axis will move up when print completed. Heating the Hotbed to 50℃ will make the model be took out easily.

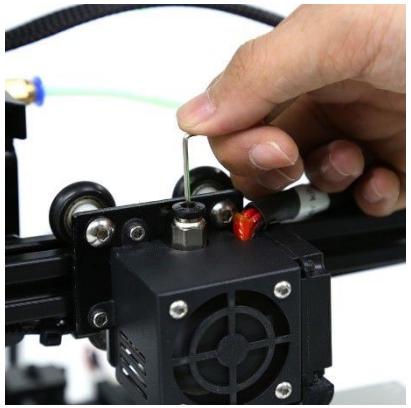
# Remove the Filament

1. Remove the guide tube and cut off the consumable closest to the extrusion head

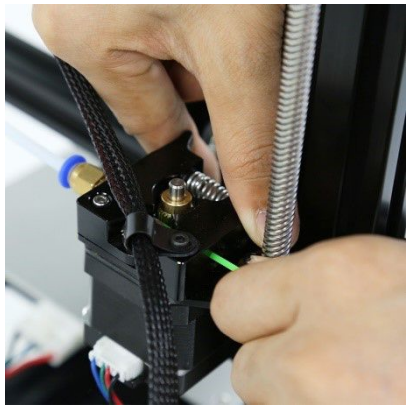


2. preheat the nozzle to enter the menu" Quinck **settings" >"Preheat PLA( ABS ) "** Waiting for preheating


3. Use a tool to push the consumables out of the nozzle and make the filament flow out



4. pull the consumables cut off out of the extruder



# 6

# Machine Maintenance

The routine maintenance is very necessary to keep the type of A9 in the good status.
This chapter will introduce some basic skills to maintain the 3D printer

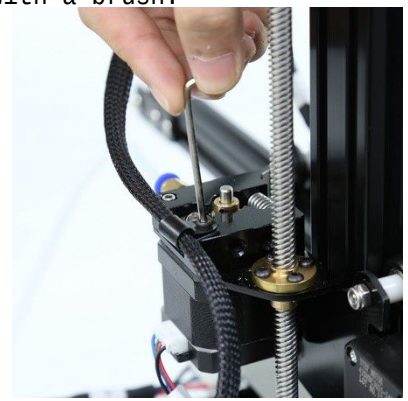
# Maintenance

## Hot bed

Make sure the hot bed is free of dust, grease and scratches
1. Use tweezers to remove filament residue.
2. Do not touch the hotbed with sharp objects.
3If the printer is left unused for a long period of time, clean the surface of the machine, clean the hot bed, and completely loosen the 4 screws on the hot bed.

## Clean the extrusion shaft

After a long period of printing, consumables entering the extrusion axis (E-axis) may slowly build up small consumables particles on the extruder and you can clean it with a brush.

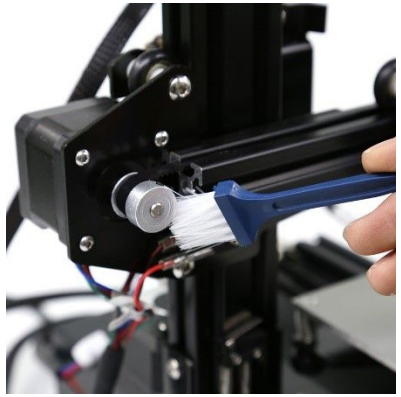


1. Remove the extruder

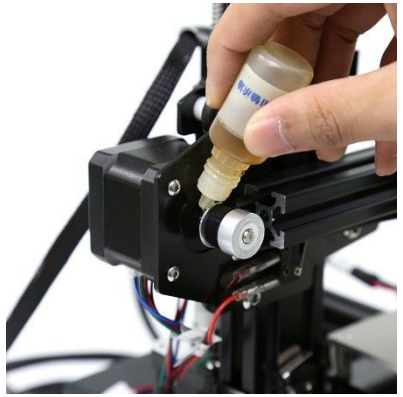

2. Select menu “Position”> “Extr.position”. Turn the button extrusion wheel to start turning

3. Use a brush to clean the extrusion wheel

# lubricating



1. Clean X, Y, Z axis polished rod and  screw rod



2. Regular lubrication of X, Y, Z axis rod and  screw can keep it lubricated.

# 7

# FAQ and Solution

This chapter will help to diagnose and solve the common problem when it appears.
Please look up the instruction in electronic document or contact service support center when you meet the problem unable to solve.

# Setup and calibration problems

Q: Temperature settings for several common filaments.

A: PLA: nozzle temperature: 200-220 ° C hot bed temperature: 50 ° C
ABS:Nozzle temperature: 230-235℃ hot bed temperature: 80-95℃

Q: What is the relationship between layer thickness, print speed and nozzle temperature?

A: The purpose of the interaction is to spare enough time to heat and cool of the filaments. Generally, if the layer thickness increases, please lower the printing speed, the normal printing temperature (if the printing speed exceeds 60 ° C, the temperature rises 5 ° C, exceeds 9 ° C, increases 10 ° C ); If the layer thickness the contrary layer is reduced, please increase the printing speed and reduce the printing temperature.

Q: How to set the best parameters when printing a model with sealed top and bottom?

A: Increase the printing thickness of the top or bottom in the basic parameters.

Q: How to set the parameters when printing a model with a single layer thickness?

A: Usually keep the layer thickness of the model more than 1mm

Note:
1. The layer thickness in the software can not be set more than 0.8 times the diameter of the nozzle (for example ,the layer thickness should not exceed 0.32mm when the nozzle is directly 0.4mm).

Q: Is the warped edge on the model related to the joint problem?

A: : 1 hot bed leveling is not correct; please readjust the hot bed level.

2.If the filament is not attached the hot bed, please use 3M adhesive tape or high-temperature adhesive tape to make it attach to the hot bed.

# Extruder problem

Q: Blocking of the nozzel

A: A: 1. If there are impurities in the filaments, they will be melted in the nozzle, please use a needle to clean the nozzle; Or take down the nozzle and use needle and drill to clean the inside of the nozzle.
2. If the nozzle is overheated, it will make the filament carbonized , please Use a needle to clean the nozzle; Or take down the nozzle and use needle and drill to clean the inside of the nozzle
3. If the shape of nozzle hole is generated by external forces which resulting in deformation. Please change the nozzle.

Q: Nozzle heating failed

A: 1.The heating tube is loosely connected, please check the black top wire and the heating tube under the heating block, insert the heating tube and tighten the black top wire.
2 . Heating:
*1)* Open the case, find the connector of the heating tube, replace the connector, and then heat the nozzle again. If the heating failed nozzle can work normally, which means that the heating tube is broken and needs to be changed;
*2)* With the replacement of heating pipe, the faulty nozzle still can not run, please replace the heating pipe, and try to change the connection with the temperature controller, and reheat the hot nozzle. If the fault nozzle turns to be normal which shows that the temperature controller is broken and need to be replaced.
*3* ) If the solutions above is useless, it should be the problem of the power tube on the mainboard, please replace it.

Q: Maximum temperature / minimum temperature

A: 1. Nozzle temperature is too high.
Please reduce the nozzle preset temperature
2. The temperature controller is damaged..
Please replace the thermostat.
3. LCD line is loose / LCD line is damaged.

Q: The print head is stuck / can not move

A: 1 . Bearing is lack of lubricating oil.
Please clean the bearings and lubricate oil evenly.
2. Rack deformation caused by external forces during transportation.
3. The Y axis motor line is loose.
Please check the motor cable, reconnect.
4. Please check the fixed belt and screw in X axis and Y axis.
If you find the belt loose, tighten the belt, tighten the screws.

Q: Limit switch is inactive when zeroing or moving

A: Limit switch, the cable is loose or the switch is disconnected.
If the cable connecting the limit switch and the main board is loose, Please check whether the main board's terminal cable is correct. If so, you need to pull out the terminal cable and reinsert it, if not, it means the limit switch is broken and needs to be replaced.

Q: Filament generate intermittent noise on the E-axis motor

A: 1 . Feeding device is too tight, Please loosen the clamp screws
2. When the nozzle is clogged, the filament can not be fed smoothly. Use a drill or a needle to clean the nozzle

# Hardware problem

Q: Even if the screws on the hot bed have been screwed up to the top, the hot bed sheet is still too far away from the nozzle (the distance between the hot bed and the nozzle is too far to adjust).

A: Adjust the printer's Z-axis limit switch, move the limit switch up a little.

Q: Z axis motion abnormalities.

A: 1 . The top of the Z-axis screw is loose, please check the Z-axis connection shaft and tighten the screw.

2. The connection of the z-axis motor is loose, Please check whether the main board is loose and plug the motor line again.

3. . The Z-axis screw needs lubricating oil, please use the lubricating oil to make the motor slide smoothly.

# Printing problems

Q: The first layer has a printing problem.

Q: The directly heated cathode does not stick in the hot bed

- A1:The distance between the nozzle and the hot bed is too far.
- A2:The hot bed has not been leveled.
- .-A3:The height of the first layer is too small, reommendation≥0.2

Q: Spin too less from the nozzel (only traces on the hot bed).

A: The distance between the nozzle and the hot bed is too close, which may result in the nozzle not spinning out.

Q: The nozzle does not print when printing.

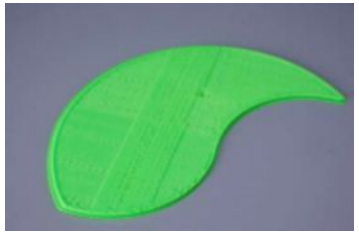
A: The filament dose not enter the end of the nozzle, please wait for the filament input.

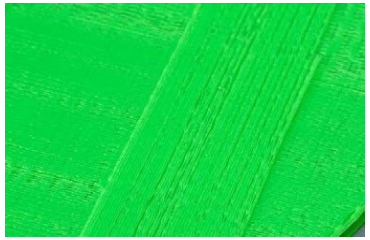
Q: Edge warped, use ABS material to print the material damage

A:Please keep hot bed heating and leveling hot bed, reduce the printing speed of the first layer, and avoid direct air blowing.

Q: The surface of the model is loose and with flaw

A: Layer thickness is too thick,print speed is too fast,
temperature of the hotbed is too low, wrongly choosing of the nozzel, stuck of the the filament, all of the problems talked above will cause the situation.





Q: There is a leak on the side of the model

A: The temperature is too high or the material is carbonized or liquefied (if the temperature is too high, the PLA will is liquefy and the ABS will be carboniz
If the problem still could not be solved, please turn to after sales service.

Q: The surface of the model is not smooth

A: Turn off and pumpback .

Q: The model is easy to fall off

A: no adhesive tape or the tape loses stickiness; or the bottom of the model is too small;
It can be used to stick a hot bed with a heat gun; add support

Q: It is difficult to remove the support structure

A:In the slice software, rotate model direction correctly; do not set the support density too much

Q: Failed to print the mini-model.

A: Please do not set the model too small and the nozzle diameter is 0.4mm.

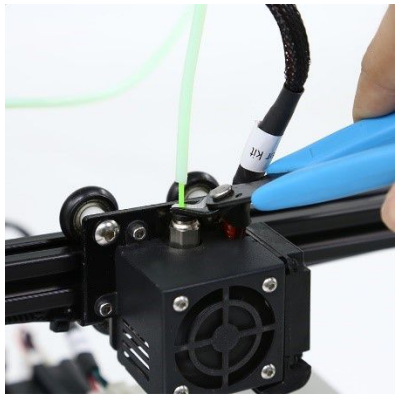
Q: The printed object can not be modled for being slant

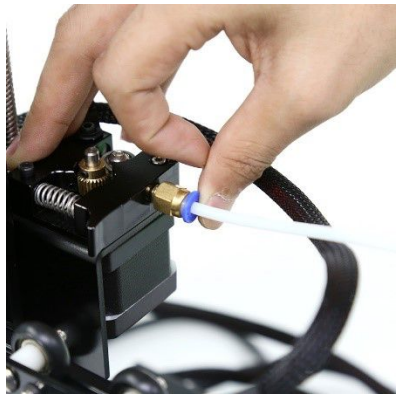
In the slice software, adjust the object vertically to the hotbed or add support structure

More solutions, please check the the quality solution guidance of Chinese version in TF card.

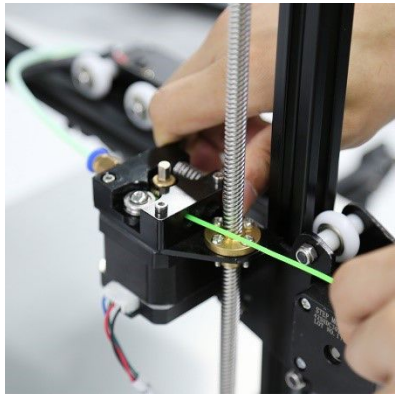
# How to deal with filament stuck in the extruder?

1. Remove the card out of filament



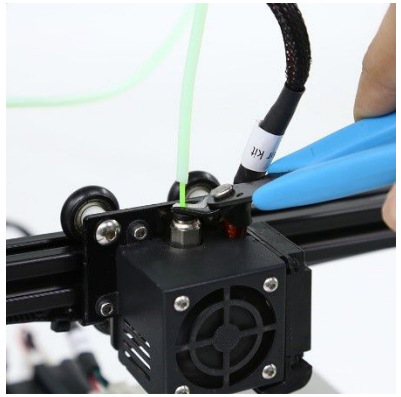


2. Take out the filament

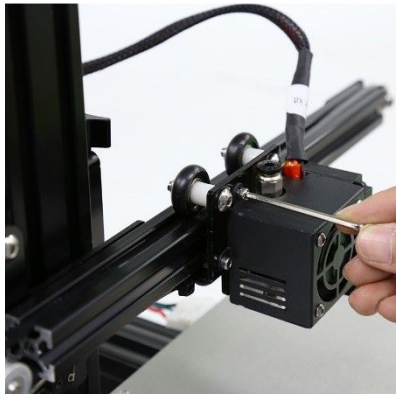


# How to Disassemble and Install the Extruder

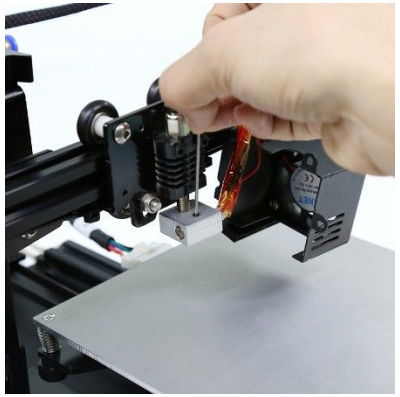
1.Remove filament and the feeding pipe out



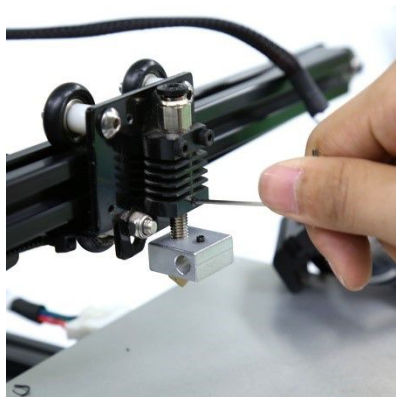
2.Increase the nozzle temperature to 210℃ to let the remain filament flow out automatically and then drop the temperature down to 30 ℃



3. screw out the jack screw and remove the heat block out



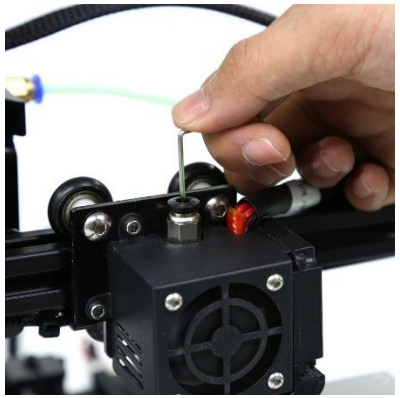
4. Loosen the set screw in the extruder and remove the heat pipe out.
Install the extruder based on the opposite steps above.



# How to Clean the Nozzle?

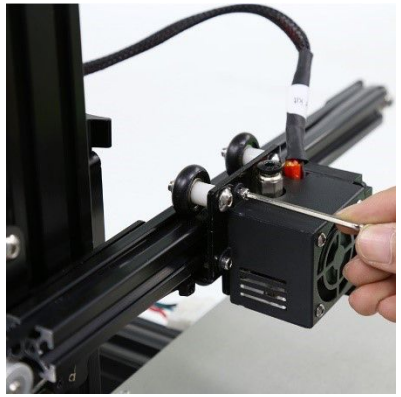
1. Increase the nozzle temperature to 210℃ to let the remain filament flow down automatically


2. When liquid filament is ran out , clean the nozzle and drill with tool squeezing in the hole

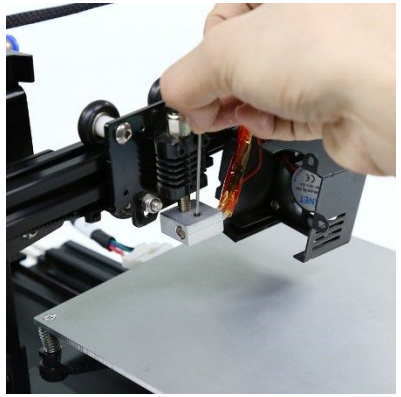


# How to Replace Heat Pipe and Thermistor?

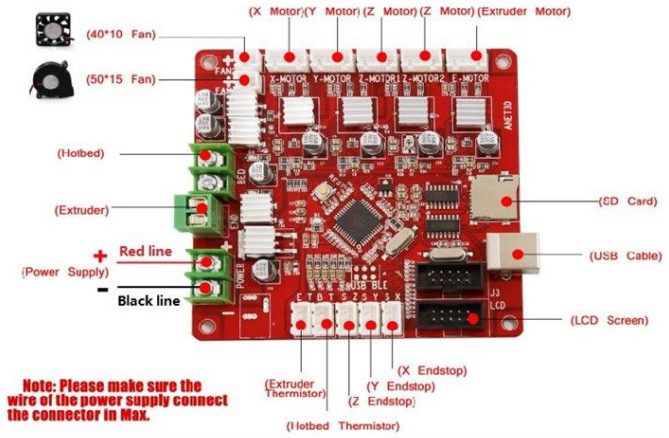
1. Disassemble extruder and screw out the screw on the heat block



2. 2.Remove heat pipe and thermistor out



3. Connect to the right interrupts referring to the mainboard




4. Replace the heat pipe and thermistor with new ones. Reinsert the heat block accordingly

## contacter

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(From Monday to Friday in beijing time8：00-5：30)

welcome to share your printing experience,

The video about operation course and more shared  video