

MOOZ-3

V4.0 2020-06

OPERATION INSTRUCTION

Shenzhen Yuejiang Technology Co., Ltd | China

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Symbol Description



Description

Basic terms or reference information.



Note

Important precaution: ignoring it may cause malfunction of the machine and the corresponding risk.



Warning

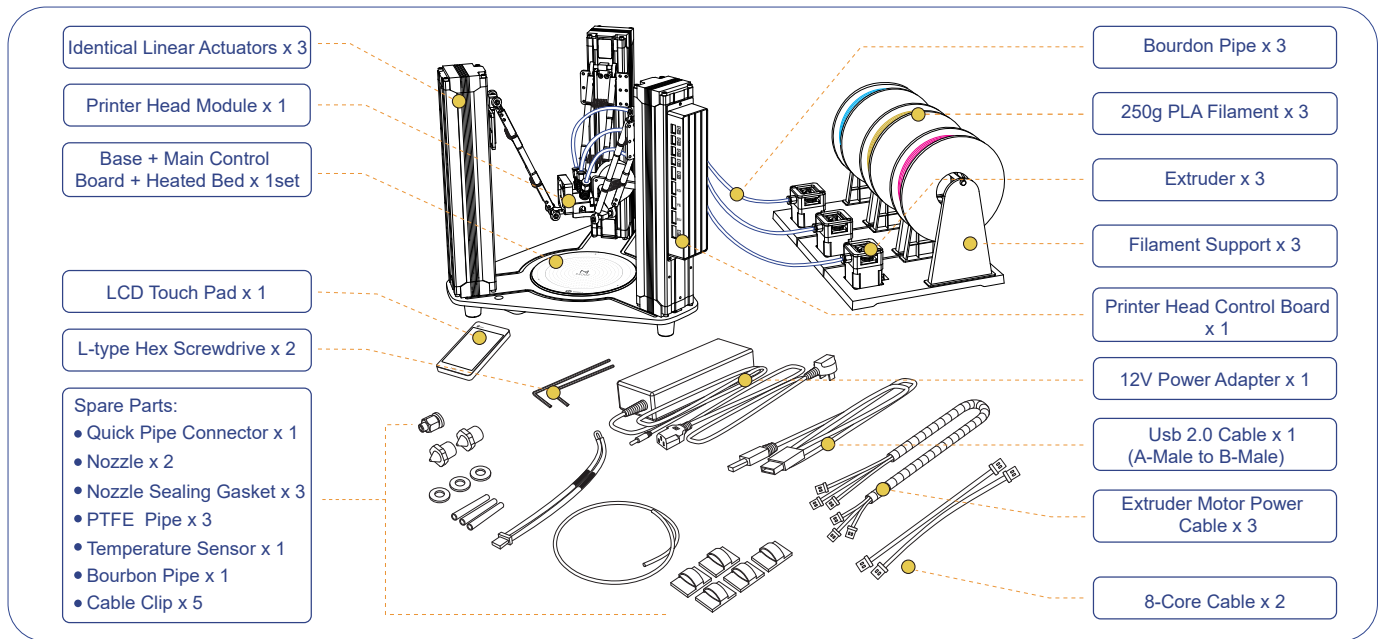
Important warning: rules must be strictly observed, otherwise it may cause machine breakdown and personal injury.



Note: Updated Firmwares, User Manuals, Softwares and Tutorial Videos will be uploaded to our official website www.dobot.cc constantly, please use them for better experience. Any support, please contact us: mooz@dobot.cc.

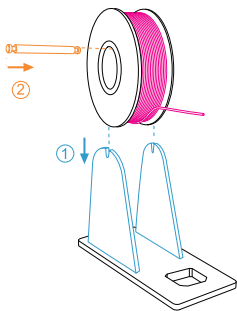
Fast Assembly

1.1 Accessories List



1.1.1 Install the Filament Support

Set up the filament support, and place the filament on it. As shown below

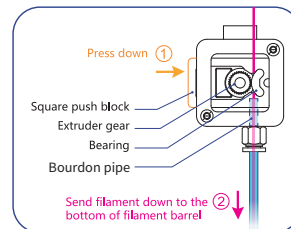


1.1.2 Connect the Bourdon Pipe and Extruder

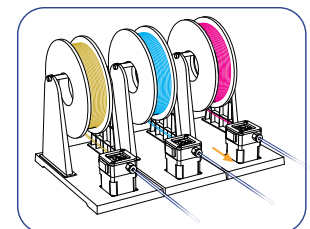
Run the filament through the extruder and insert one end of the bourdon pipe into pipe connector. Keep feeding the filament until it extends out of the other end of the pipe for about 20~30mm. Place the extruder on the filament support orderly after proper connecting.



Straighten the filament manually



Press down the square push block, insert the filament into bourdon pipe down to the bottom of filament barrel through the gap between extruder gear and bearing



Rearrange the filament rolls and extruders

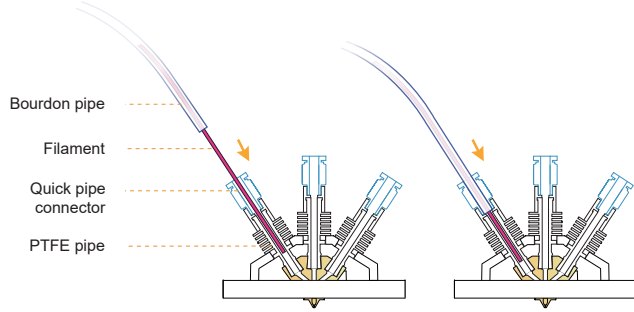


Note:

In case the bourdon pipe and pipe connector need to be detached: Press down the plastic part of the connector and pull the pipe out quickly (see the illustration above).

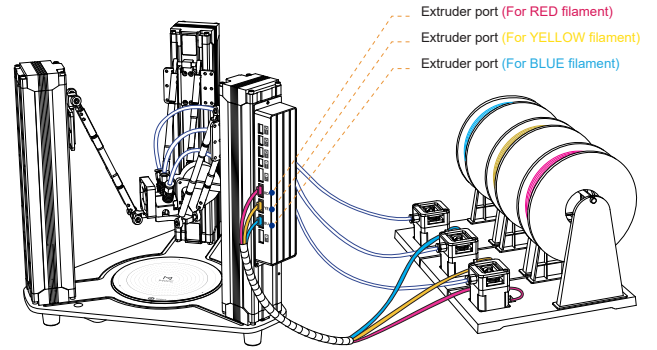
1.1.3 Connect the Bourdon Pipe to the Print Head

Straighten out the filament, insert it into the print head. In the meanwhile, feed the bourdon pipe into the pipe connector to clamp it.



1.1.4 Install Extruder Motor Power Cables

Connect the extruders to the corresponding ports of the printer head control board with cables. As shown below:

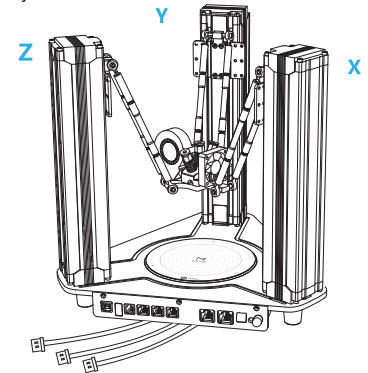
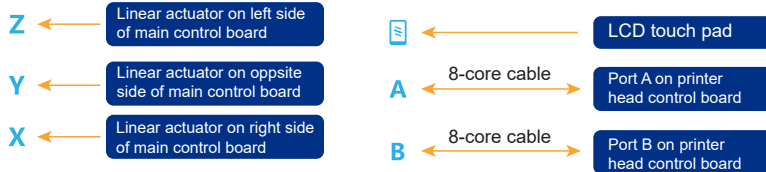
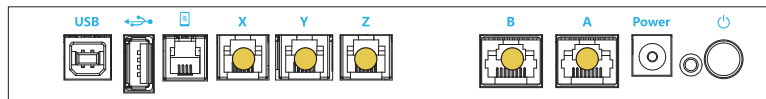


1.1.5 Connect Cables to Main Control Board



Warning: Wrong connection of cables may cause burnout of control board! Hot-plug is strictly prohibited! Always make sure that all cables are plugged in place before power-on! Plugging of cables during power-on status will cause malfunction!

Before power on the machine, please follow the chart below and connect all cables to the main control board correctly.



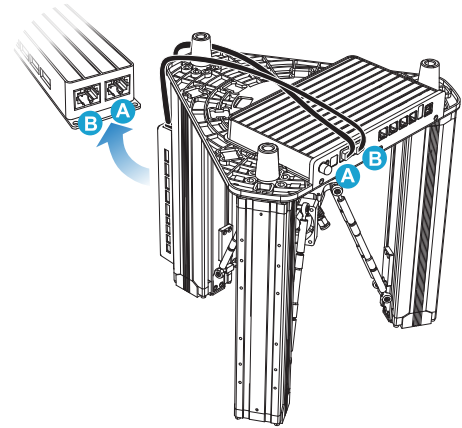
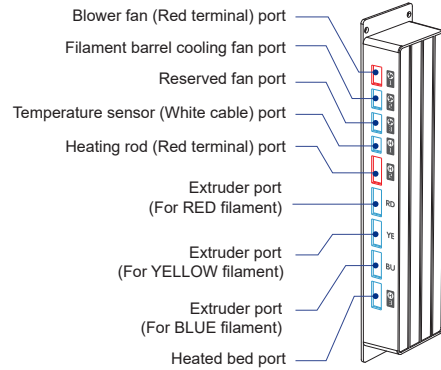
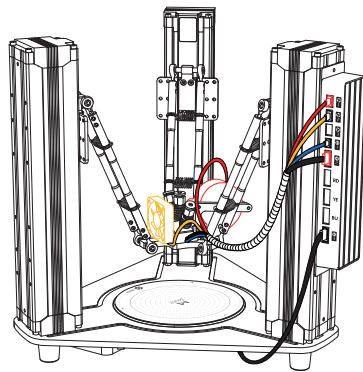
Note: The linear actuators are labeled with X, Y, Z based on mounting positions in the above drawing, which should be connected to the corresponding port on main control board correctly!

1.1.6 Connect Cables to Printer Head Control Board

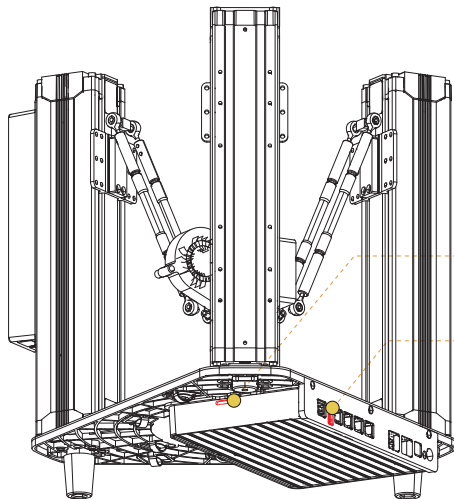


Warning: Wrong connection of cables may cause burnout of control board! Hot-plug is strictly prohibited! Always make sure that all cables are plugged in place before power-on! Plugging of cables during power-on status will cause malfunction!

Before power on the machine, please follow the chart below and connect all cables to the printer head control board correctly.



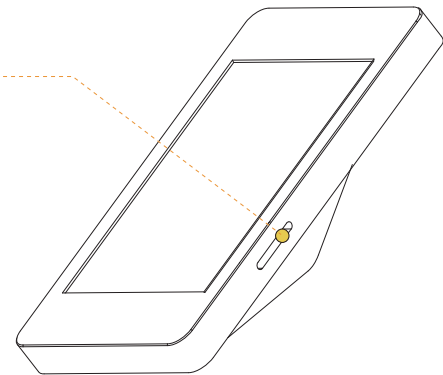
1.1.7 External Interface Description



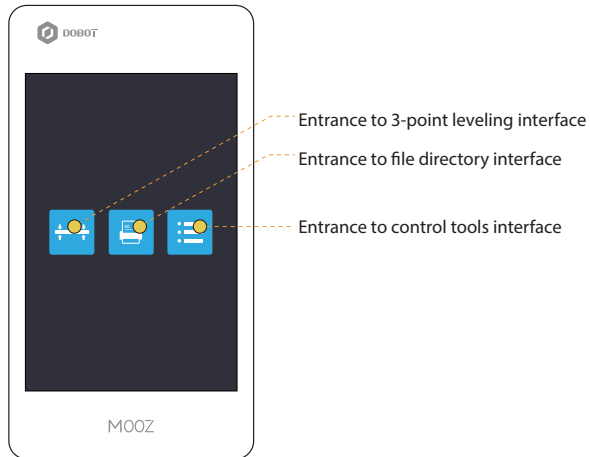
Touch pad SD interface: It is used for updating the firmware of touch pad.

Main board SD interface: It is used for updating the firmware of main board and printing in offline mode.

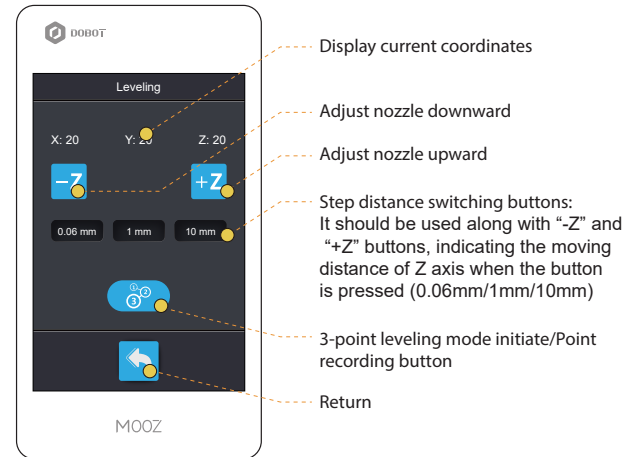
U disk interface: It is used for updating the firmware of main board and printing in offline mode.



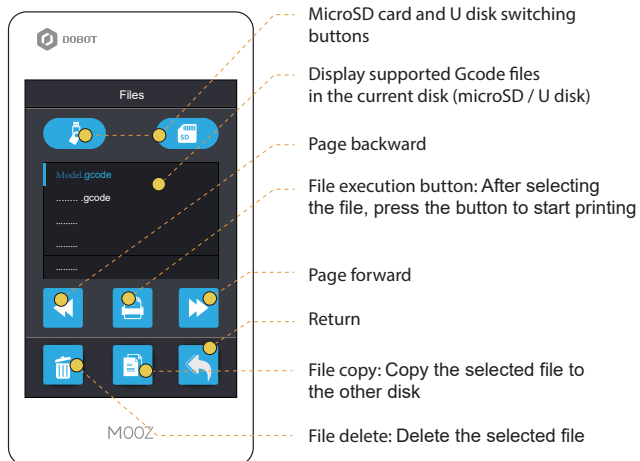
2.1 Home Page



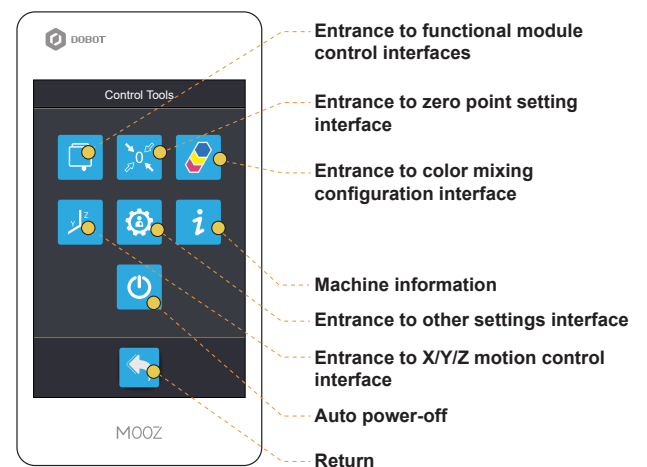
2.2 3-Point Leveling Interface



2.3 File Directory Interface



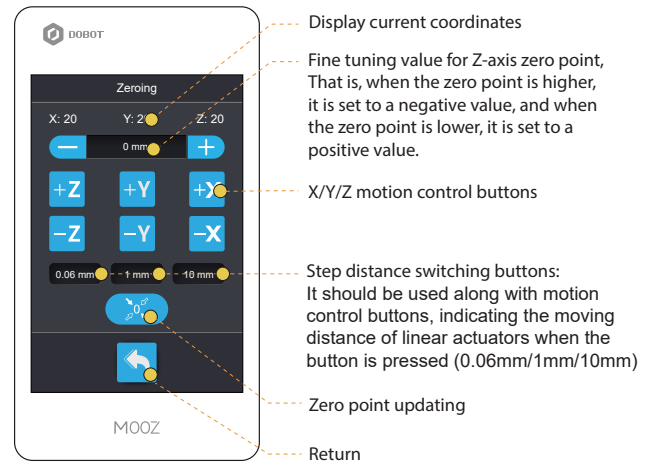
2.4 Control Tools Interface



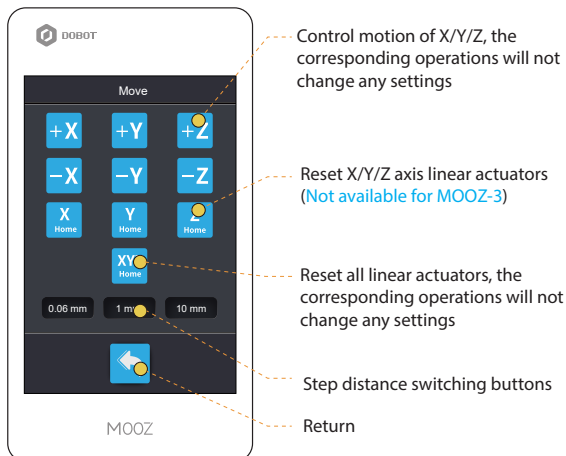
2.5 3D Print Functional Module Control Interface



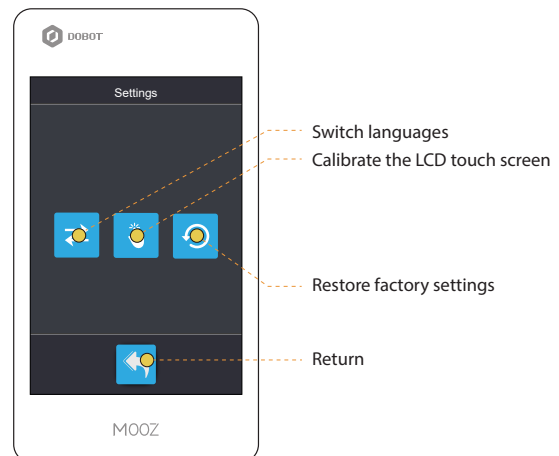
2.6 Zero Point Setting Interface



2.7 X/Y/Z Motion Control Interface



2.8 Other Settings Interface



2.9 Working Process Control Interface

MOOZ

- Display execution progress of current file
- Display time elapsed
- Display current coordinates
- Display current/target nozzle temperature
- Display current/target heated bed temperature
- Real-time working speed control buttons
- Auto power-off
- Abort the process
- Pause/Continue the process

2.10 Switch Mixing Mode Configuration Interface

MOOZ

- Red filament percentage: Adjustment range: 0~100, 0 means red filament will not be used to mix
- Yellow filament percentage: Adjustment range: 0~100, 0 means yellow filament will not be used to mix
- Blue filament percentage: Adjustment range: 0~100, 0 means blue filament will not be used to mix
- Height adjustment: Adjustment range: 1~100, default is 30mm
- Display current switching scheme: A maximum of 4-color switching is supported, you can set different height for each color
- Applied configured mixing scheme
- Default color mixing scheme

2.11 Gradient Mixing Mode Configuration Interface

MOOZ

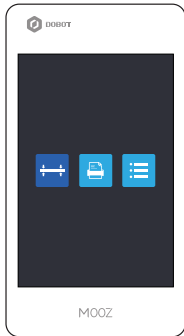
- Red filament percentage: Adjustment range: 0~100, 0 means red filament will not be used to mix
- Yellow filament percentage: Adjustment range: 0~100, 0 means yellow filament will not be used to mix
- Blue filament percentage: Adjustment range: 0~100, 0 means blue filament will not be used to mix
- Gradient cycle: Adjustment range: 1~100, default is 30mm
- Display current mixing scheme: Cb is cycle begin color, and Ce is cycle end color



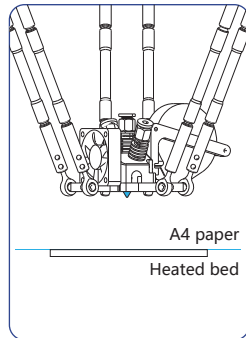
3.1 3-Point Leveling

Please follow the guide of the machine to record three different points to define a plane parallel to the heated bed, these three points must be recorded in order with nozzle in the areas shown in the drawing below, one in each. The calibration requires to be set only for the first use.

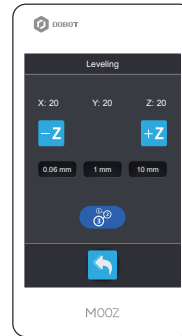
Operation steps:



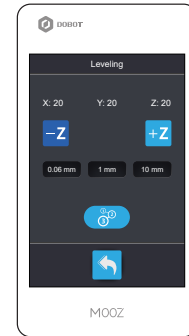
Press the "Entrance to 3-point leveling interface" button



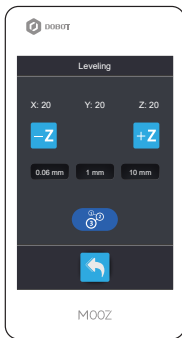
Place a piece of A4 paper on the heated bed



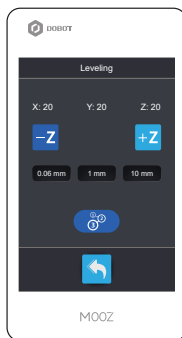
Press the "3-point leveling mode initiate/Point recording" button to enter 3-point leveling mode, and the nozzle will automatically go to a position right above Point ①



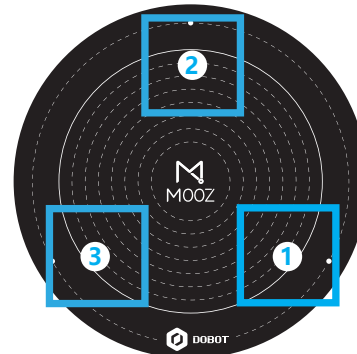
Press the "-Z" button to get the nozzle closer to the heated bed, and move the A4 paper back and forth at the same time. Stop just when the paper can slip with slight friction



Press the "3-point leveling mode initiate/Point recording" button to record Point ①, The nozzle will automatically go to a position right above Point ② after successful recording



Do the same height adjusting and point recording steps to record Point ② and ③. After successful leveling, the machine will home again and exit 3-point leveling mode



Note: 1. Please access to www.dobot.cc to download and upgrade the mainboard firmware! 2. 3-point leveling mode can only be entered with 3D printing head connected.

3. Only Z coordinates will be recorded, so all you need to do is adjusting the height with a piece of paper.

4. The recorded points will not be lost after power-off. But, once entering 3-point leveling mode, previously recorded points will be cleared automatically.

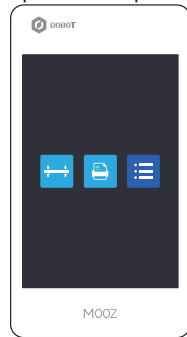
5. Friction status of the three points should be as uniform as possible. Pay attention when traveling the head downward, especially when the nozzle is getting too close to the bed. Even though the height detect protection will take effect and force the machine to go 0.06mm each press, the heated bed may also get burnt if you continuously move it downward without testing the height with a piece of paper.

6. A re-assembled machine should be re-levelled.

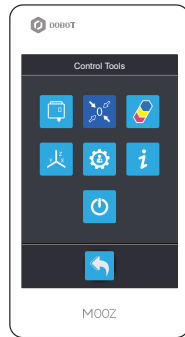
3.2 Set the Zero Point

Zero point is the start point for the machine to print, which requires to be set only for the first use.

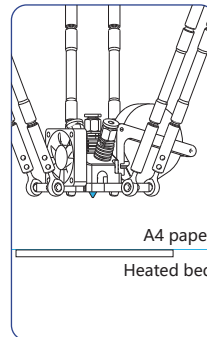
Operation steps:



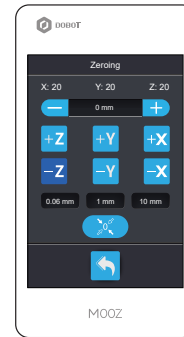
Press the "Entrance to control tools interface" button



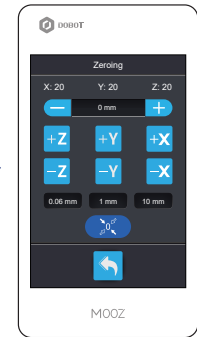
Press the "Entrance to zero point setting interface" button



Place a piece of A4 paper on the heated bed



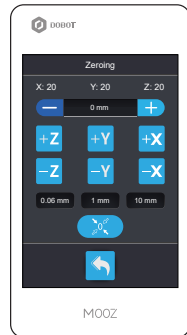
Press the "-Z" button to get the nozzle closer to the heated bed, and move the A4 paper back and forth at the same time. Stop just when the paper can slip with slight friction



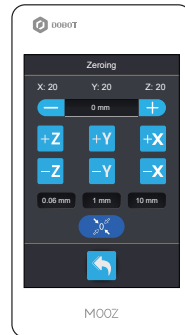
Press the "Zero point updating" button to record the position of zero point. The machine will home again after successful recording

Fine tuning:

This function allows users to fine tune the zero of Z-axis according to bonding status of the first layer, in case the zero point is not satisfactory after standard setting procedures. For instance, if the zero point is too high and causing bonding failure of the first layer:



Press "-" button to set a negative fine tuning value



Press the "Zero point updating" button to fine tune the zero point with the value you set. The machine will home again after successful updating



Note:

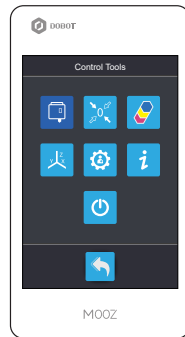
1. Only the zero of Z-axis need to be set and recorded. Zeros of X-axis and Y-axis are system default values and will not and cannot be changed.
2. Too high Z-axis zero position will lead to loose bonding at the bottom, causing the model falling off, and too low position will make it difficult to take off the model or even scratch the heated bed. Dedicated fine tuning is always required to obtain satisfactory first several layers. If the zero point is too high, please use a negative fine tuning value and use a positive fine tuning value if the zero point is too low.
3. Pay attention when moving the head downward, especially when the nozzle is getting too close to the bed. Even though the height detect protection will take effect and force the machine to go 0.06mm each press, the heated bed may also get burnt if you continuously move it downward without testing the height with a piece of paper.
4. The zero point will not be lost after power-off, so there's no need to reset it. However, the zero point may be deviated and needs to be reset after the reassembling.
5. If your printer prints in the mid air, the zero point must be wrongly set. After correct zeroing and homing, the coordinate of Z should be about 100.
6. Please be prudent with the "Zero point updating" button, pressing it will change zero point of the machine. If the fine tuning value remains 0, the operation will record current height of the nozzle as zero point. If the fine tuning value is not 0, the operation will update zero point of Z-axis using fine tuning value you set.

3.3 Install/Remove the Filament

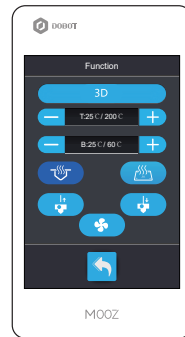
Operation steps:



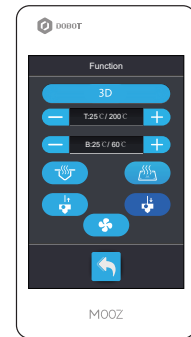
Press the "Entrance to control tools interface" button



Press the "Entrance to functional module control interfaces" button



Press the "Preheat nozzle" button, and wait for the temperature to reach about 200°C



Press "Preheat nozzle" button until melted filament flows out of the nozzle



Note: 1. In case filament need to be unloaded: preheat the nozzle to target temperature and pull the filament out.
2. In case of reloading the filament, refer to Section 1.1.2 and 1.1.3.

3.4 Use the Slicing Software



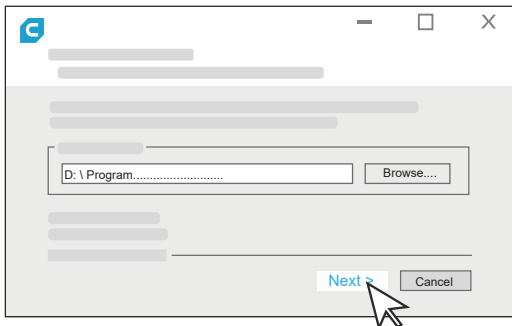
1. Description: MOOZ supports most third-party printing softwares, such as Cura, Repetier-Host, etc. Cura 4.6.1 is described here as an example.
2. Please download the latest Cura, the download address: <https://ultimaker.com/software/ultimaker-cura>
3. The installation and setting of different version of Cura are all most same, please install and set Cura refer to the below.

3.4.1 Install the Slicing Software

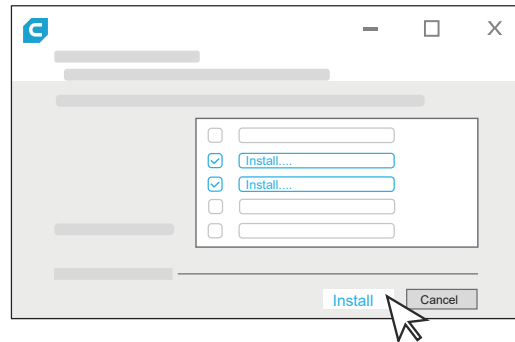
Operation steps:

- ① Double-click  to install the software:
Cura4.6.1.exe

- ② Select the installation directory. It is recommended to keep the default, click "Next":



- ③ Select the features you need. It is recommended to keep the defaults, click "Install":



- ④ The window of installing arduino driver will pop up in the process of installation. Please follow the prompts to complete the installation.

3.4.2 Configuration for Initial Use



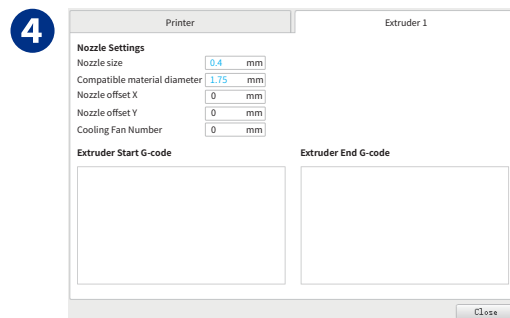
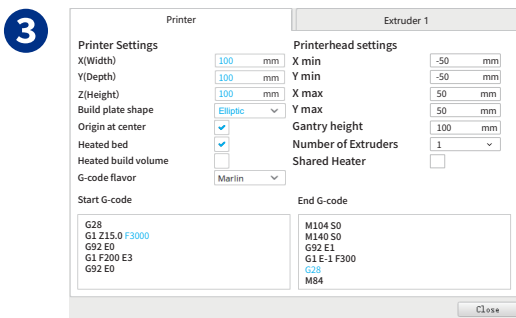
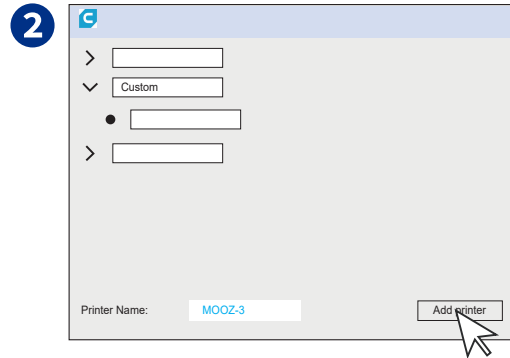
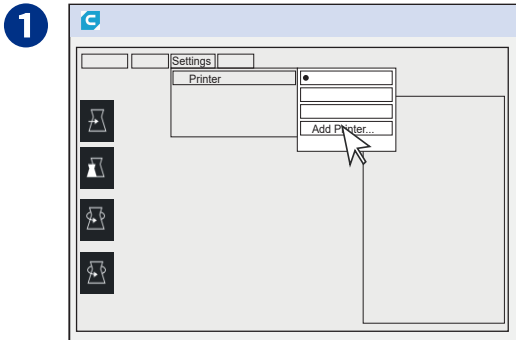
Description: Please visit www.dobot.cc to download the related tutorial videos and softwares.

Operation steps:

- ① Run Cura 4.6.1 and go "Settings" > "Printer" > "Add Printer" > "Custom", name your printer "MOOZ-3", and click "Add printer", dialog of Machine Settings will popup







- ② Configure the machine

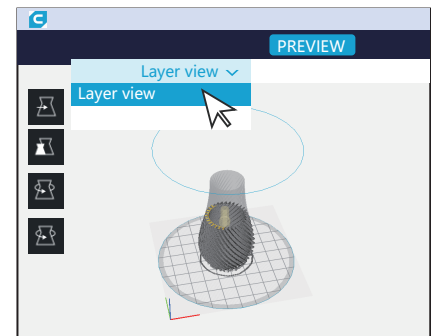
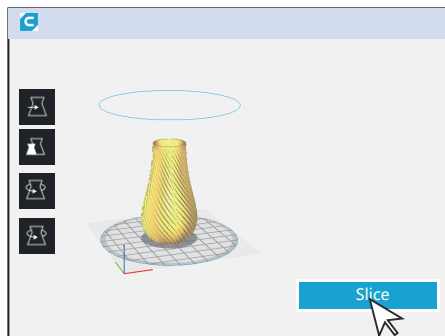
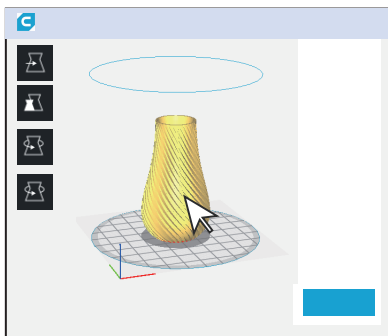


Note: Origin of MOOZ-3 is defaulted at the center of heated bed, please be sure to check the "Origin at center" box, otherwise the machine will not work normally.

3.4.3 Printing

Load and profile the model:

- ① Adjust the model: Left click on the model, four options , ,  and  will appear on the left side of the interface, you can adjust as needed.
- ② After setting parameter according to the next page, click Slice to generate Gcode file.
- ③ View the details of the slice: Click the drop-down list on the upper middle corner of the interface and select "Layer view" to view the details of the slice.





Description of key profile settings:

- ① **Layer Height:** For the height of each layer of printing, smaller value will produce finer surface, but cost more printing time. Suggested range is 0.05 to 0.3, not exceeding 3/4 of the diameter of the nozzle. MOOZ used 0.4mm nozzle, means not exceeding 0.3.
- ② **Wall Thickness:** For the printing thickness of the outer surface of the model, the setting of 1.2 indicates that the outer surface will go three rounds, since the width of each round equals to the diameter of the nozzle, namely 0.4.
- ③ **Top/Bottom Thickness:** Determine the bottom/top thickness of the model.
- ④ **Infill Density:** Determine the filling density of the internal grid of the model, generally set at 15% or less.
- ⑤ **Printing Temperature:** Need to be set according to filament type. Suggested value for PLA is 200~210 C.
- ⑥ **Build Plate Temperature:** Need to be set according to filament type. Suggested value for PLA is 60~70 C.
- ⑦ **Travel Speed:** Travel speed should be set no greater than 40mm/s, otherwise the Z linear actuators may lose some steps when traveling downward from home position too fast and cause zero point deviation.
- ⑧ **Support Placement:** If the model has any hovering part, the option must be switched on. Generally, "Everywhere" indicates that support can be added on the model itself. If you select "Touching buildplate", it indicates that support can be added only between the print platform and the model hovering position, not on the model.
- ⑨ **Build Plate Adhesion:** "Brim" indicates that a few layers of outer ring should be added on the bottom edge of the model so as to prevent warping. And "Raft" is used to get the whole model raised by adding a raft-like base on the bottom when the heated bed leveling status is not satisfying.
- ⑩ **Spiralize Outer Contour (i.e., vase mode):** Only the outer surface and the bottom of the model are printed, and continuous spiral lift will appear when printing the outer surface, which can improve the surface quality, but has requirements for the model, and that is, the model can only have one outer surface and can not be hovered.



Note:

1. Hover the mouse over the option, and the corresponding hint will appear.
2. Right-click anywhere within the parameter setting area, you can "Configure setting visibility".
3. Tutorial video for using Cura is available on our official website.

Print settings
✕

Profile Fine - 0.1mm ★ ▼

☰

Layer Height 🔗 0.1 mm

Line Width 0.4 mm

Shell ▼

Wall Thickness 0.8 mm

Top/Bottom Thickness 0.8 mm

Print Thin Walls

Infill ▼

Infill Density 20 %

Gradual Infill Steps 0

Material ▼

Printing Temperature ↻ ⓘ 205 °C

Build Plate Temperature 🔗 ↻ 70 °C

Flow 100 %

Speed ▼

Print Speed 60 mm/s

Infill Speed 60 mm/s

Wall Speed ↻ ⓘ 15.0 mm/s

Travel speed ↻ ⓘ 40 mm/s

Travel <

Cooling <

Support <

Build Plate Adhesion ▼

Build Plate Adhesion Type 🔗 ↻ Raft ▼

Raft Extra Margin 🔗 ↻ 4 mm

Raft Air Gap 🔗 ↻ 0.2 mm

Initial Layer Z Overlap 🔗 0.1 mm

Raft Top Layers 🔗 ↻ 4

Raft Print Speed 🔗 ↻ ⓘ 15 mm/s

Dual Extrusion <

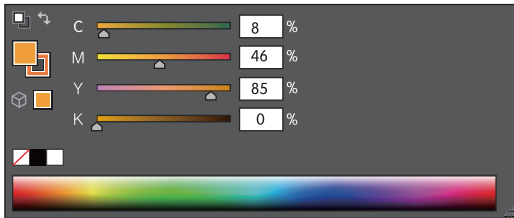
Special Modes ▼

Print Sequence 🔗 All at Once ▼

Surface Mode Normal ▼

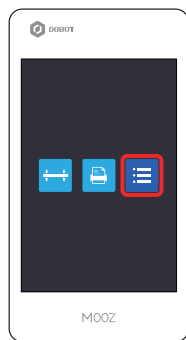
3.4.4 Configuration of Color Mixing Scheme

The machine adopts CMY subtractive color mixing model, wherein C stands for Cyan, M stands for Magenta, and Y stands for Yellow. For gradient mixing mode, the gradual color changing process will follow the CMYK chromatography in general. You can use image-editing software, Photoshop for instance, for accurate color configuration.

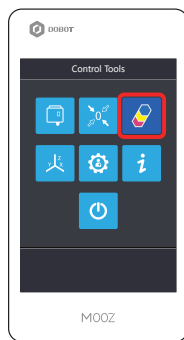


Note: The principle of color mixing is only for reference. Due to the non-real-time and uniformity of color mixing, the color of actual printing will be slightly different from the theoretical setting.

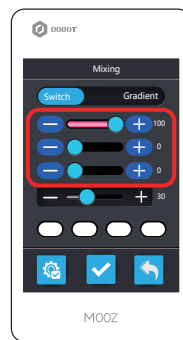
1. Switch mixing mode



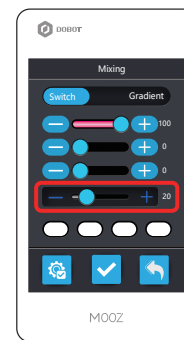
Press the "Entrance to control tools interface" button



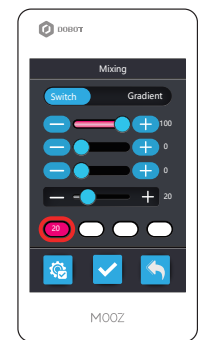
Press the "Entrance to color mixing configuration interface" button



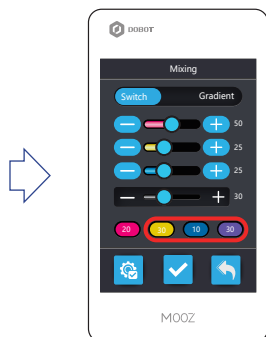
Configure color by adjusting filament percentage



Set height for the configured color

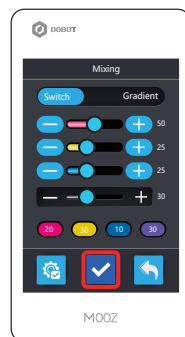


Record the configured color and height to the first block. Press the block again to clear as needed

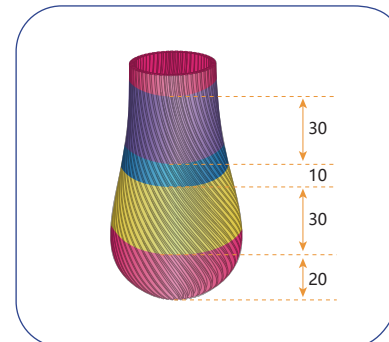


Configure color and set height for other blocks as needed.

A maximum of 4-color switching is supported



Apply the configured mixing scheme



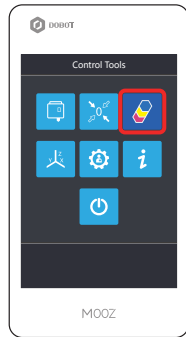
Estimated result

- Note:**
1. If only one color block is configured and the others are left empty, the whole model will print with the very one color you configured regardless of the height parameter.
 2. If you only want to use one or two of the three filament rolls, always set percentage of the filament you don't want to use to 0 when configuring.
 3. Due to the uniformity of color mixing, there will be a partial gradient transition between actual layers.

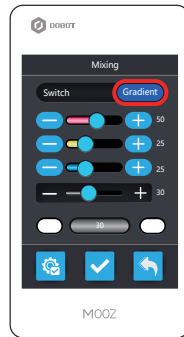
2. Gradient mixing mode



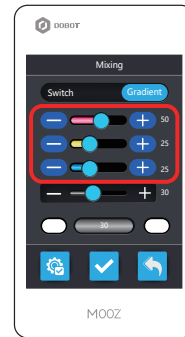
Press the "Entrance to control tools interface" button



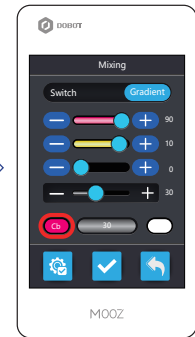
Press the "Entrance to color mixing configuration interface" button



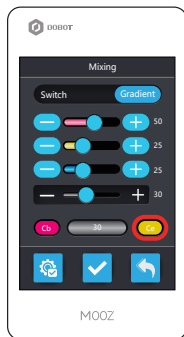
Switch to gradient mixing mode



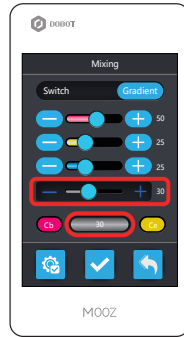
Configure color by adjusting filament percentage



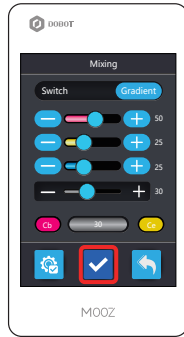
Record the configured color to the "Cb" block. Press the block again to clear as needed



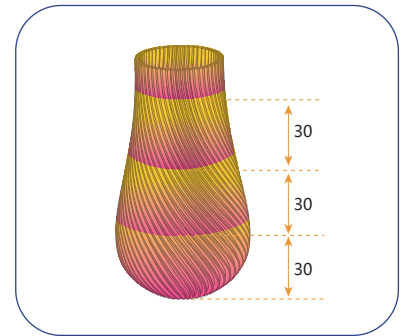
Configure color and record it to the "Ce" block



Adjust gradient cycle



Apply the configured mixing scheme



Estimated result



Note: 1.The system default gradient mixing scheme requires 3 rolls of filament.

2.Due to the uniformity of color mixing, there will be a partial gradient transition between actual layers.



Warning: 1. Make sure the machine has been properly leveled and zeroed before executing any Gcode files. We strongly advice you to check if the zero point is suitable by moving the Z coordinate to 0 manually and test the friction status with a piece of A4 paper.

2. After printing finished, please wait until heated bed cools down to ambient temperature. Place a knife or spatula under the print and apply a small amount of force to remove it. Do not try to drag or pull the print off, otherwise the heated bed sticker may swell and result in severe unevenness.

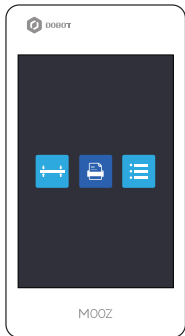


Note: 1. The U disk or microSD card format shall be Fat32 with the capacity not greater than 32GB.

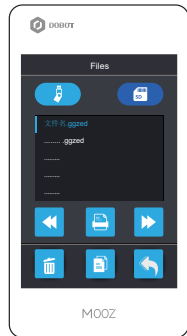
3. Applying masking tape before printing can greatly reduce risk of getting the heated bed sticker scratched!

Operation steps:

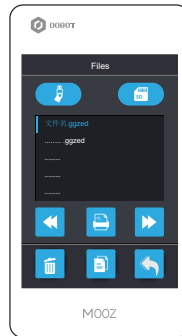
1. Preheat nozzle and heated bed to target temperature, and test extrusion performance of the 3D print functional module. Refer to Section 3.3.
2. Follow the steps below to execute the Gcode file.



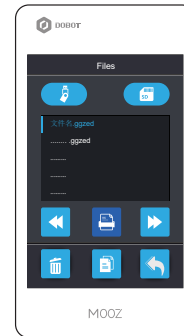
Press the “Entrance to file directory interface” button



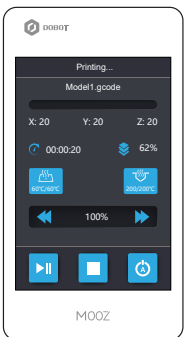
Switch to microSD card or U disk



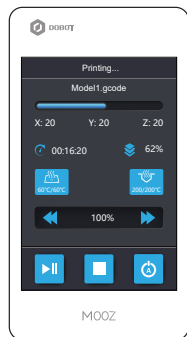
Press to select the file you want to print



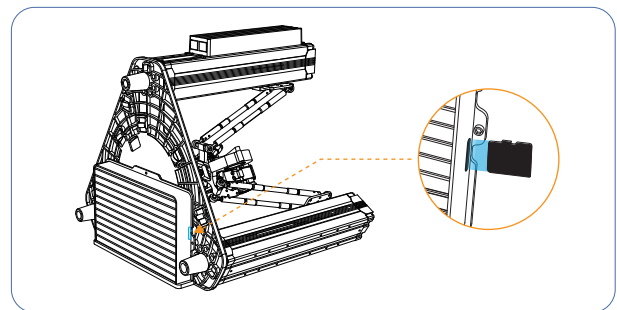
Press the “File execution” button to start printing



Wait for the heated bed and nozzle to be heated to the target temperature



Start printing automatically



microSD card slot

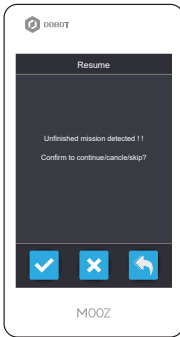


Note:

The main control board is designed with microSD card slot. MicroSD card is neither standardly equipped nor required. Format of microSD card you used shall be Fat32 with the capacity not greater than 32GB.

3.5 Power-Loss Resume

In case of abrupt power failure during printing, the machine will save current printing process and move the functional module away from the print. You may resume or cancel the process after power recovery.



Description

- “ ” Continue: Resume the unfinished printing process
- “ ” Cancel: Cancel the unfinished printing process
- “ ” Return: The system will prompt you again next time you turn on the machine, provided that no file is executed after the power recovery. You can use the “Return” button to check and prepare the machine, such as nozzle preheating and filament replacement.

3.6 Printing Control

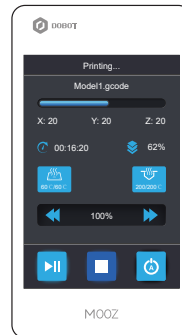
1. Speed Control: Change printing speed in real-time. Note that too high speed may sacrifice accuracy and service life of the machine.
2. Process Control—Pause/Continue: Press to pause the printing process, press again to continue.
3. Process Control—Abort: Press to abort current printing process. The process will be unrecoverable once aborted, please be prudent.



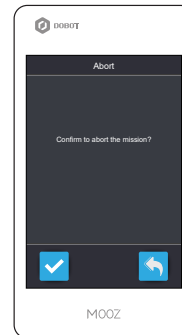
Speed Control



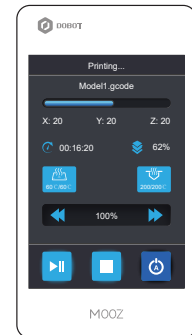
Process Control—Pause/Continue



Process Control—Abort



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Auto power-off

4. Auto power-off: The machine will power off automatically after finishing the current printing/engraving/carving process, provided that the “Auto power-off” button is activated.

4.1 3D Printing Failure

Q : Print center is at left-bottom corner of the heated bed

A : Wrong machine setting in slicing software, the “ Origin at center ” box must be checked, refer to Section 3.4.2.

Q : The machine prints in the air after file execution

A : Check if the zero point is appropriate. Methods:
 1. Check if coordinate of Z is about 100 after homing operation.
 2. Move Z coordinate to 0 manually and check the friction status with a piece of A4 paper.

Q : Poor first layer

A : 1. Re-level the heated bed.
 2. Heated bed is too far from nozzle, result in loose bonding: Zero point is too high, reset or fine tune it. Refer to Section 3.2.
 3. Heated bed is too close to nozzle, result in squeezing, scratching and extruder step losing issues: Zero point is too low, reset or fine tune it.

Q : The print falls off from the heated bed

A : Please set the zero point correctly, increase heated bed temperature, and make sure the first layer is successful before leaving.

Q : Unable to read Gcode files in U disk or microSD card

A : 1. Check if the file system format of your U disk or microSD card is FAT32, and with capacity not greater than 32GB.
 2. Check if the Gcode files are stored in the root directly.
 3. Reboot the machine, unplug and plug the U disk or microSD.
 4. Please use qualified U disk or microSD.

Q : Fail to finish the print

A : 1. Check if the filament is stuck by the filament roll support.
 2. Check if the extruder can feed normally at standby state.
 3. Reinstall the filament.
 4. Open the Gcode file with text editor and check if there is any garbled codes at the end of the file.

4.2 Whole Machine Failure

Q : Unable to control X/Y/Z movements

A : 1. Check and make sure all cables are properly connected to the right sockets.
 2. Check if the nozzle temperature is normal, displaying “0” means unable to read nozzle temperature. In this case, please use the spare temperature sensor to decide if the failure is caused by faulty temperature sensor. Refer to Section 4.4 for maintenance.

Q : Movement of X/Y/Z linear actuator is abnormal

A : 1. Check and make sure the cables are in good connection.
2. Check crossly(i.e. connect X-axis linear actuator to Y port and Connect Y-axis linear actuator to X port and Connect) to decide if the failure is caused by the faulty linear actuator or control board.

Q : Unable to exit "starting..." interface after power up

A : 1. Unplug the cables, U disk and microSD card orderly, restart the machine to decide if the failure is caused by corresponding faulty component.
2. Update the mainboard firmware.
3. Update the touch pad firmware.

Q : Unable to start the machine, auto shutdown or restart

A : Unplug the cables, U disk and microSD card orderly, restart the machine to decide if the failure is caused by corresponding faulty component.

Q : Auto shutdown after pressing nozzle heating button

A : 1. Unplug the cables, U disk and microSD card orderly, restart the machine to decide if the failure is caused by corresponding faulty component.
2. If the issue is solved after unplugging the heating rod socket, please check if failure is caused by short-circuit of heating rod cables. Refer to Section 4.4 for maintenance.

Q : Buzzer on after starting, the machine shutdown a few seconds later automatically

A : Check if the heating rod and heated bed are reversely connected.

4.3 3D Print Functional Module Failure

Q : Able to heat nozzle, but unable to reach target temperature

A : Check if the temperature sensor falls out of the heating block. Refer to Section 4.4.

Q : Abnormal nozzle temperature, displays "0" other than ambient temperature

A : 1. Check if temperature sensor cable is connecting to the correct socket properly. Refer to Section 4.4.
2. Use the spare temperature sensor to decide if the failure is caused by faulty temperature sensor. Refer to Section 4.4 for maintenance.

Q : Unable to preheat the nozzle

A : 1. Check if nozzle temperature displays normally.
2. Check if the heating rod cable is connecting to the correct socket properly. Refer to Section 4.4.
3. Functional module is damaged.
4. Heating rod is damaged.

Q : Unable to extrude filament normally

A : 1. Check if the extruder motors are working normally.
2. Refer to Section 4.4 for maintenance.
3. Please do not mix-use filament of different type or brand.

Q : Under extrusion, too little filament is extruded during printing

A : Carbonized material will accumulate in the nozzle after long time printing. To keep the print head in good condition, we suggest you clean the nozzle after every 1kg filament printing by applying the cold-pull method: Remove all three quick pipe connectors from the print head, then heat nozzle to 200~220 C, use your hands to feed filaments into the three channels simultaneously until all three filaments flows out for 5~15s. Stop heating and wait until nozzle temperature drops to 90~100 C, then pull out the filaments, in this way, the carbonized material may be pulled out together. Remove the bulged end and be ready for the next cold pull. You may need to perform the cold-pull 4~5 times to get the nozzle fully cleaned.

4.4 Maintenance of 3D Print Functional Module

In case of clogging issue, leading to slipping or step losing of extruder motors: Please preheat nozzle to target temperature, press down the plastic part of the quick pipe connector ② and remove the corresponding bourdon pipe ①. Remove the swelling end and reinstall it.

If the clogging issue is not solved by reinstalling the filament: Please refer to the last Q&A in Section 4.3 for maintenance of the nozzle.

In case of replacing the PTFE pipe ⑤, please screw off the quick pipe connector ② and filament barrel cap ③ after heating nozzle to target temperature.



Note: No need to disassemble the print head further to fix clogging issue. For replacing nozzle ⑬ or temperature sensor ⑨, please follow the steps below:

Remove the fixing screw of heat insulation block ⑦, take down the whole print head from the triangular piece ⑰.

Loosen the fixing screw of heating rod ⑩, for replacing the heating rod & temperature sensor suite ⑨.



Warning: Please follow the steps above to replace temperature sensor. Fitting area between the nozzle ⑬ and filament barrel ④ is sealed with sealant during factory assembling. Please do not try to loosen the filament barrel fixing screw ⑪.

In case of replacing the nozzle ⑬, please screw off the old one with a plier or wrench. You may need to heat the nozzle to about 160°C first.

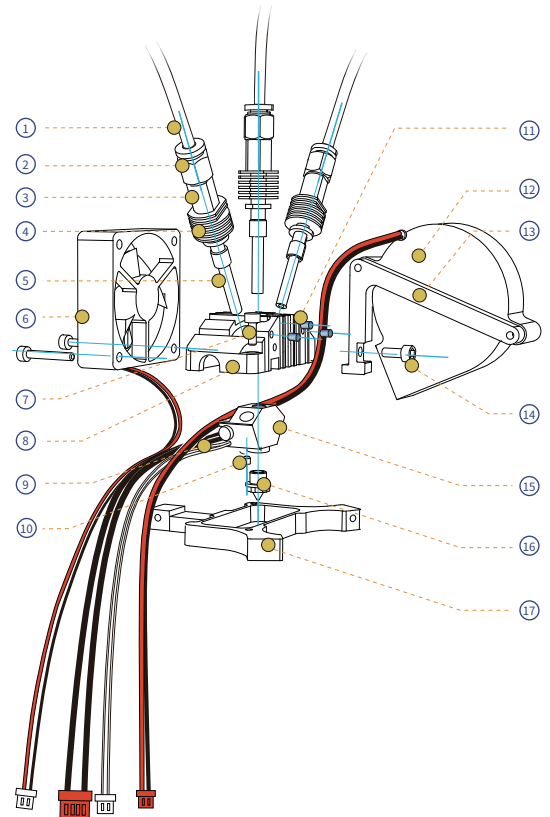
Fit a new sealing gasket ⑮ into the groove of the nozzle, and tighten them on the heating block as hard as you can to prevent oozing issue ⑨.



Note:

The sealing gasket is disposal and mustn't be reused.

- | | |
|--|---|
| ① Bourdon pipe | ⑩ Heating rod fixing screw |
| ② Quick pipe connector | ⑪ Filament barrel fixing screw |
| ③ Filament barrel cap | ⑫ Blower cooling fan assembly |
| ④ Filament barrel | ⑬ Blower cooling fan support |
| ⑤ PTFE pipe | ⑭ Blower cooling fan support fixing screw |
| ⑥ Filament barrel cooling fan | ⑮ Heating block |
| ⑦ Fixing screw of heat insulation block | ⑯ Nozzle + sealing gasket |
| ⑧ Heat insulation block | ⑰ Triangular piece |
| ⑨ Heating rod & temperature sensor suite | |



Parameters

Overall Dimensions: $\Phi 350 * 325\text{mm}$

Adapter Input: 100-240V~50/60Hz, 1.8Amax

Adapter Output: 12V~10A

Main Material: Aircraft-grade aluminum

Operation Panel: 3.5' LCD touch pad

3D Printing

Nozzle Diameter: 0.4mm

Layer Resolution: 0.05~0.3mm

Nozzle Temperature: 250°C Max.

Heated bed Temperature: 100°C Max. (at 25°C ambient temperature)

Forming Size: $\Phi 100 * 100\text{mm}$

Applicable Materials: 1.75mm PLA

Effective Printing Speed: 0~100mm/s

Operating Temperature: 10~40°C

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.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator & your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

All RF frequencies are not restricted in EU member states

FCC ID: 2AH14-MOOZ-3



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