



# MOOZ-3

V3.0 2019-04

## OPERATION INSTRUCTION

Shenzhen Yuejiang Technology Co., Ltd | China

ADDRESS: 3F, Building No.3, Tongfuyu Industrial Town, Nanshan District, Shenzhen, 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

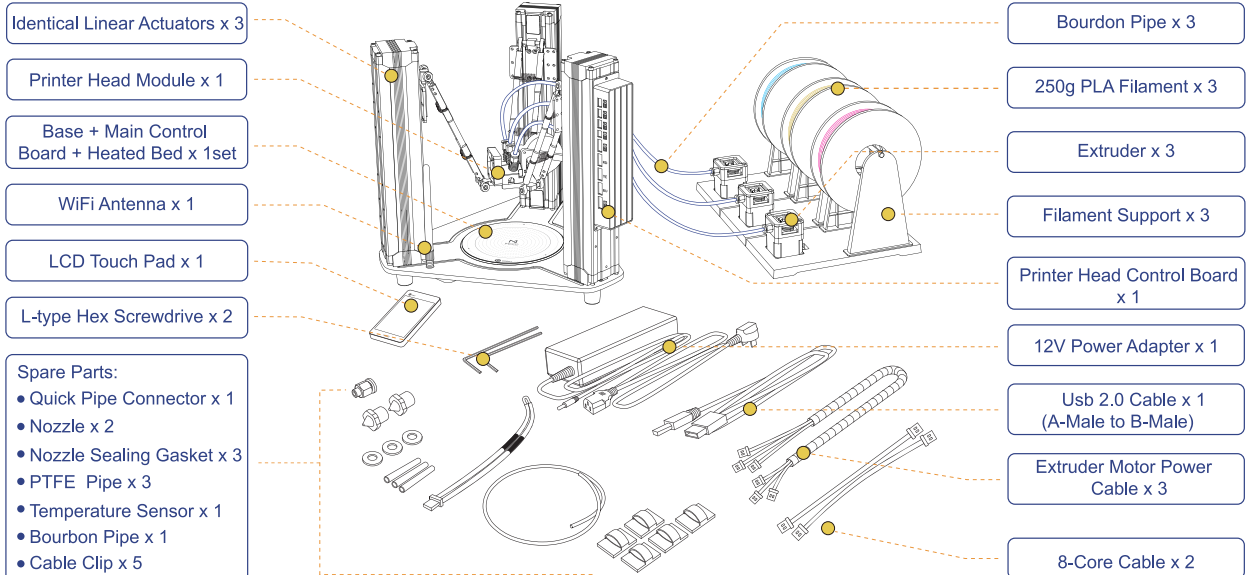
Important warning: rules must be strictly observed, otherwise it may cause machine breakdown and personal injury.



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

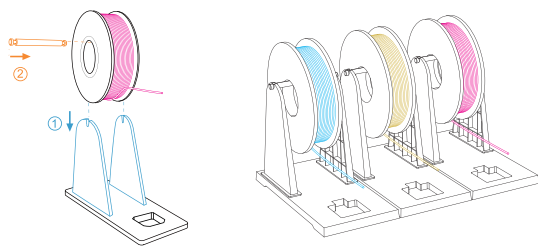
## Fast Assembly

### 1.1 Accessories List



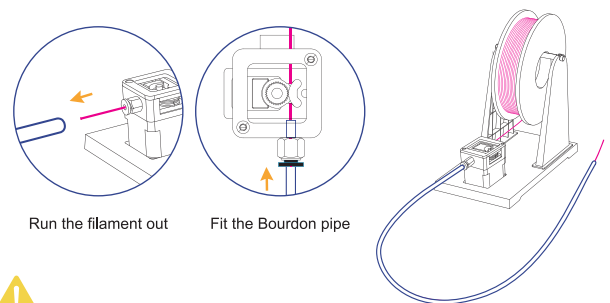
#### 1.1.1 Install the Filament Support

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.

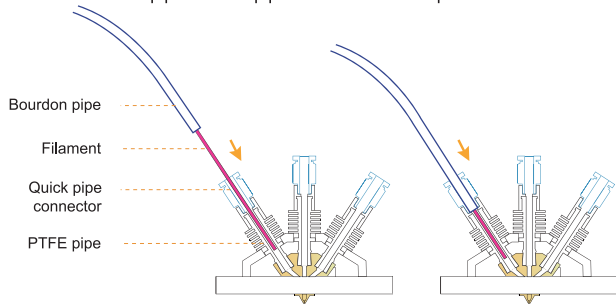


Note:

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).

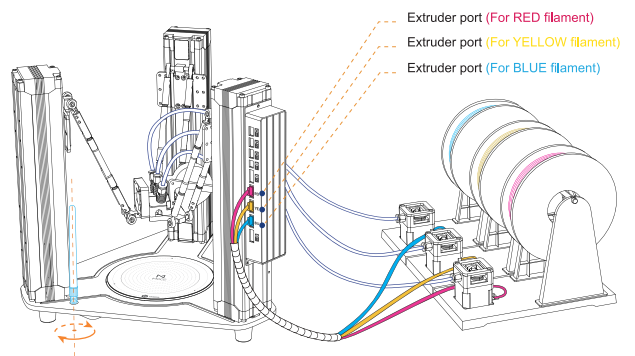
### 1.1.3 Connect the Bourdon Pipe to the Print Head

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 and WiFi Antenna

Connect the extruders to the corresponding ports of the printer head control board with cables. Screw the WiFi antenna on the base clockwise. As shown below

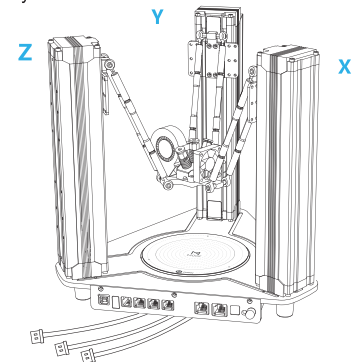
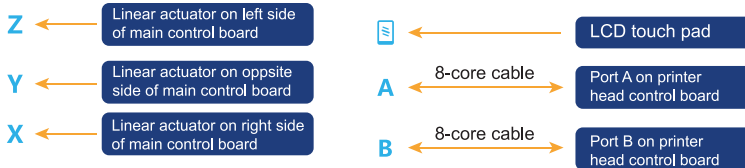
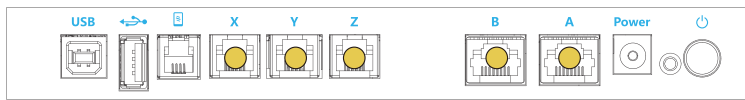


### 1.1.5 Connect Cables to Main Control Board



**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.



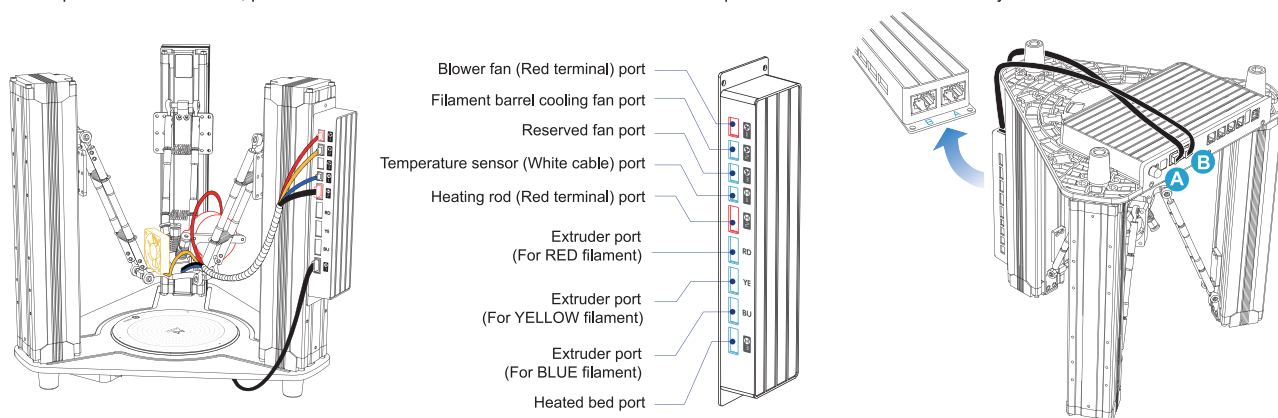
**Note:** The linear actuators are labeled with X, Y, Z based on mounting positions in the above drawing, which should be connected to the corresponding port on main control board correctly!

### 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!

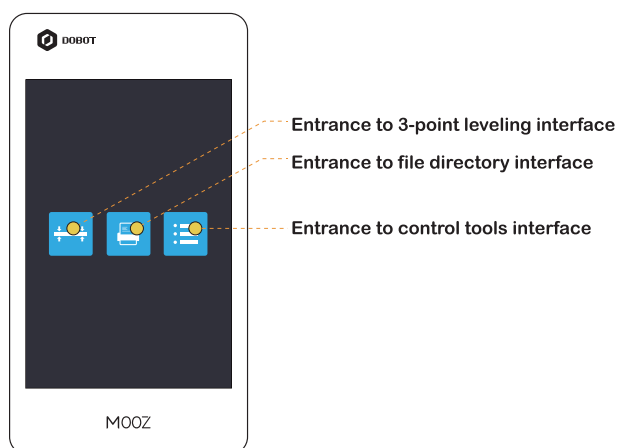
Before power on the machine, please follow the chart below and connect all cables to the printer head control board correctly.



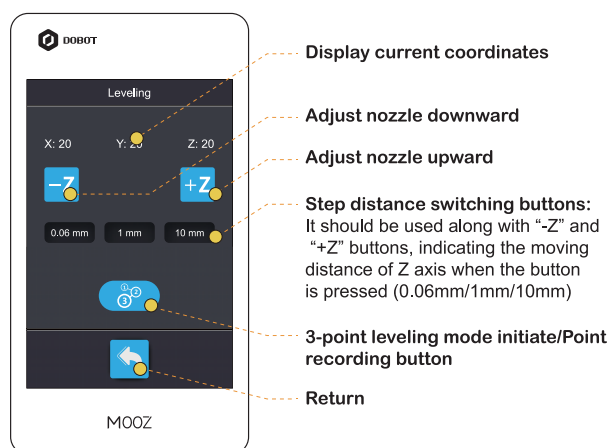
## II

## Operation Panel

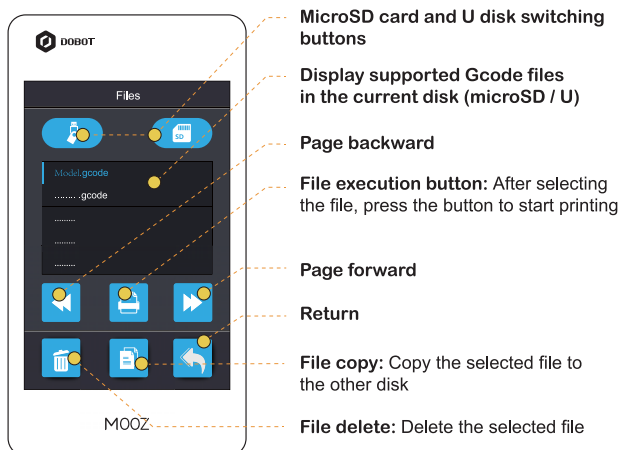
### 2.1 Home Page



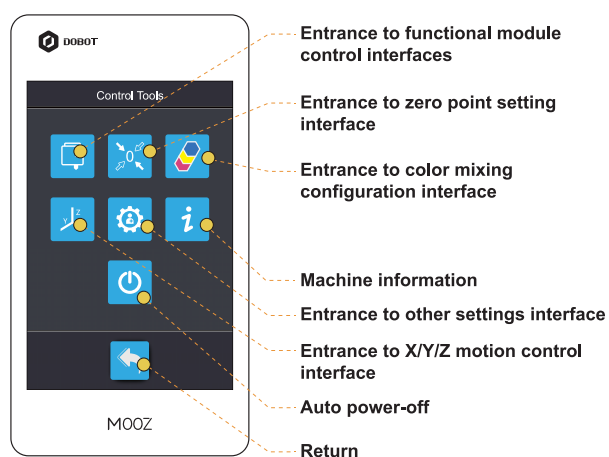
### 2.2 3-Point Leveling Interface



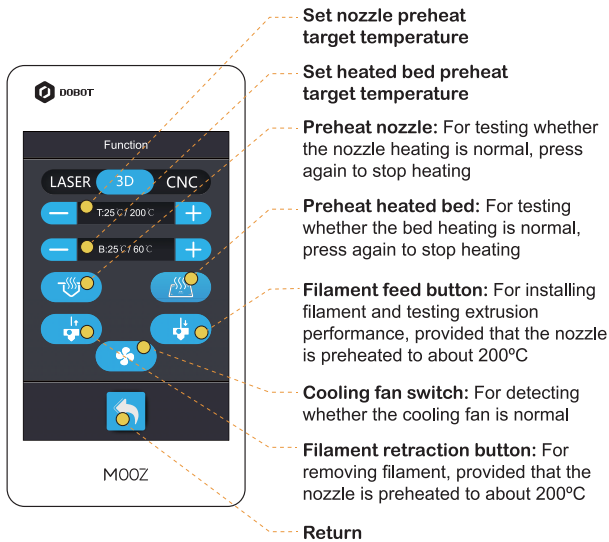
### 2.3 File Directory Interface



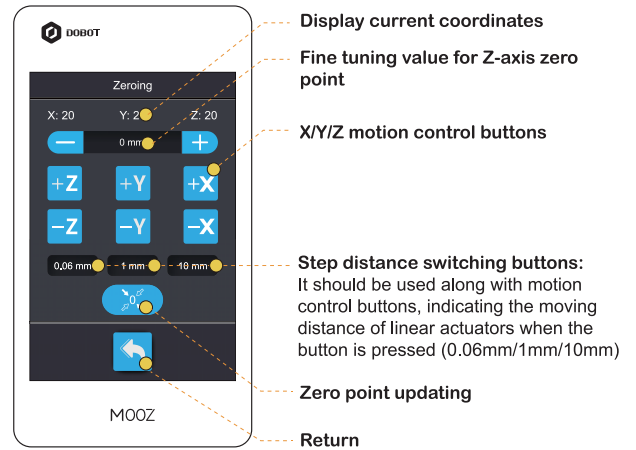
### 2.4 Control Tools Interface



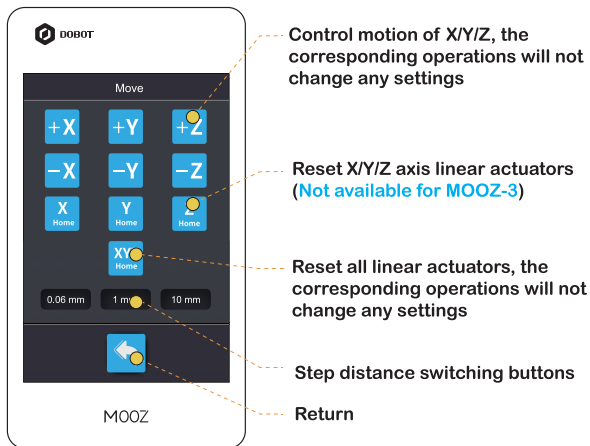
## 2.5 3D Print Functional Module Control Interface



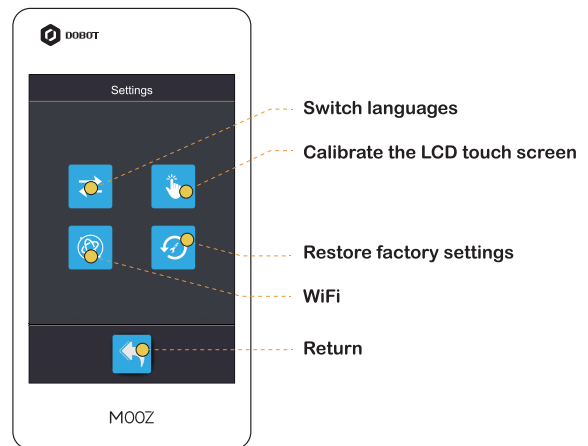
## 2.6 Zero Point Setting Interface



## 2.7 X/Y/Z Motion Control Interface

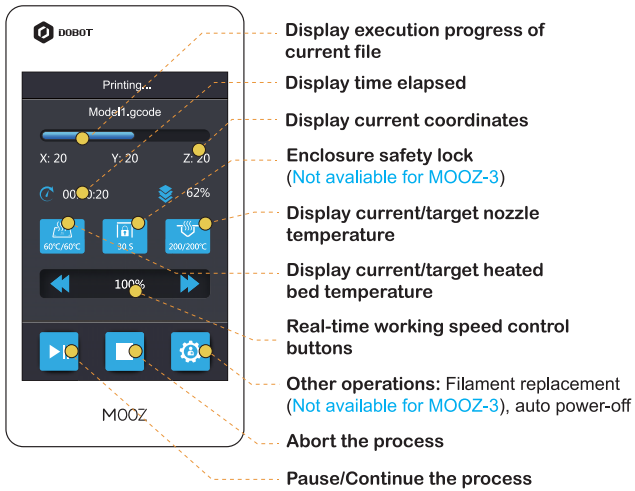


## 2.8 Other Settings Interface

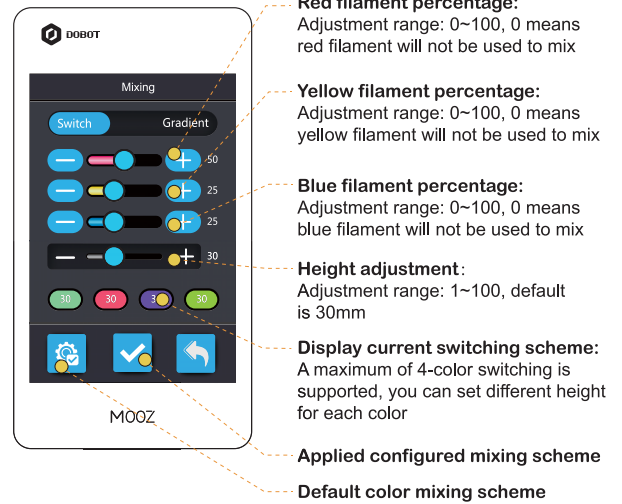




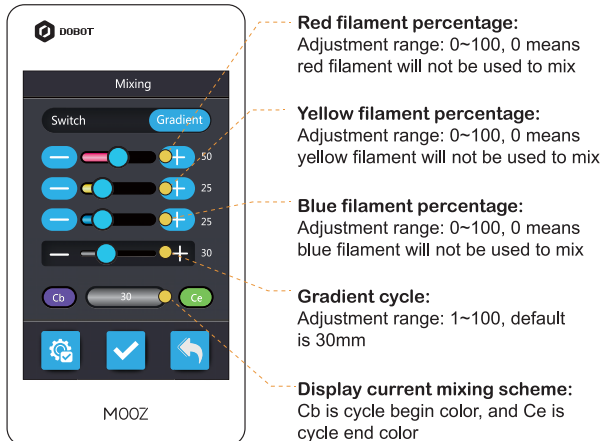
## 2.9 Working Process Control Interface



## 2.10 Switch Mixing Mode Configuration Interface



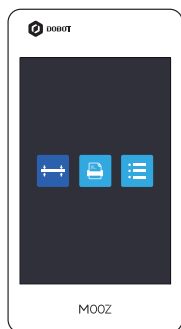
## 2.11 Gradient Mixing Mode Configuration Interface



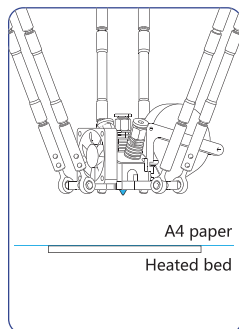
### 3.1 3-Point Leveling

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.

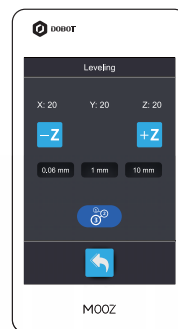
Operation steps:



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



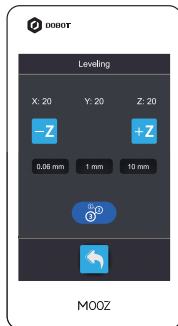
Place a piece of A4 paper on the heated bed



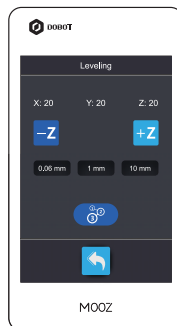
Press the "3-point leveling mode initiate/Point recording" button to enter 3-point leveling mode, and the nozzle will automatically go to a position right above Point ①



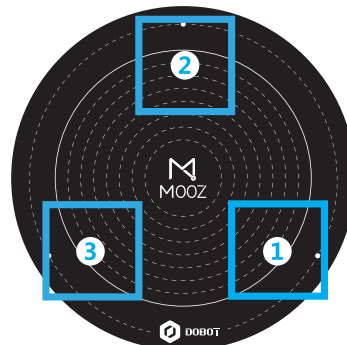
Press the "-Z" button to get the nozzle closer to the heated bed, and move the A4 paper back and forth at the same time. Stop just when the paper can slip with slight friction



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](http://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.

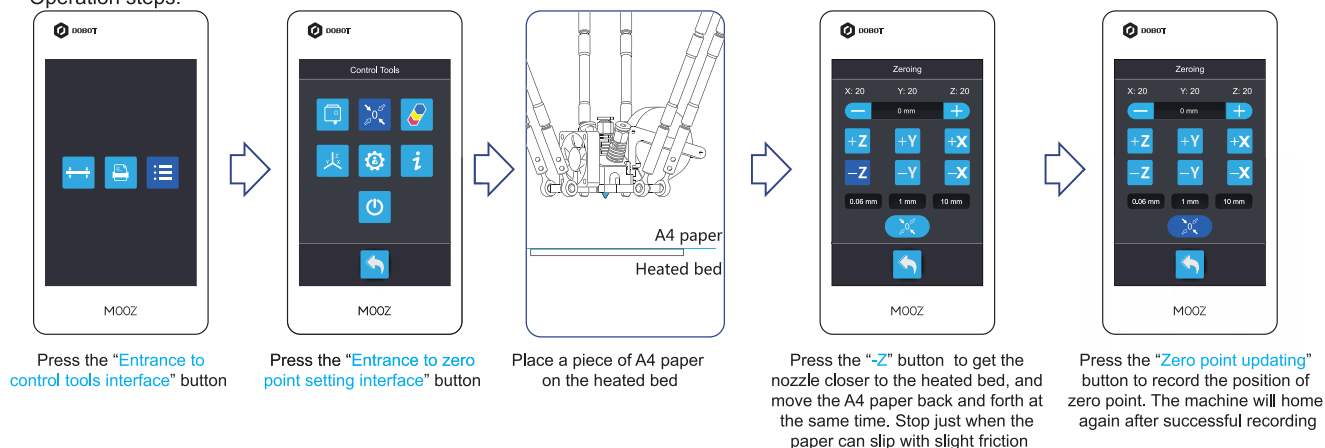
5. Friction status of the three points should be as uniform as possible. Pay attention when traveling the head downward, especially when the nozzle is getting too close to the bed. Even though the height detect protection will take effect and force the machine to go 0.06mm each press, the heated bed 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

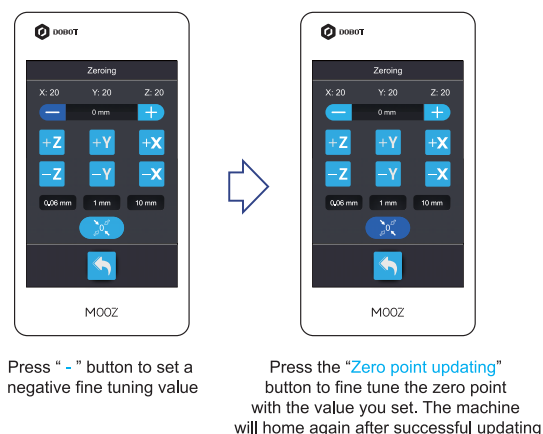
Zero point is the start point for the machine to print, which requires to be set only for the first use.

Operation steps:



### 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:

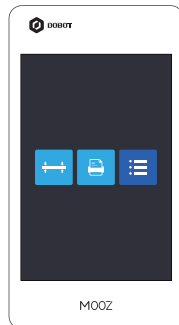


Note:

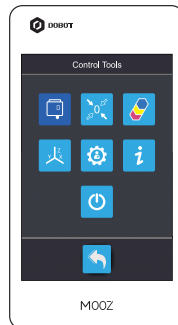
1. Only the zero of Z-axis need to be set and recorded. Zeros of X-axis and Y-axis are system default values and will not and cannot be changed.
2. Too high Z-axis zero position will lead to loose bonding at the bottom, causing the model falling off, and too low position will make it difficult to take 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

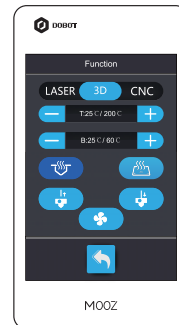
Operation steps:



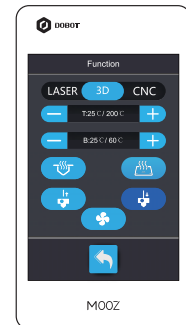
Press the "Entrance to control tools interface" button



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 " " 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.