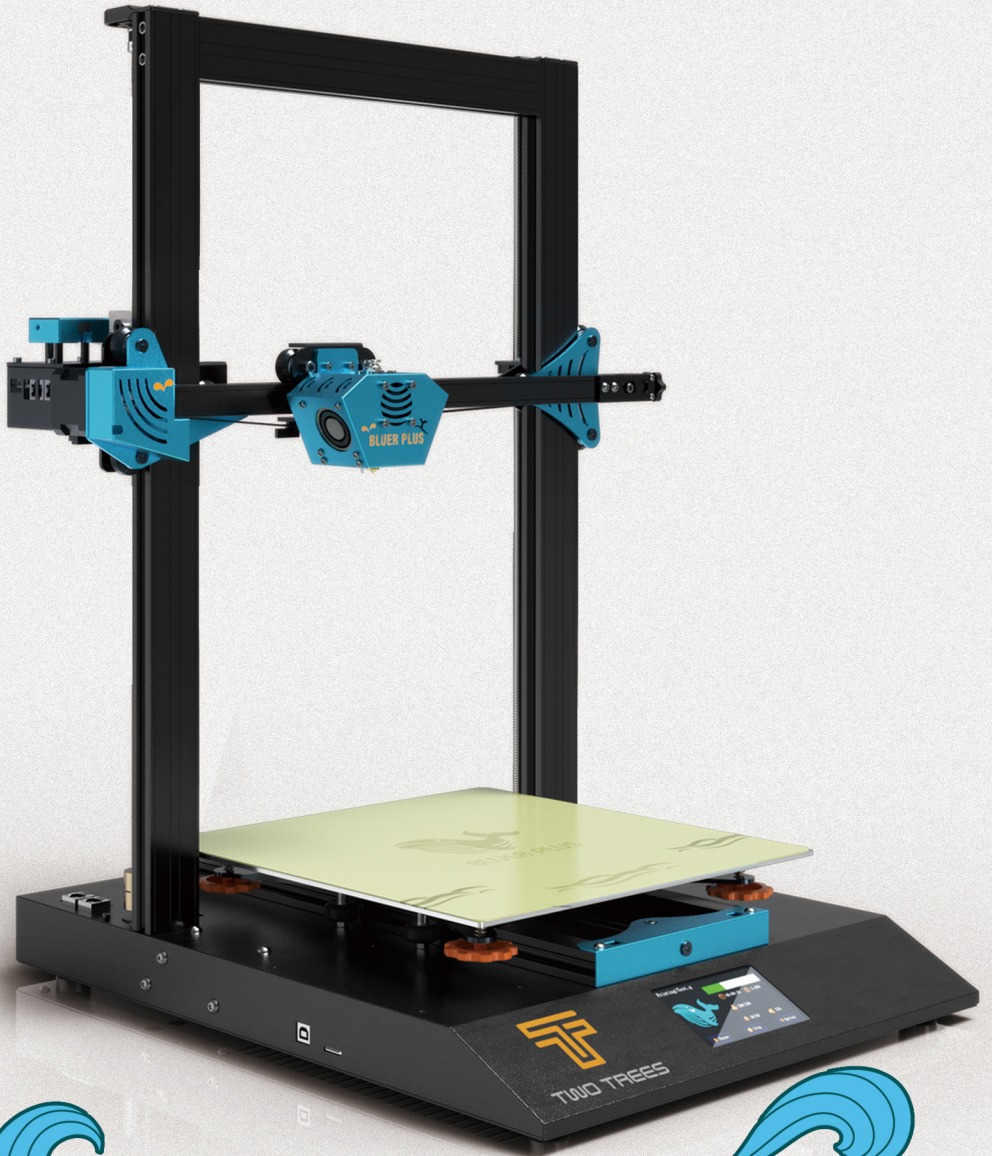# BLUER PLUS

PLEASE READ FIRST

Please read this manual thoroughly before assembling and turning on the printer!

DANGER AND WARNING

The 3D printer machine contains electric and heating parts. When the printer is working, please use it in a safe environment.

RISK OF ELECTRIC SHOCK

When the machine is powered on, never open the bottom of the machine. To open the bottom, turn off the power and unplug the power cord.

RISK OF BURNS

Before the hot end is completely cold, do not touch the hot end part, this part may take up to 10 minutes to cold.

FIRE HAZARD

When the machine is running, do not place flammable materials and liquids around the printer to maintain a good environment for the machine.

RISK OF PINCHING

When the printer is running, be careful not to put your fingers on moving parts, including belts, pulleys, gears, rollers or screws.

STATIC ELECTRICITY

Before touching the printer, especially the electronic equipment, make sure you are grounded. Static electricity can damage electronic components. To ground yourself, touch a grounded power source.
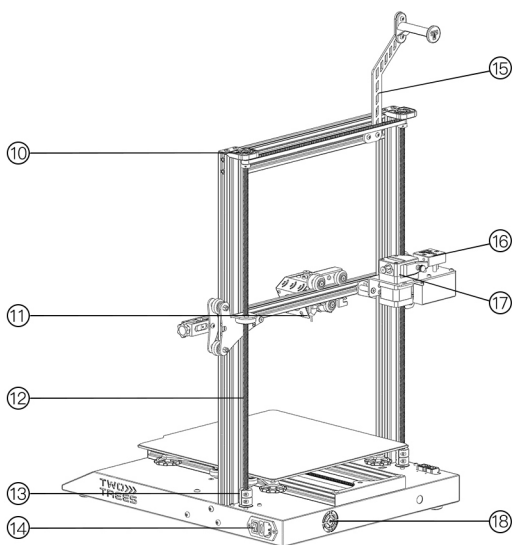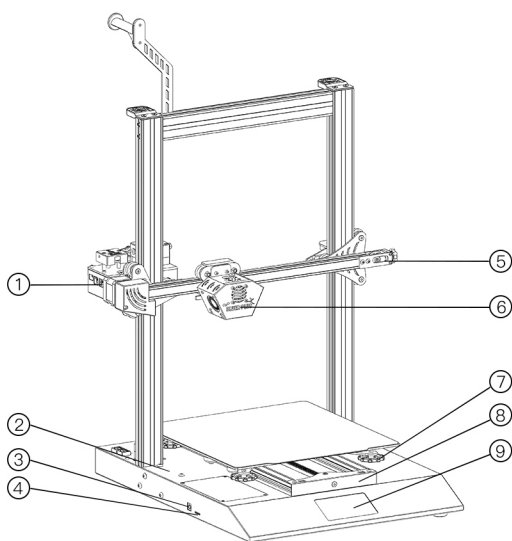
AGE WARNING

Minors and children are advised to be accompanied by adults to avoid danger.

CONTENTS

TO KNOW YOUR PRINTER

1. Interface
2. Main Boar Junction Box
3. USB Ports
4. SD Card Slot
5. X–Axis Stretch Straighten Tensioner
6. Extruder Head
7. Bed leveling Screw
8. Y–Axis Stretch Straighten Tensioner
9. 4.3" Color Touch Screen
10. Z–Axis Lead Screw Bearing Holder Block
11. 3D Touch
12. T8 Lead Screw
13. Couplings (Gold)
14. Power Switch
15. Filament Holder
16. BMG Extruder
17. Filament Sensor
18. Chassis Cooling Fan

PARTS LIST
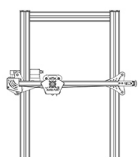
1 Gantry Frame x 1
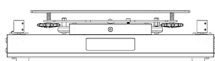
2 Base Frame x 1

3 Extruder Head x 1

4 Filament Holder x 1

5 Filament x 1

6 AC Power Cable x 1
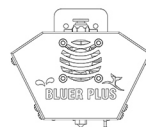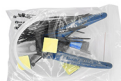
7 M5×50 Screw x 4

8 Tool Bag x 1

9 Connecting Line x 3

MACHINE PARAMETERS

BASIC PARAMETERS	
Model：BLUER PLUS	**Printing Speed**：20~200mm/s
Print Size：300*300*400mm	**Extruder Head Temperature** : ≥260℃
Machine Size：L405*W505*H646mm	**Heat Bed Temperature** : ≥100℃
Machine Material：Sheet Metal	**Printing Platform**：Heat Bed & Spring Steel PEI Membrane
Number Of Nozzle：1	**Support Filament**：PLA/ABS/PETG/Wood
Nozzl Size：0.4mm	**Filament Diameter** : 1.75mm
Printing Accuracy：±0.1–0.2mm	**Language** :Chinese、English、French、Spanish、German、Korean、Russian
Layer Thickness：0.1–0.4mm	**Software Format**：STL、OBJ、JPG
Printing Method：SD card Online Printing (PC)	**Print File Format**：Gcode
Display：4.3" Color Touch Screen	**Operating System**：Windows, MAC
Power Supply：220V/110V 360W	**Support Software**：Repetier–Host、Cura...
Machine Speed：10~300mm/s	

1. Install the gantry frame

Insert the gantry frame into the base and tighten with M5*50 Screws

M3*10 Screw

⚠ Note

M5*50 Screw
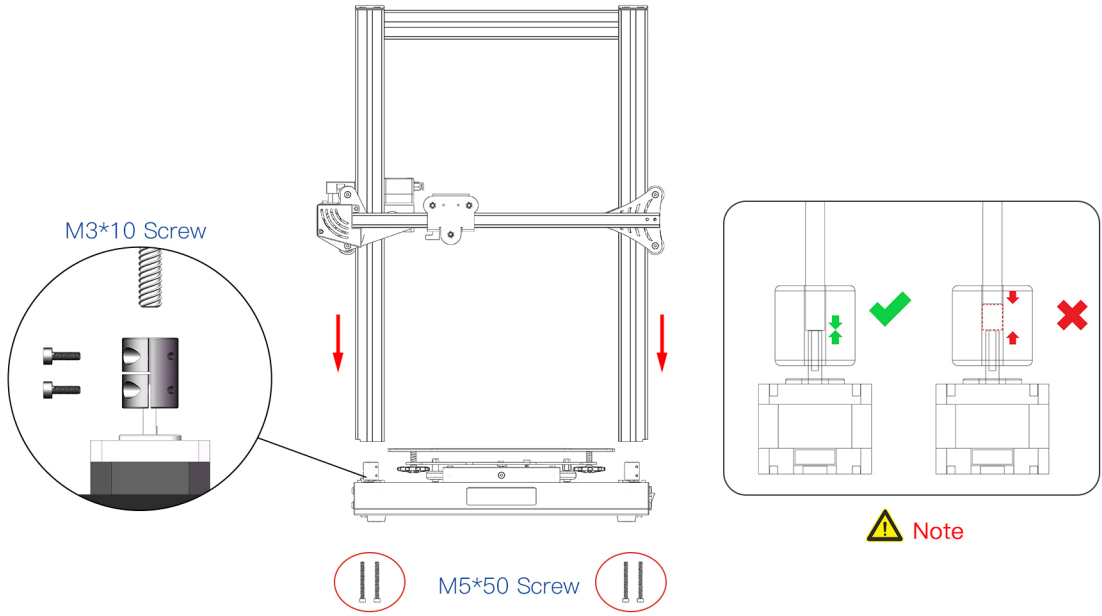
2. How to install the Extruder Head

a. Fix the Extruder Head Part with M3*8 Screws
b. Insert the Teflon tube into the hotend (Extruder Head) and extruder (BMG Extruder)

M3*8 Screw

Teflon tube

Hotend

Nozzle   90°
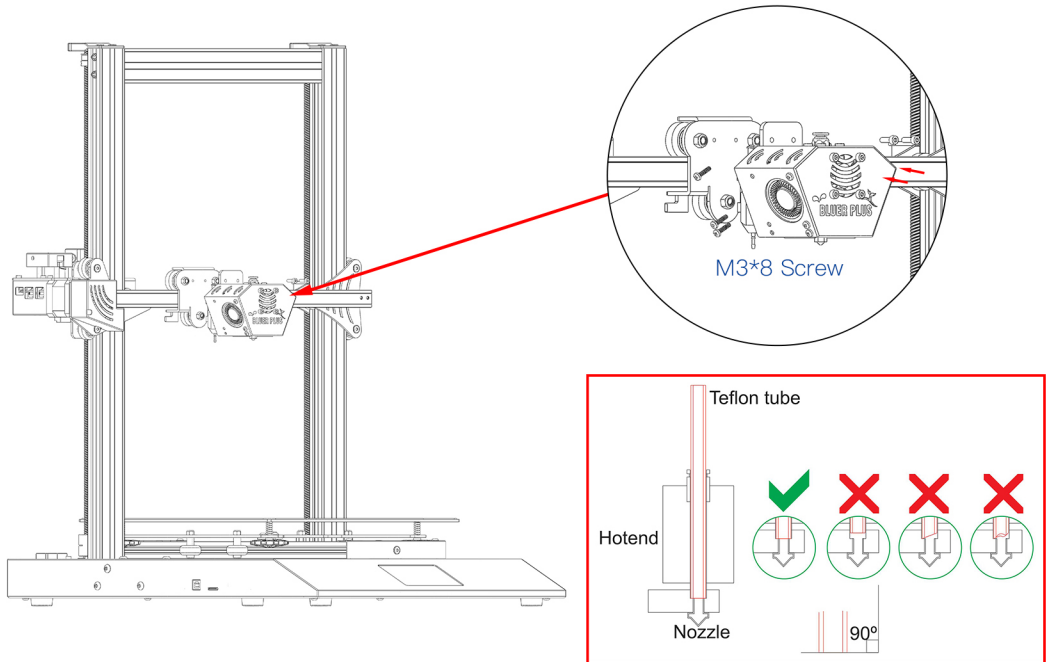
3. How to install the Filament Holder

Use M4*8 Screws and T-nuts to fix the filament holder to the top of the gantry.

Please turn clockwise
Screw drive nut and fix

M4*8 Screw

M4*8 Screw
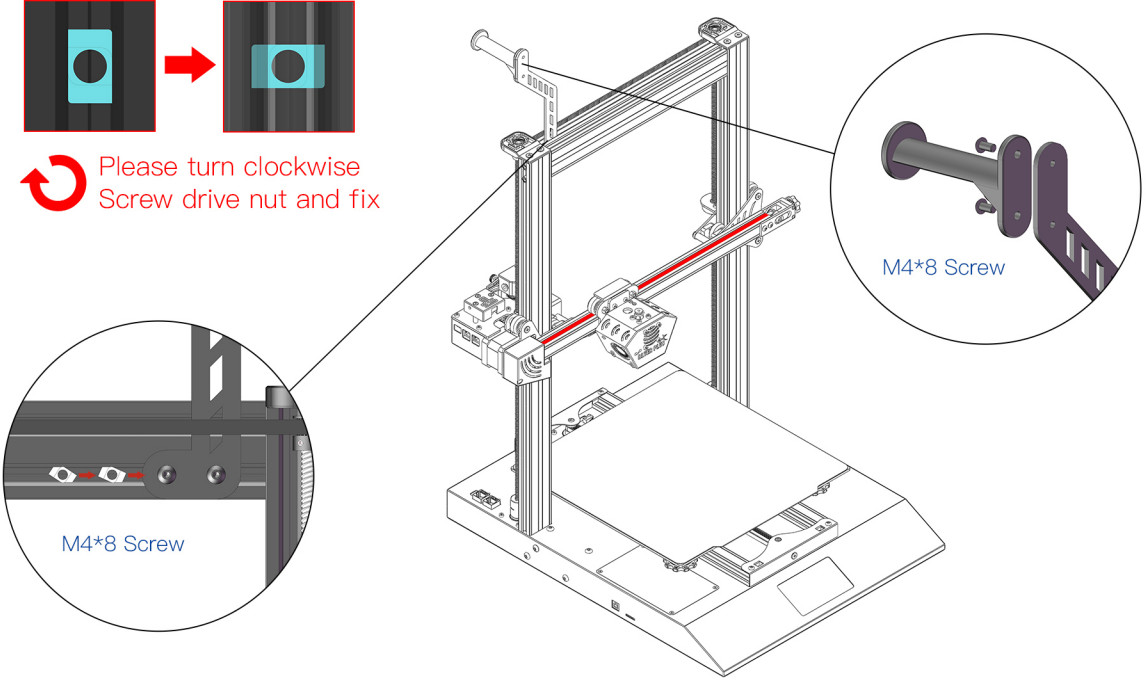
4. Interface connection

a. Connect the interface 1and 4, interface 2 and 5, interface 3 and 6
b. Check whether the leveling screws are tightened and the hot bed will shake left and right
After completing the above steps, all the installation steps are completed.
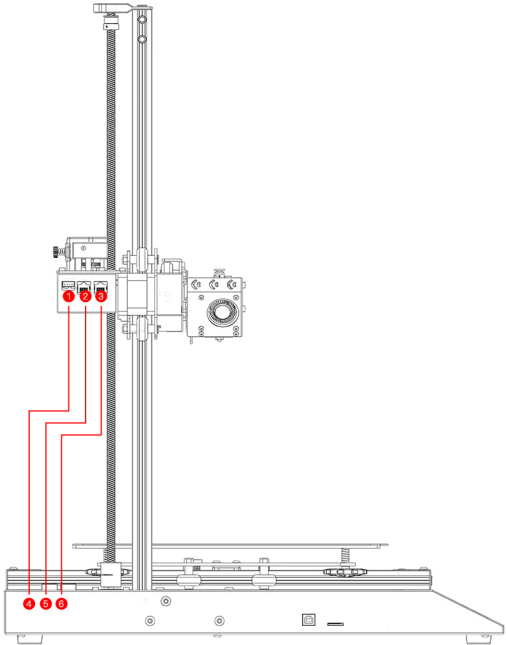
CHECKING AND ADJUST BEFORE USE

Slide the timing belt by hand to check whether it is smooth

Slide the bracket by hand and check whether the x−axis slides smoothly

Check if the port is connected before turn on the power

Slide the hot bed by hand to check whether the Y axis sliding is normal

Check the coupling and check whether the coupling and the screws are tight

Check whether the four Leveling spring screws are tight
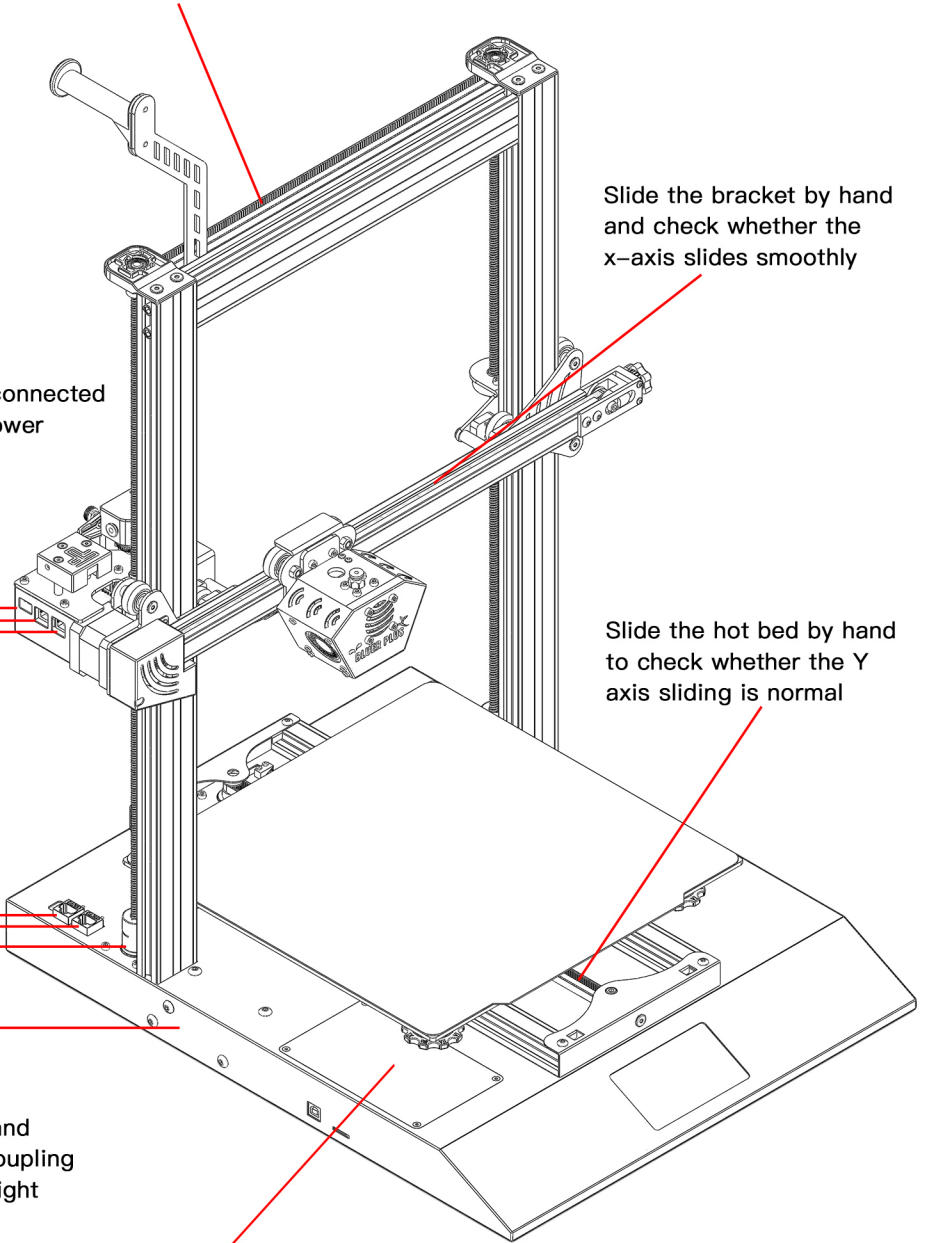
ROBIN NANO
TYPE OF ERROR AND SOLUTION

ERR1: The hot bed exceeds the maximum temperature limit,please check whether the thermal interface is shorted;

ERR2: The nozzle exceeds the maximum temperature limit,please check whether the thermal interface is shorted;

ERR3: The hot bed exceeds the minimum temperature limit,please check whether the thermal interface is disconnected;

ERR4: The nozzle exceeds the minimum temperature limit,please check whether the thermal interface is disconnected;

ERR5: The heating of the nozzle fails. If the nozzle does not reach the set temperature difference within the set time, an error will be reported; please check the configuration file settings or check whether the power supply is sufficient;

ERR6: The heating of the heating bed fails. If the heating bed reaches the set temperature difference within the set time, an error will be reported; please check the configurationfile settings or check whether the power supply is sufficient;

ERR7: Thermal runaway; when the temperature reaches the target temperature, the current temperature is lower than the target temperature value within the set time and exceeds the set temperature, an error will be reported; please check whether the thermal sensitivity is normal or whether the PID value is appropriate.
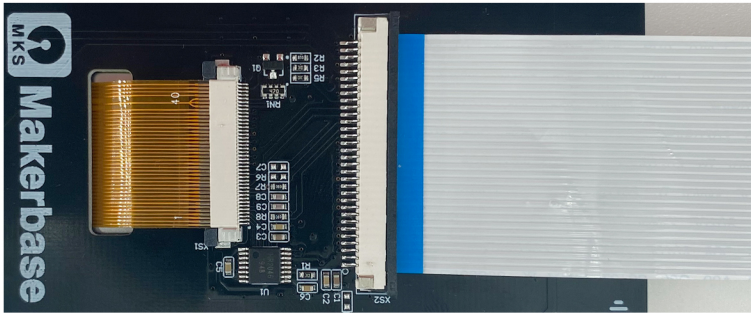
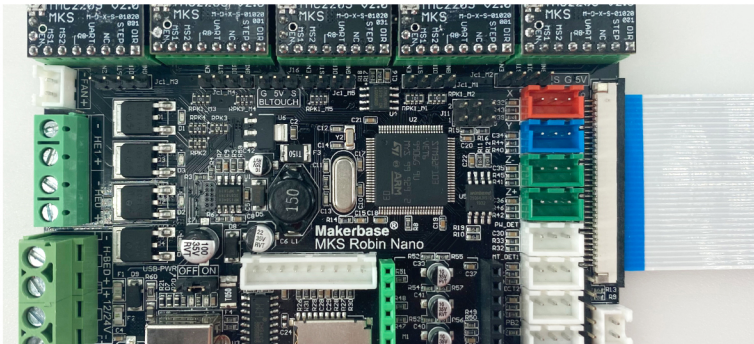# FAQ CATALOG

(Summary of Question&Answer)

1. Q&A of Screen

1.1 When the screen turns white : 1. pls check if the screen cable is loose and re-tighten.

1.2 (Place of screen connection)

(Place of motherboard connection)

1.3 The screen line is loose: There will be a vibration during the transportation of the machine.The vibration may cause the wire plug inside the machine to loosen and cause poor contact or no contact. At this time, the screen of the machine will turn white and not work properly.Pls check if the line have problems firstly.

1.4 Motherboard or screen problem: If there is no problem with the screen line,then there is a problem with the motherboard or the screen. If there are multiple machines, you can replace the "bad" with a normally displayed screen. if the good screen can be displayed normally, it is a problem with the original screen,if not, there is a problem with the mother-board. If you encounter this problem,youcan contact the after-sales customer service.

1.5 Pls make sure if there is any high frequency interference nearby? High frequency interference will cause the screen to be white.

2. Q&A of Motor

If the motor has a jitter fault, or there is no response after plugging in the power.

2.1 First check whether the motor wire and the motor terminal or the motherboard port are firmly connected. if there is looseness or poor contact,and the power can be tested afterre−plugging.

2.2 Exchange the positions of the motors . If there is no response after re−plugging, the problematic motor and the normal motor can be exchanged at the motherboard port for testing. After the test, the motor fault is judged. (A.Motor line Problem B. Drive problem C. Motor problem)

  A. Motor line problem: After confirming that the motor is ok, please exchange positions of the problematic line on the main board and the motor with the motor line that has no problem,and then test it. If there is no problem, then it is the problem of the motor line. If it still doesn't work, pls check the driver.

Note: Adjust the motor wiring on the main board. As shown in the figure, if it is Y−axis jitter,you can exchange the bad motor line and the good motor line (Y/XZ/E−axis motor line are ok) ports. At the same time, it is necessary to match the motor line to the corresponding motor. After power−on, test it by testing the function of the moving shaft.
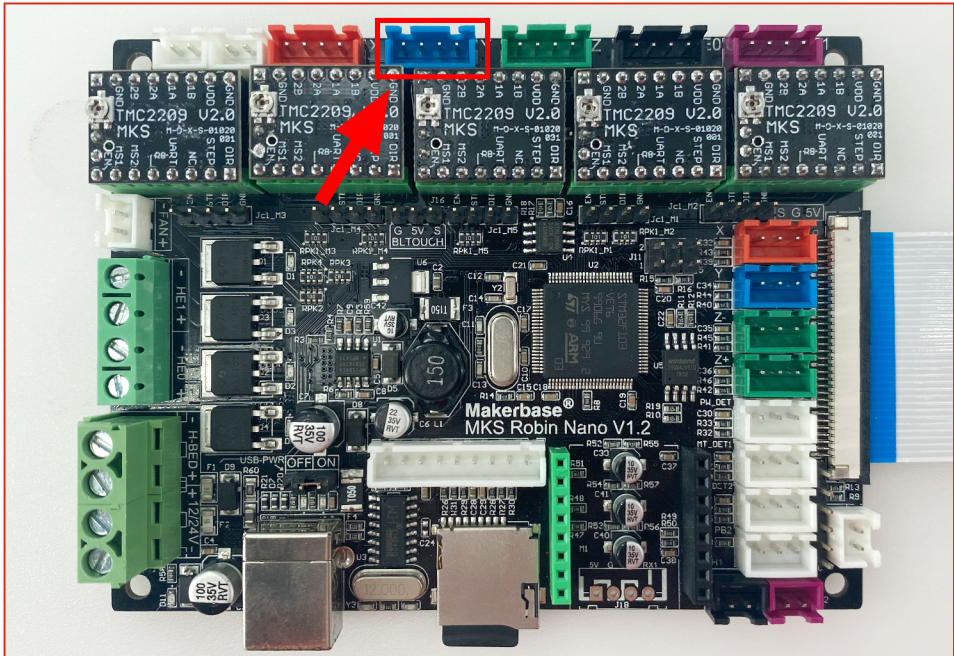
  B. Drive problem: Under the premise of confirming that the motor and the motor line are no problem, check the motor drive again. There may be a problem with the drive and a new drive needs to be replaced.

3. Q&A of SD Card

The card slot does not read the card and check if the SD card is broken

4.1 SD card problem: How to determine if there is any problem with the SD card,first check whether the card can be used normally on the computer. If the SD card can be used normally on the computer, first save the file to the computer and format the card at the same time.After the card is put on the machine and tested, if it is not recognized after the power-ontest, it proves that the SD card has a problem and needs to be replaced.

4.2 Check if the card slot is loose

Card slot problem: Long-term use of the card slot may cause the card holder to shake, resulting in poor card reading, and need to replace the new card holder to solve the problem. Sometimes the card may be inserted into the card for a moment and then suddenly no response. You can quickly plug in and out several times and then try to plug in after turning off the power, then take some alcohol to clean it on the card, then insert the card into the card slot, and then insert it several times to see if it can be used normally after cleaning.
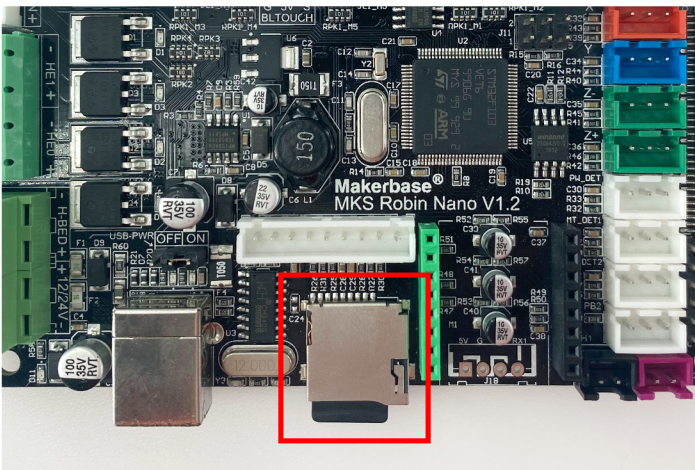

SD Card

4.3 SD card chip oxidation, you can try to apply a little alcohol on the SD card,and then insert the card into the card slot, insert a few more times, see if it can be used normally after cleaning.

4. Q&A of Extruder

3.1 The motor of the extruder does not work. It may be damaged by the motor or the motor is poorly connected. It is necessary to check the fault and then go on the power-on test.

3.2 It is difficult to extrude the material after heating, and the nozzle is clogged and the discharge is abnormal. It is necessary to replace the nozzle or use the cleaning needle to clean the residual material of the nozzle to ensure the smooth flow of the nozzle.

3.3 The nozzle temperature is abnormally heated, which may be caused by damage to the thermistor of the hot bed. The normal display temperature is about plus or minus 2 degrees of the set temperature. You can check whether the thermistor on the heating block is off or the connection port of the main board is not well connected.

THERMAL

THERMAL
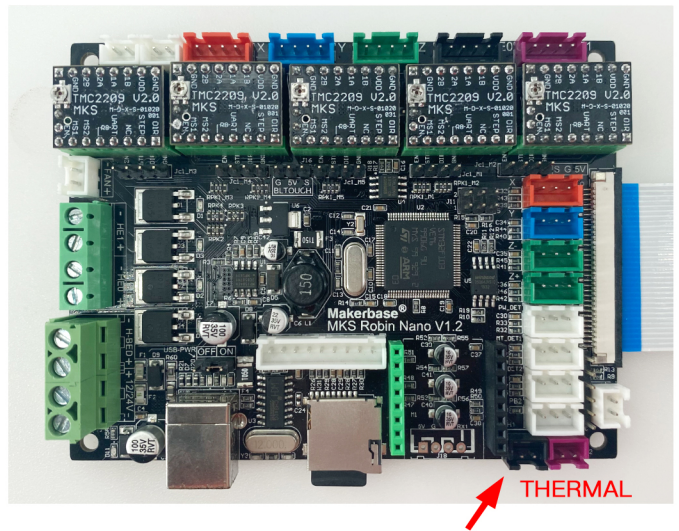
3.4 Q&A of Motherboard

If the new heating kit is replaced and it does not heat properly, it may be a motherboard problem. First check the heating tube line. If it is not possible, you can test the output voltage of the two ports of the motherboard heating tube. Normally, it is 24v. If there is no output voltage, it may be a problem with the motherboard. At this time, you need to repair the motherboard to solve the problem.

5. Q&A of Heat Bed

5.1 The temperature of the hot bed is abnormal, which may be caused by the damage of the thermistor of the hot bed. The normal display temperature is about plus or minus 2 degrees of the set temperature. You can check whether the thermistor on the hot bed is off or the connection port of the main board is not in good contact. as the picture shows.
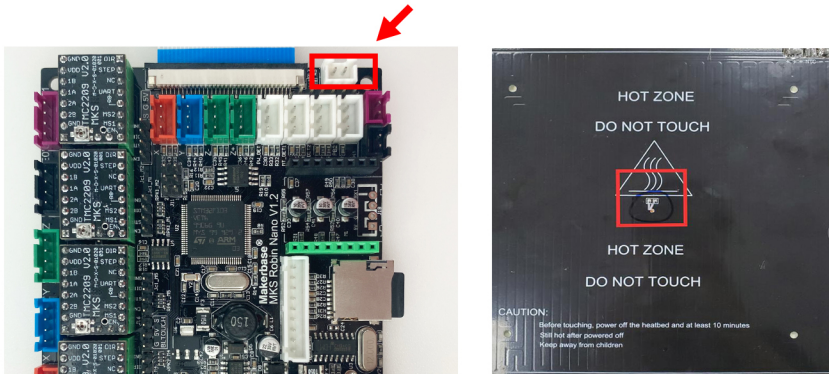

6. Q&A of Printing

6.1 Misprint

A. The drive heat sink is not attached – paste the heat sink to the drive

B. Motor drive overheating – keep the drive's heat dissipation good

C. Motor drive current is too large – readjust the appropriate drive current

D. Motor synchronous wheel is not fixed – retighten the synchronous wheel

E. Optical axis Slider Screw stuck – Manually adjust to a smooth position afteroiling

F. X Y–axis belt is too slack – re–adjust the belt tension

6.2 X Y Z axis direction cannot be reset

A. Limit switch failure – replace the limit switch

B. Cannot return to zero after printing is complete – wrong axis direction

C. Home and motion speed is too slow – motor drive pulse setting is incorrect,

6.3 Print file is not recognized

A. The SD file cannot be recognized after the SD card is inserted – the file code is incorrect and the code needs to be renamed.

B. Top printing after half of the print––Slice problem or poor SD card contact

6.4 Printer abnormal sound

A. Fan problem – there may be abnormal noise caused by the fan blade touching the outer casing

B. Structural problems – abnormal operation of the T8 screw and slider causes the sound to be too loud, re–oiling and correcting the direction.

C. Belt problem – abnormal sound caused by belt shedding and misalignment.

MOTHERBOARD INSTALLATION METHOD

1. Connect the hotbed power cord to the "hotbed connector".
2. Connect the hot bed thermistor wire to Hot Bed Heat.
3. Connect the X.Y–Endstop switch cable to the "X.Y limit switch".
4. Connect the Z–Endstop switch cable to the "Z Endstop connector". (Or use automatic induction switch)
5. Connect the X.Y.E motor cable to the "X.Y.E motor".
6. Connect the radiator cooling fan wire to "12V / 24V rated output".
7. Connect the print model cooling fan wires to the Fan Connector.
8. Connect the hot end heating rod to the "Extrusion Head 1 Port".
9. Connect the hot–end thermistor to "Extrusion head 1".
10. Connect the filament sensor to "Break Detection 1".
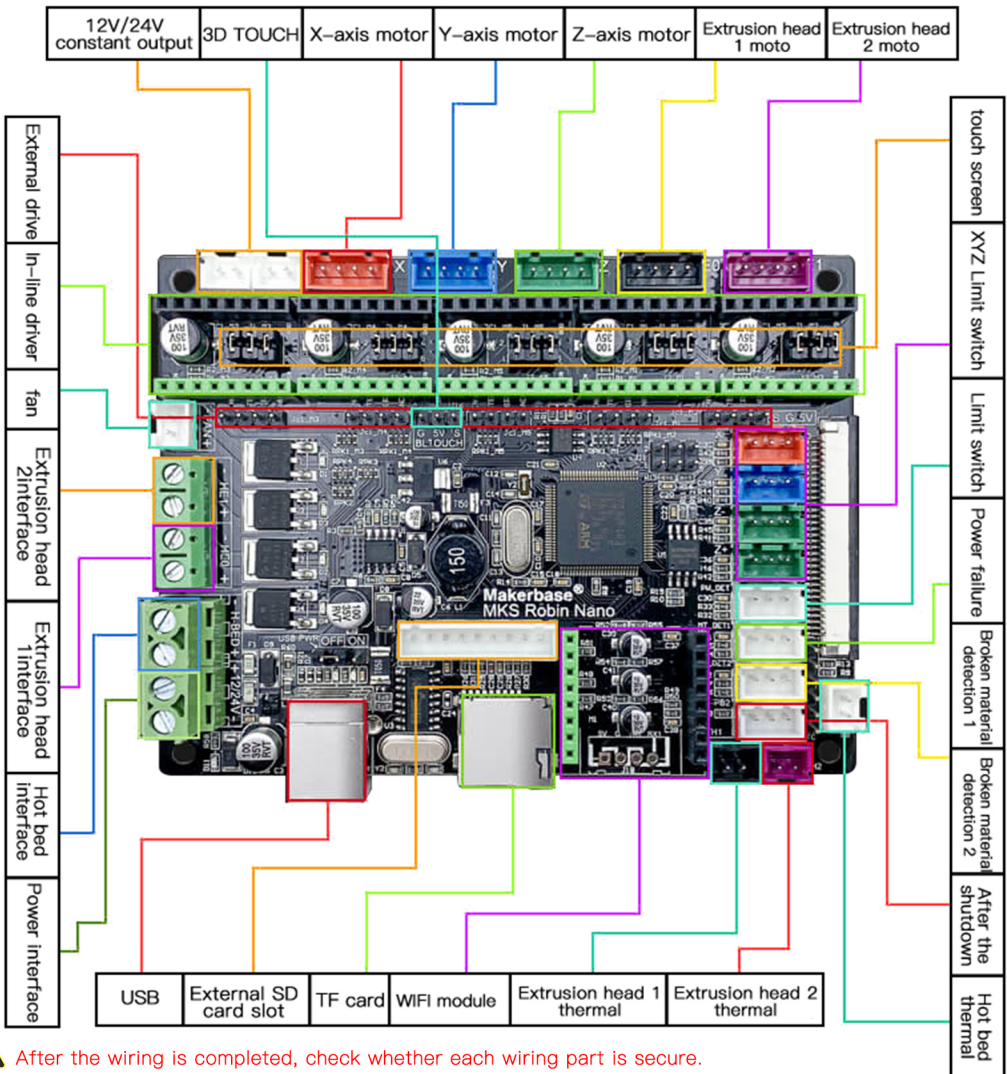
⚠ After the wiring is completed, check whether each wiring part is secure.

DRIVER DESCRIPTION

Drive current algorithm and adjustment

1. Vref measures Gnd and the intermediate voltage of the potentiometer. Turn the potentiometer clockwise to decrease the current and counterclockwise to increase it.
2. Be sure not to connect the motor when measuring the voltage, otherwise it will burn the drive easily
3. Turn on the power when measuring the voltage, do not just connect the USB power supply
4. Please pay special attention to the direction, do not insert the reverse

I=Vref default current I = 1.25A
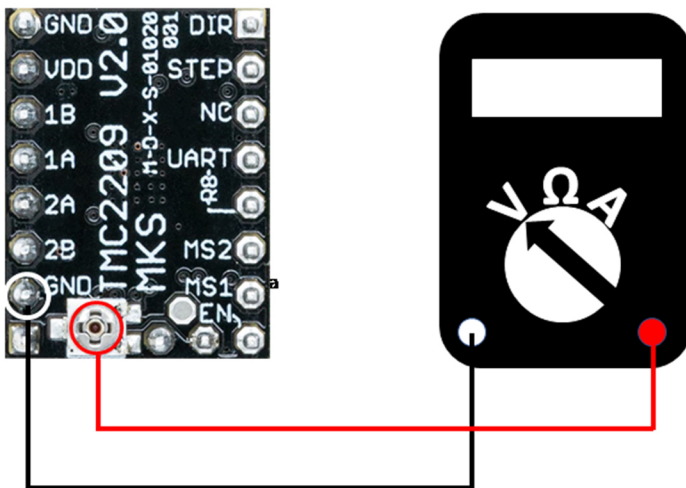
Default current: 1.25a

Maximum current: 2.5a

Logic voltage: 3.5v/5v

Input voltage: 5.5v/28v

Breakdown: up to 1/256

Mode: dir/step, uart

AFTER–SALES SERVICE

The shelf life is 12 months from the date of purchase.

1. Missing / damaged / defective parts

a. Within 7 days after the delivery date, we will replace any parts for
free, including shipping costs.

b. 7 days after the delivery date, we will replace any parts for free. But
customers need to pay the freight.

2. Customer damaged parts: The customer should pay for the parts cost
and transportation costs.

3. The courier company lost, lost, damaged and defective parts.

a. Claims for lost or damaged goods must be reported to the carrier
within the carrier 's claim window,The customer needs to notify us
within 7 days after the delivery date.

b. For any parts lost or damaged during transportation, the customer
should take photos or videos and Send us the information.

c. Once the carrier dispute is resolved, please provide us with all
communications with the carrier. The customer is responsible
Let us keep abreast of all correspondence with the carrier.

d. For missing parts, the customer should fill in the service order.

e. For damaged parts, the customer should fill in the service ticket and
send the photo or video to us.

f. If the component is an LCD panel, power supply or motherboard, the
customer should ship the component back to us and we will Send new
parts.

LETTER FROM TWOTREES

Dear Customers:

Thank you for choosing the Bluer Plus 3D printer.

These operating instructions will guide you through the installation and first use of the Printer.

If you have any problems with the assembly, please contact us via

Facebook: https://www.facebook.com/groups/Bluer3DPrinter/

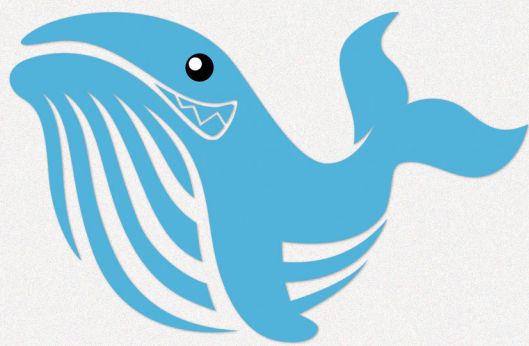Website: www.twotrees3dprinter.com

Servicemail: service@twotrees3dprinter.com

Our customer service team will contact you within 48 hours.

Sincerely yours

Two Trees team

BLUER PLUS