

# Geeetech A30 3D Printer

## —Building Instruction—



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## **Safety Instructions**

Building the printer will require a certain amount of physical dexterity, common sense and a thorough understanding of what you are doing. We have provided this detailed instruction to help you assemble it easily.

However, ultimately we cannot be responsible for your health and safety while you are building or operating the printer. Therefore, be sure you are confident in what you are doing prior to commencing with building or buying. Read the entire manual to enable you to make an informed decision.

Building and operating involves electricity and all necessary precautions should be taken and adhered to. Check the power input of the power supply unit. You can choose either 110V or 220V according to the power regulation in your country.

High temperatures are involved in 3D Printing. The extrusion nozzle of the hot end can run at about 210 °C, the heated bed runs at 110 °C and the molten plastic extruded will initially be at around 200 °C. Therefore, special care and attention should be taken when you are handling these parts of the printer during operation.

We wouldn't suggest you to leave your printer running unattended, or at least until you are confident to do so. We are not responsible for any loss, damage, threat, hurt or other negligent result caused by either building or using the printer.

## Preparation

1. Unpack the kit and check if all parts are in the box. Please check the condition of each part since there might be some damage during shipping. To help you with this, there is BOM in the box and each bag is labeled with its part number.

2. Contact our customer service immediately by email or through the website if you find any missing or damaged parts. And at the bottom of the BOM, there is a signature of the checker. Please take a picture of it and attach the picture in your mail.

**3. Before your assembly, please read through each chapter of this assembly manual to gain an overall idea of what is involved and how long it might take to complete the assembly job.**

4. As a preparation job, you can put all the part in order to save your time, especially the screws and nuts. Do not mix them up.

5. Ensure you have the necessary skills to carry out the assembly job or entrust someone who does.

6. Work on a big firm table or bench in a clean dry well-lit area.

7. Since this kit contains tiny parts, please keep them away from kids under 3.

8. Ask for help if you run into any problems --- our contact details are on the website and we will always do our best to solve any problems encountered.

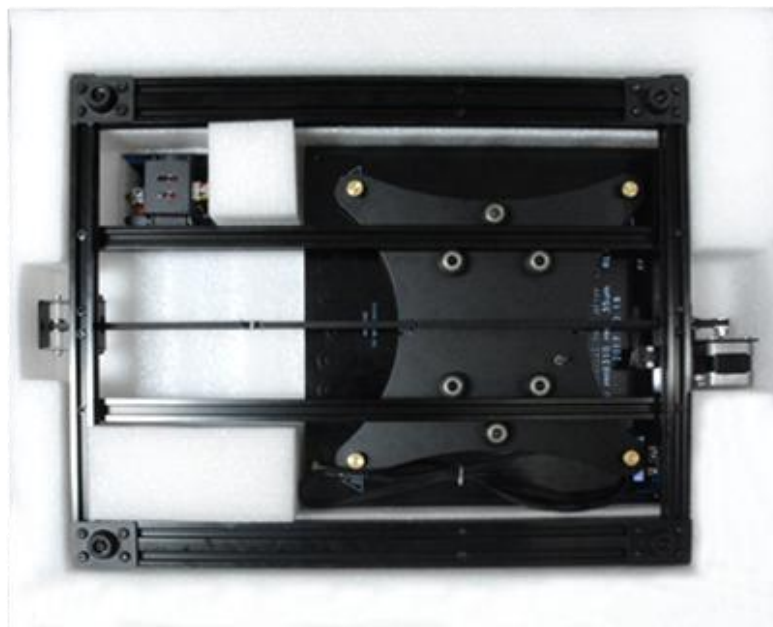
**9. For different batches, some parts of the kits may have changed. If the parts listed in this instruction and what you received is slightly different, please don't worry. These changes will not affect your installation and usage.**

10. Please watch the building instruction video at [https://youtu.be/hM\\_ZYANWnGw](https://youtu.be/hM_ZYANWnGw)

## **1. Unfold the Box and Check the Package**

Step1. Unfold the package and take all the parts out to check the condition of the items.

As you can see, all the parts are packed very carefully.



Step 2. Check the materials.

**Materials in the Foam box**

Bottom frame parts, Vertical frame parts, Control box

### **Materials in the Tool Box**

4\* M5x20mm hex screws, 4 spring washers, Filament spool, 2\* M3x6mm screws, Power cable, Blue A-B USB cord, 2\* Z axis stator kits, 3D touch stator, Filament detector kit, Ties, Allen key, Pin, Starter filament, Spare screw package, TF card

#### **Tips:**

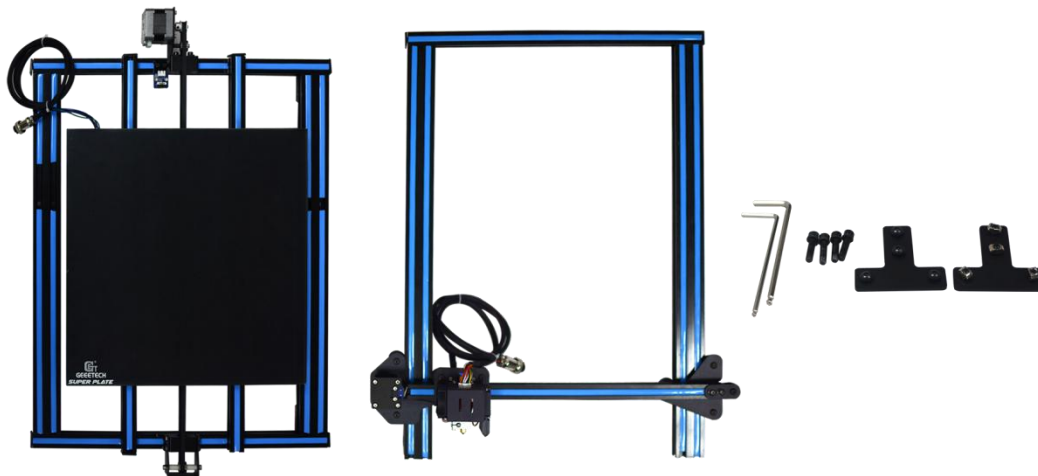
1. Before assembly, you are advised to put all the parts, especially the screws and nuts in order, which would save you much time in looking for the required parts.

2. The part ID is corresponding to the number labeled on the bag of each part. Some parts may not have labels and you can refer to the pictures on the package list.

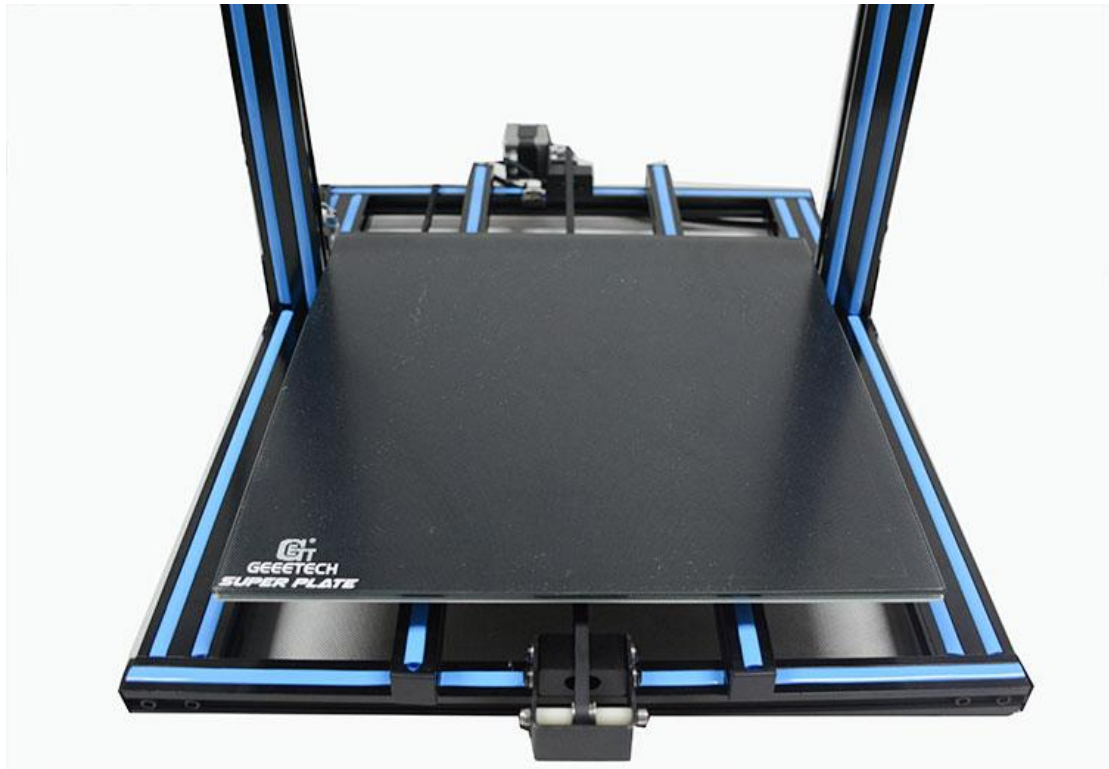
## **2. Assembly**

Step 1. Prepare the following parts for assembling:

Bottom frame parts, vertical frame parts, 4\* M5x20mm hex screws and 4 spring washers, 2\*Z axis stators



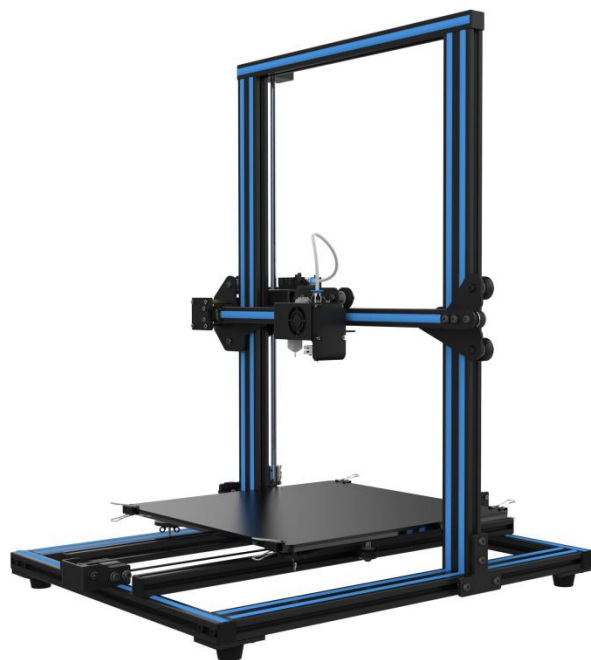
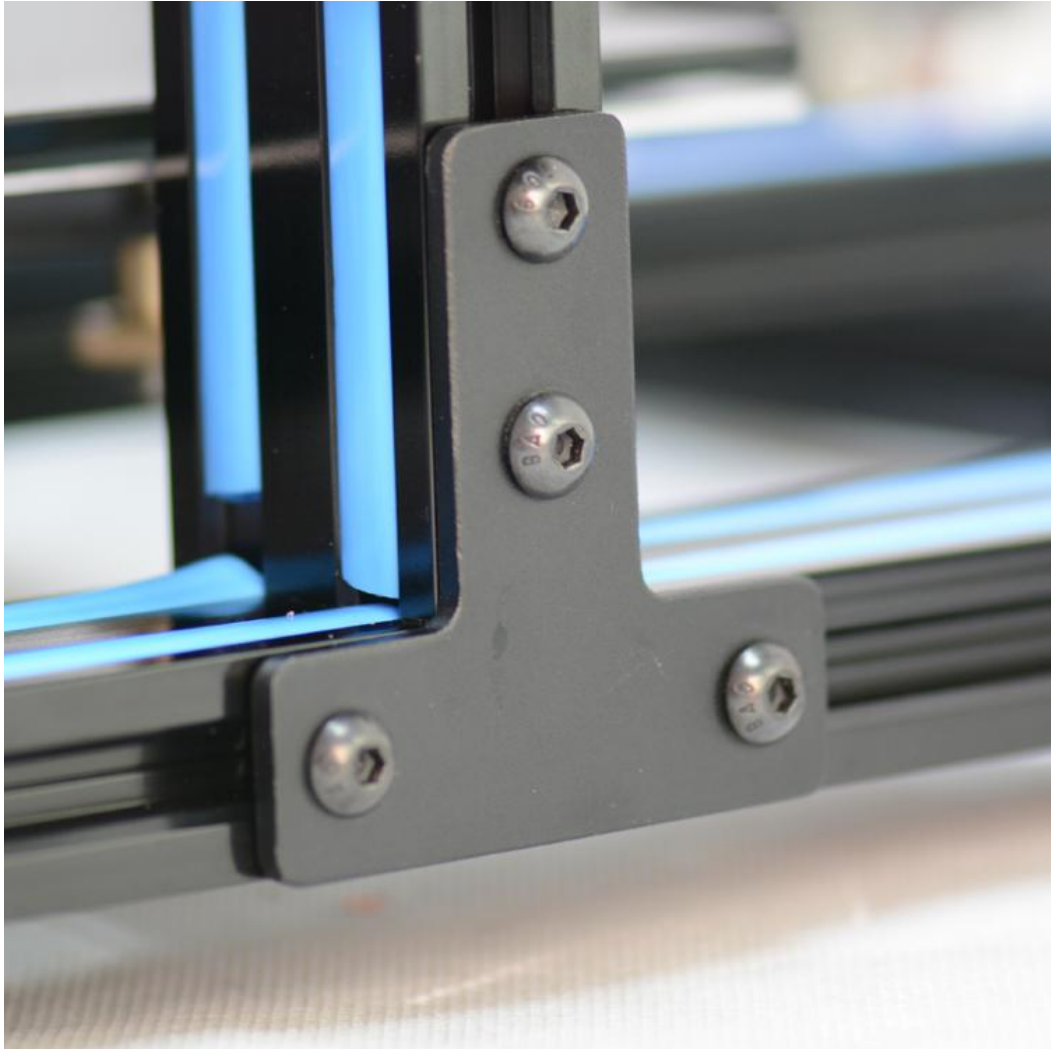
Step 2. Place the vertical frame parts on the bottom frame one (Note: Just keep the ends of the blue strips on the two frames meet each other.)



Step 3. Fix the two Z axis stators on two sides of the vertical frame respectively.

Fasten the screws on the stators in a relatively loose way.

**Note:** Pay attention to the direction of the nuts on the Z axis stator.

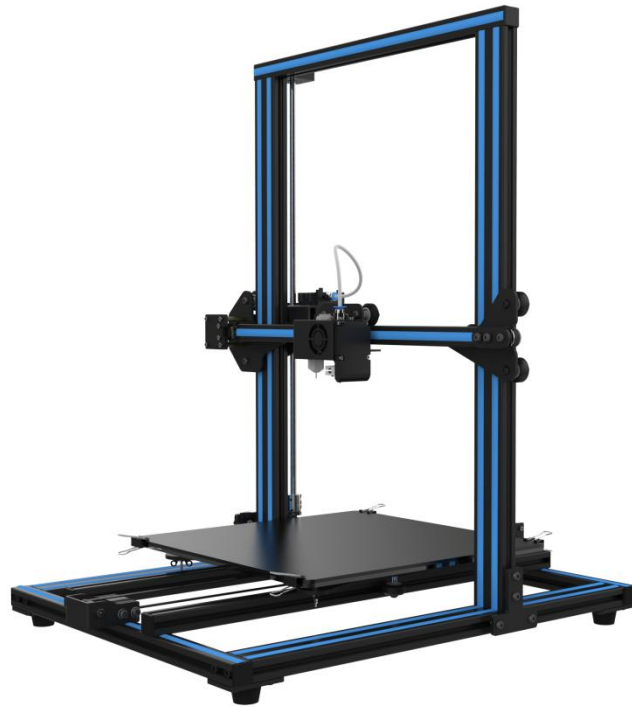




Step 4. Use 4\* M5x20mm hex screws and 4 spring washers to put the bottom frame parts and the vertical frame parts together.

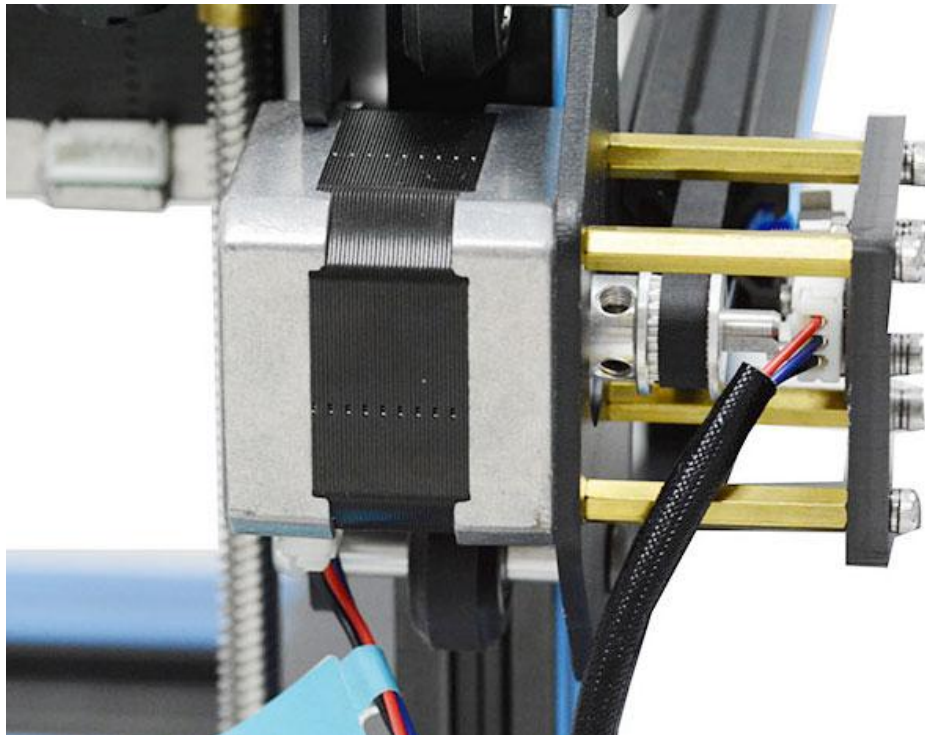


Step 5. Tighten the screws on the Z axis stators.

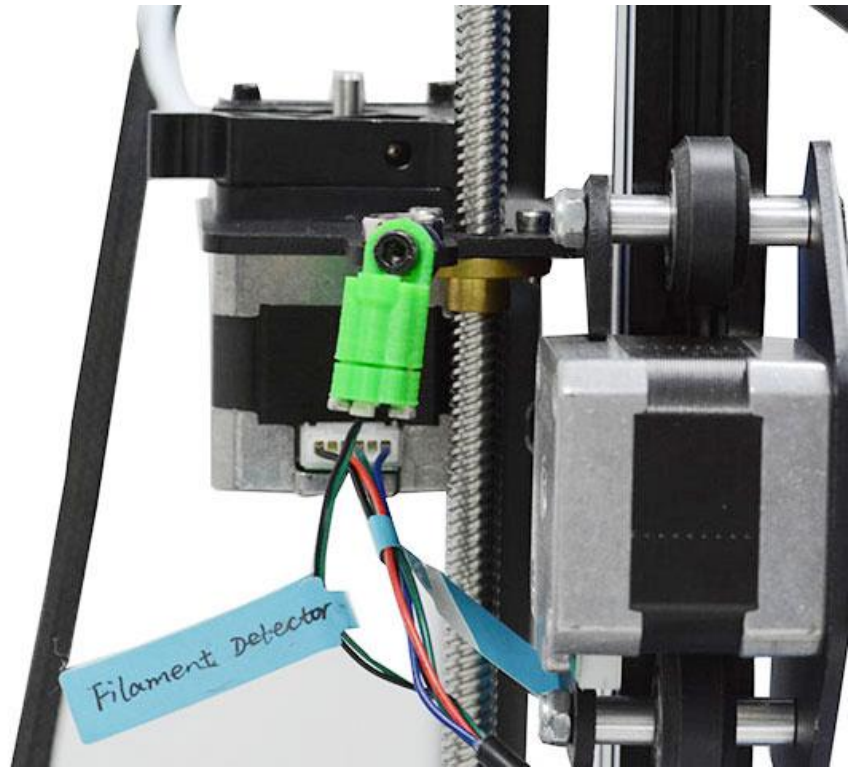


### 3. Wiring

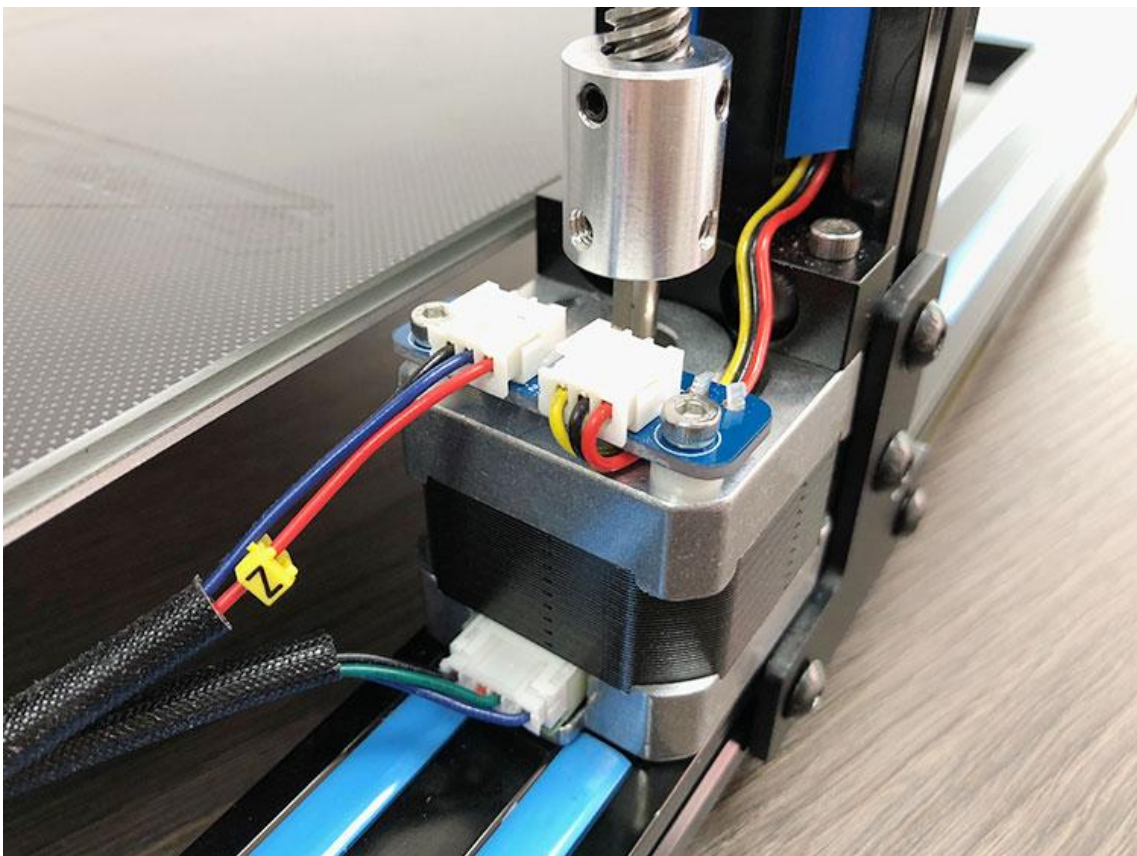
Step1. Connect the two wires for X axis stepper motor and endstop.



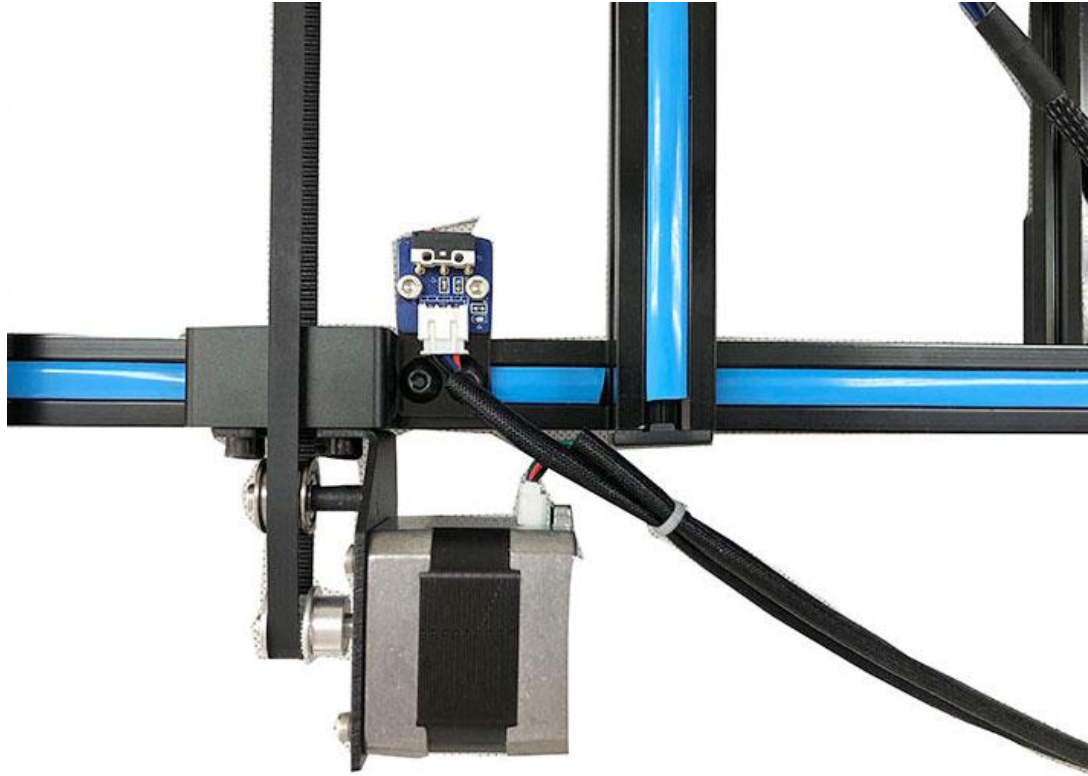
Step 2. Connect the two wires for the extruder and filament detector.



Step 3. Connect the two wires for Z axis stepper motor and endstop (the left port).



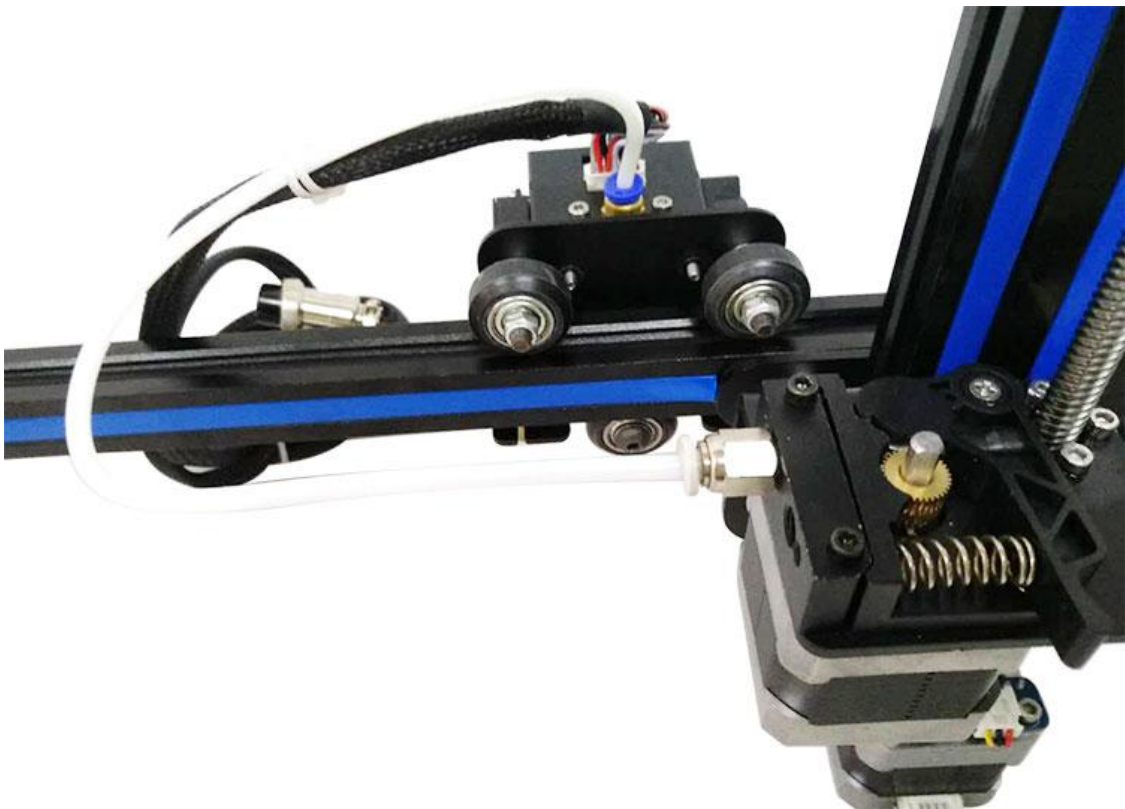
Step 4. Connect the two wires for Y axis stepper motor and endstop.



Step 5. Connect the two wires for the printing head and heatbed to the control box.



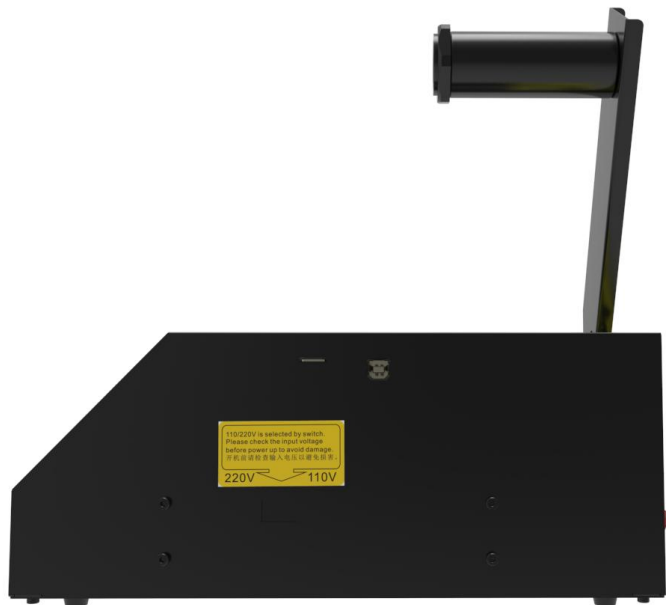
Step 6. Fasten the PTFE pipe (for loading filament).



Though the other end of the PTFE pipe is pre-assembled, please make sure that it reaches the bottom of the printing head.



Step 7. Attach the filament holder kit to the control box with 2 \* M3\*6mm.



Step 8. Choose the proper voltage (220V / 110V) for A30 by adjusting the switch, according to the power supply standard in your own country.





## 4. Warm Tips

Before your maiden print, it is vital that the printer is correctly calibrated. Skipping or rushing this step will result in frustration and failed prints later. “More preparation may quicken the speed in doing work.” Thus it is important to take the time to make sure the machine is correctly set up.

Every machine may have its own calibration procedures and please make reference to the user manual for auto-leveling A30 hotbed. Instead here is a list of key points that should be kept in mind.

- Frame is stable and correctly aligned.
- Rods are correctly aligned
- Belts are taut.
- Driving wheel turns smoothly.
- Hotbed is level in relation to the path of the extruder.
- Filament rolls freely from the spool, without causing too much tension on the extruder.
- The current for stepper motors is set to the correct level.
- Wires are correctly connected.
- Couplings and pulleys are fixed tightly.



Firmware settings are correct, including: axis movement speeds and acceleration; temperature control; end-stops; motor directions.

The point regarding the extruder step rate is vital. Too much extrusion will result in blobs and other imperfections in the print, while too little extrusion will result in gaps and poor inter-layer adhesion.

For how to set up the printer, please refer to the user manual.