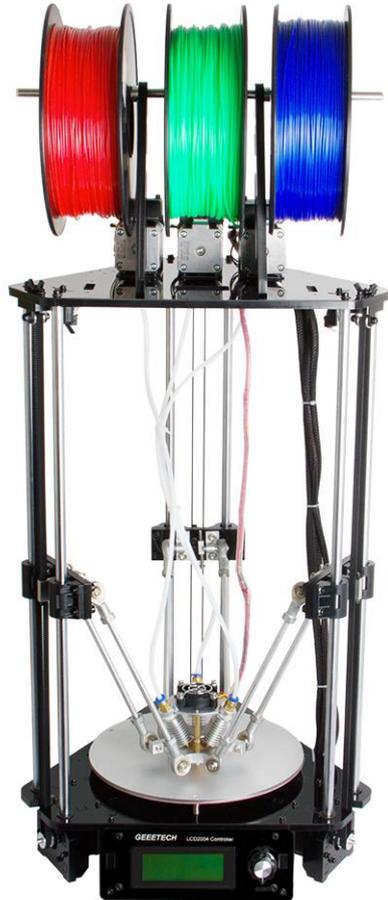


# Geetech Rostock 301

## Building Instruction



(Document version: 07-7, 2016)

# CONTENT

<b>Preparation</b> .....	2
1 Base Assembly .....	3
1.1 Motor holder assembly .....	3
1.2 Connect motor ends to base plate .....	5
1.3 Mount the LCD panel .....	8
1.4 Mount the fan .....	13
1.5 Mount the control board.....	15
1.6 Mount the print bed.....	17
2 Top Plate Assembly.....	21
2.1 Drive wheel mount.....	21
2.2 Endstop mount .....	22
3 Assembling the carriage.....	28
4. Mount the hotend. ....	33
4.2Mount the rod-end bearing holder and diagonal rod .....	34
5 Mount the smooth rods .....	37
6 Mount the carriage and the top plate.....	40
7 Mount the Belt .....	44
7.1 Assemble the drive wheel .....	44
7.2 Add the belt .....	48
8 Connect the Diagonal Rod to the carriage .....	51
9 Mount the extruder.....	53
10 Mount the filament holder .....	59
11 Connect the Bowden tubes.....	62
12 Wiring .....	64
1 Connect wires for motors.....	65
2 Connect X/Y/Z motor(s).....	66
3Connect heat-bed wires .....	67
4 Connect wires for endstop .....	67
6 Connect wires for Fan.....	68
7. Connect wires for LCD panel .....	69
8 Connect wires for power input.....	69
13 Assembly of PSU protective case .....	70
14 Tidy out the wires .....	75
15 Tips.....	80

## **Safety Instructions**

Building your printer will require a certain amount of physical dexterity, common sense and a complete understanding of what you are doing. These detailed instructions have been provided to help you easily assemble your 3D printer.

However, we cannot be responsible for your health and safety whilst building or operating the printer, with that in mind be sure that you are confident with what you are doing prior to buying and commencing to build your 3D printer. Before you begin, read this entire manual so you are aware of all the individual steps and to ensure that you are confident that you can complete this task before you commence to build your 3D printer.

Building and operating your 3D printer involves working with electrically powered equipment, so all necessary precautions should be taken and adhered to. This printer operates on 12Volts which is supplied by a certified power supply, so you shouldn't ever with voltages exceeding 12V but bear in mind there can still be high currents involved and even at 12V extreme causation and safety awareness should be taken at all times.

3D printing involves high temperatures. The Extrusion nozzle of the hot end can run about 230 °C, the heated bed runs 110 °C and the molten plastic extruded will initially be at around 200 °C, so special care and attention should be made when handling these parts of the printer during operation.

It is not recommended that you leave your printer running unattended, or at least until you are confident to do so. We cannot be held responsible for any loss, damage, threat, hurt or other negligent result from either building or using the printer.

## **Preparation**

1. Unpack the kit and check that all parts have been supplied with the kit. Check the condition of each part as there might be some damage during shipping. To help you with this procedure we have supplied you with a bill of materials (BOM) which can be found in the box. Each part has been packed in a bag with an easily identifiable part number.
2. Should you identify damaged, missing or incomplete parts, please contact our customer service immediately by email or through the website. At the bottom of the BOM, there is a signature of reviewer, please take a picture of it and attach the picture in your mail.
3. Read through each chapter of these instructions to gain an over-all idea of what is involved and how long it might take, before starting on the work described.
4. Before you start, you can sort all the parts in order, this will save you time especially when trying to identify individual screws and nuts. Take care not to mix up these parts as they may appear to be very similar to each other.
5. Ensure you have the necessary skills to carry out the work, or enlist the help of someone who does.
6. Work on a big firm table or bench in a clean dry well-lit area.
7. This kit contains tiny parts; please keep them away from kids under 3.
8. If you run into problems, ask for help – our contact details are on our website and we will always do our best to resolve any problems you may encounter quickly and efficiently.
9. Due to parts upgrade and production batch is different, the pictures on the manual might be a bit different with what you actually received, but the function and installation will not be change. Geeetech reserves the right to explain.

10. Step-by-step videos are available for you to refer to. Please combine this instruction manual with the online videos to help you finish the work. For access to the instruction videos, please subscribe our [YouTube Channel](#).

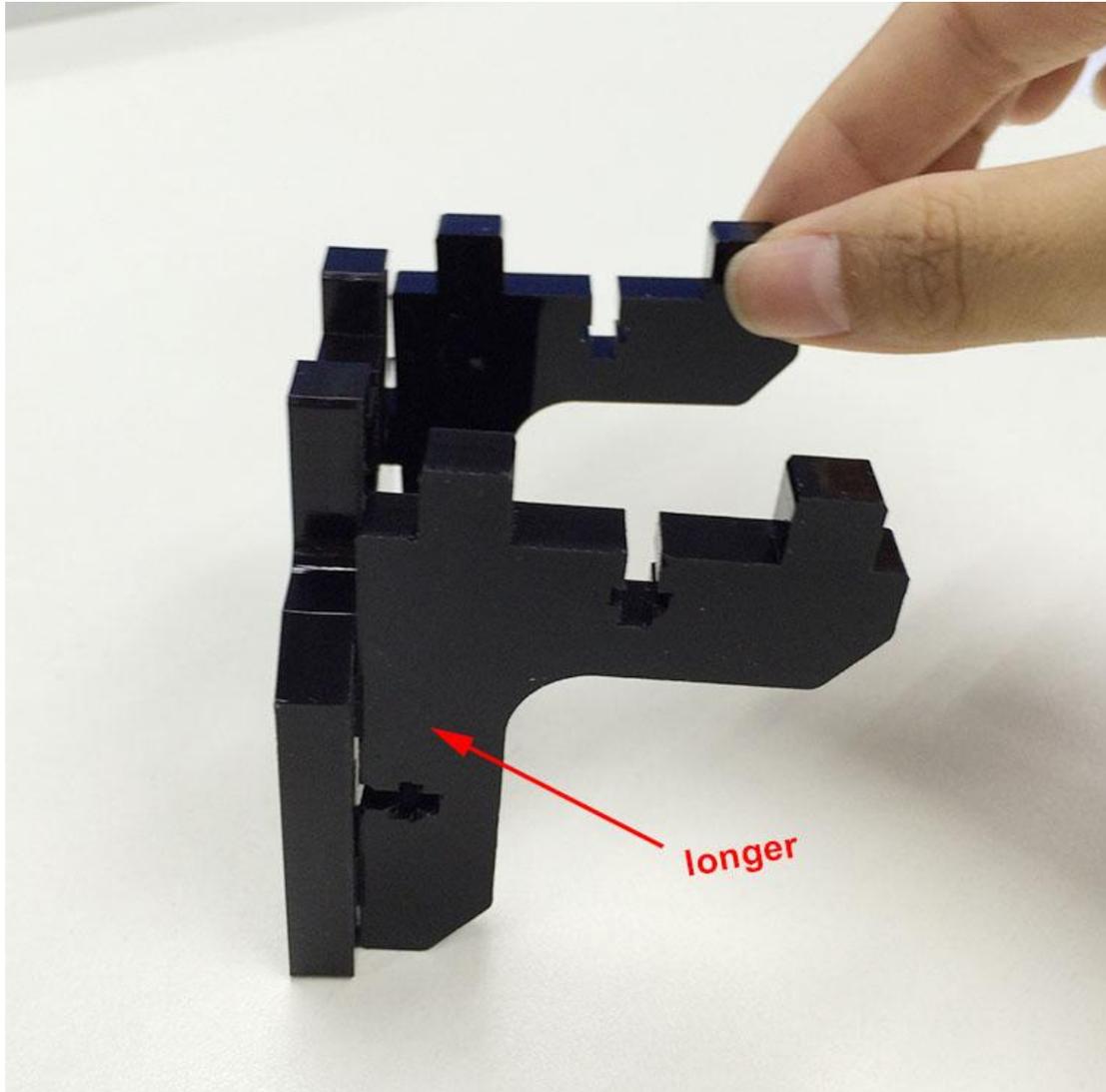
\*The video was originally made for G2 pro and G2s Pro, you can also refer to it for the assembly of this Rostock 301. For different parts, we have made new videos. If you have any doubt, please feel free to contact us.

## 1 Base Assembly

### 1.1 Motor holder assembly

Name	Part #	Qty.	Pic
Motor holder	#A3	3	
Motor holder support	#A4	6	
Square nut	#13	6	
M3 x 16 Screw	#21	6	
M3 washer	#5	6	

Step1: Select 1 A3 and 2 A4 parts and screw them together with the M3 x 16 (#21) screws, M3 square nut (#13) and M3 washers (#5) provided.



Take note, when assembled one side of the assembly is longer than the other side.



Repeat the above steps for the other 2 motor holder assemblies.

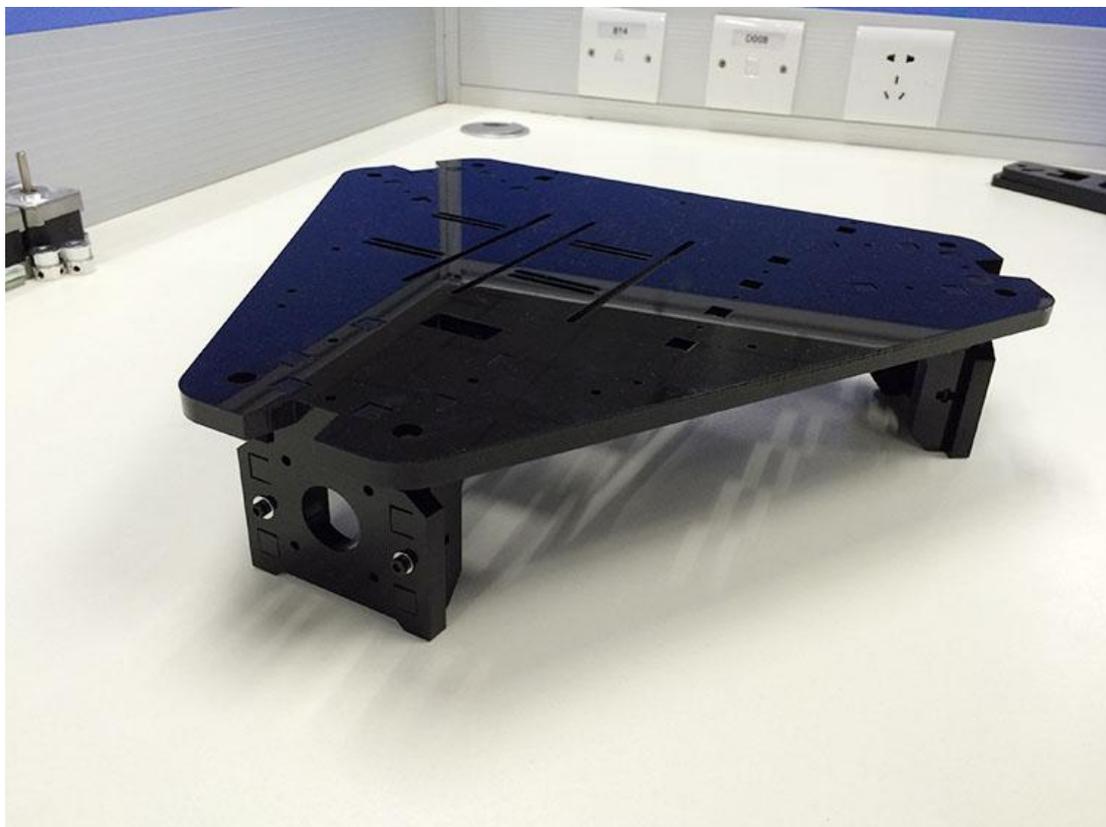
[Videos](#)

### 1.2 Connect motor ends to base plate

Name	Part #	Qty.	Pic.
Base plate	#A2	1	
Square nut	#13	9	
M3 x 16 Screw	#21	9	

M3 washer	#5	21	
Stepper motor	#57	3	
Pulley	#36	3	
M3 x 12 Screw	#20	12	

Step1: Mount the motor holder assemblies to the 3 tower locations of the base plate (#A2). Fix them with 9 M3 x 16 Screws (#21), Square nuts (#13) and M3 washers (#5).



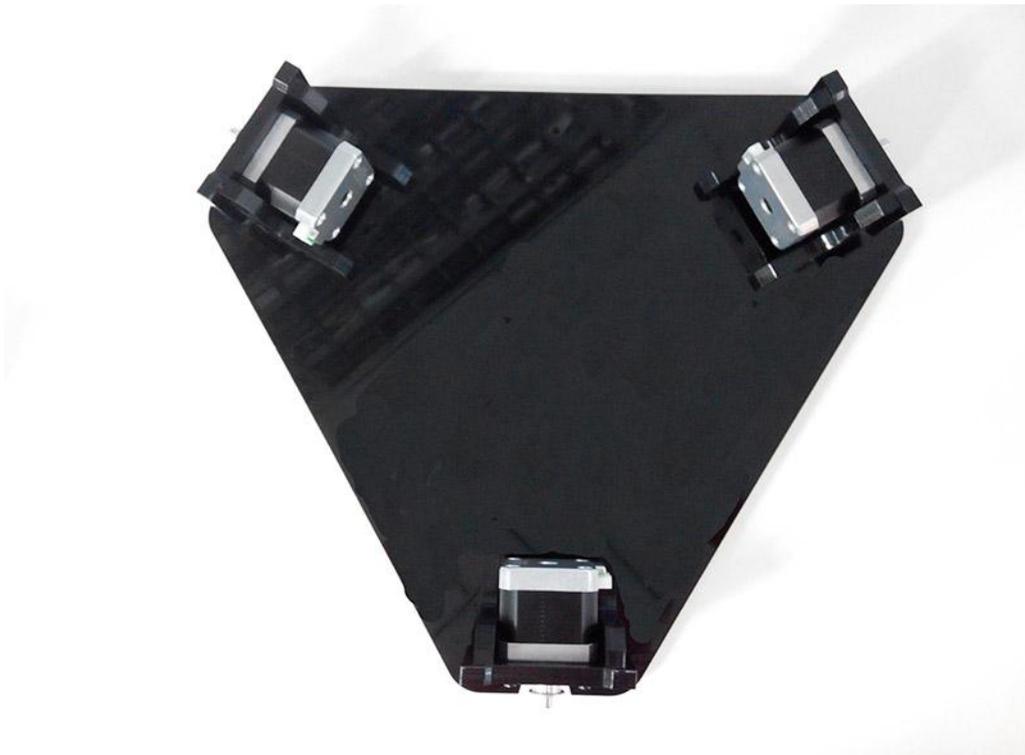
Step 2. Mount the pulley on to the motor shaft. One of the screws should be screwed on the flat section of the shaft – ensure to screw them tightly, be careful not to damage the screws.



Note: Pulley looks different here in the picture, but it will not affect the assembly and use.

Step 3. Mount the 3 motors to the assembled motor holders. Fix them with the M3x12 screws (#20) and M3 washers (#5).

\* Note: It is better to have the wire connector mounted so then it is facing either left or right. Do not mount it so the connector is facing up or down as it will interfere with the base or the table.



[Videos](#)

**1.3 Mount the LCD panel**

Name	Part #	Qty.	Picture
LCD frame	#A8	1	
LCD support	#A9	2	
LCD2004	#54	1	

Square nut	#13	4	
M3 x 16 Screw	#21	4	
M3 x 12 Screw	#20	4	
Spacer	#39	4	
M3 washer	#5	8	
Knob	#53	1	

Upgrade item: LCD2004. We have upgraded the LCD controller connector so that it can be compatible with more control board.

In this kit, we will use the FPC Ribbon cable. Pictures shown in the following steps are another type. But this will not affect the assembly. Please feel free to go on with the assembly.



- Step 1. Attach the LCD frame (#A8) to the support plate (#A9) with the M3 x 16 Screws (#21) and M3 square nuts (#13).



- Step 2. Plug the aircraft-type spacer (#39) in to the 4 screw holes on the LCD2004 (#A8) frame.



Step 3. Assemble the LCD frame (#A8) and LCD2004 (#49) with 4 M3 x 12 Screws (#20) and washers (#5).



Step 4. Install the knob over the protruding stalk and screw it in place with the screw located in the hole.





Step 5. Mount the assembled LCD kit onto the base plate. Screw it up with 2 M3 x 16 screws (#21), M3 square nuts (#13) and washers (#5).





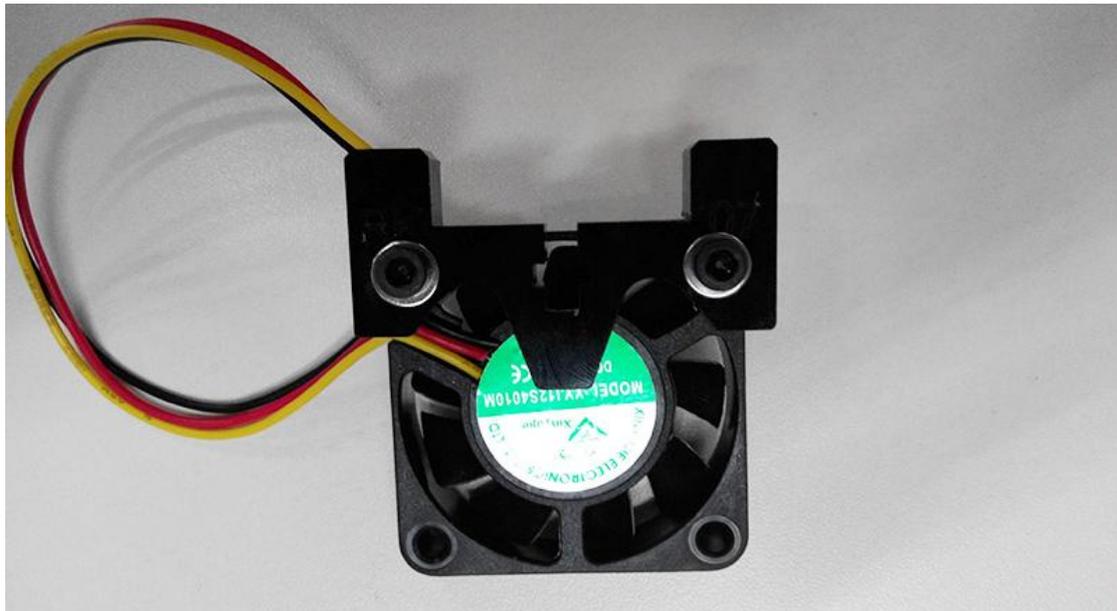
[Videos](#)

**1.4 Mount the fan**

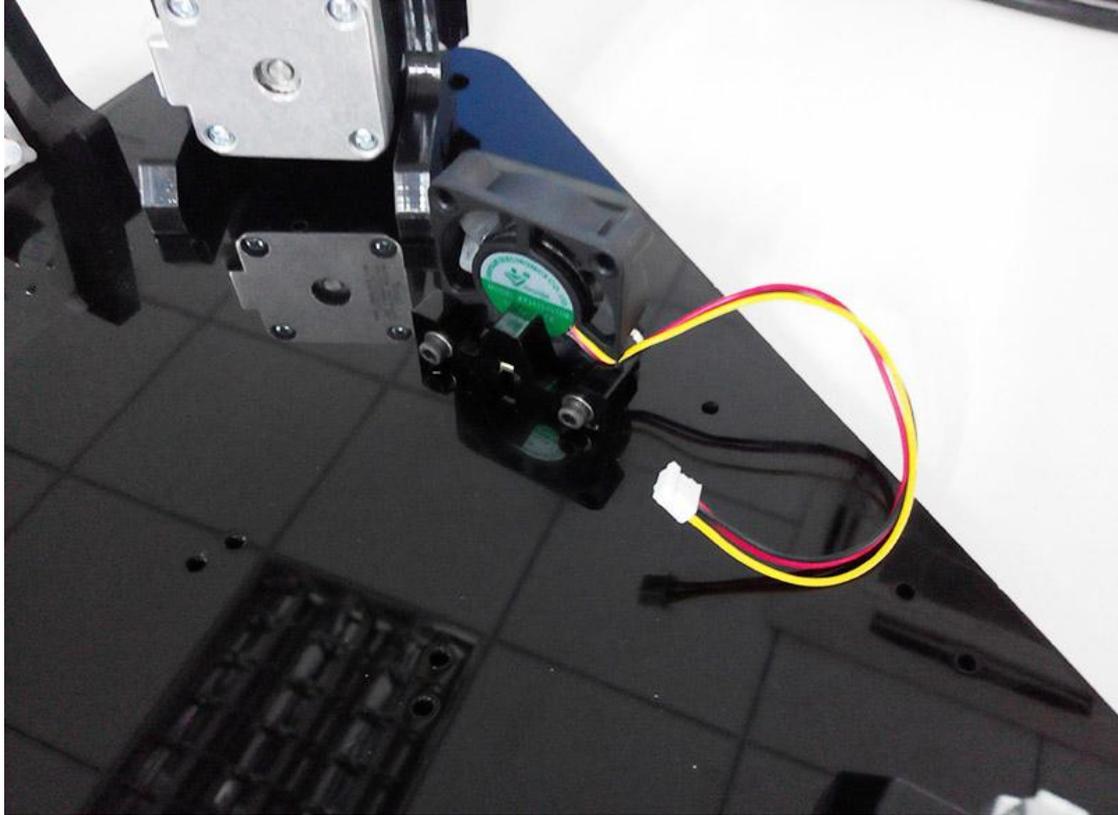
Name	Part #	Qty.	Picture
Fan (40x40x10)	#48	1	
M3 x 16 Screw	#21	1	
M3 x 25 screw	#23	2	

M3 Square nut	#13	1	
M3 nut	#9	2	
M3 washer	#5	3	

Step 1. Mount the fan to the fan mount, screwing it up with 2 M3 x 25 screws (#23), M3 nuts (#9) and washers (#5).

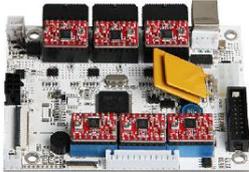


Step 2. Mount the assembled fan mount to the base plate (#A2) with a M3 x 16 screw (#21) and M3 square nut (#13) and washer (#5).



[Videos](#)

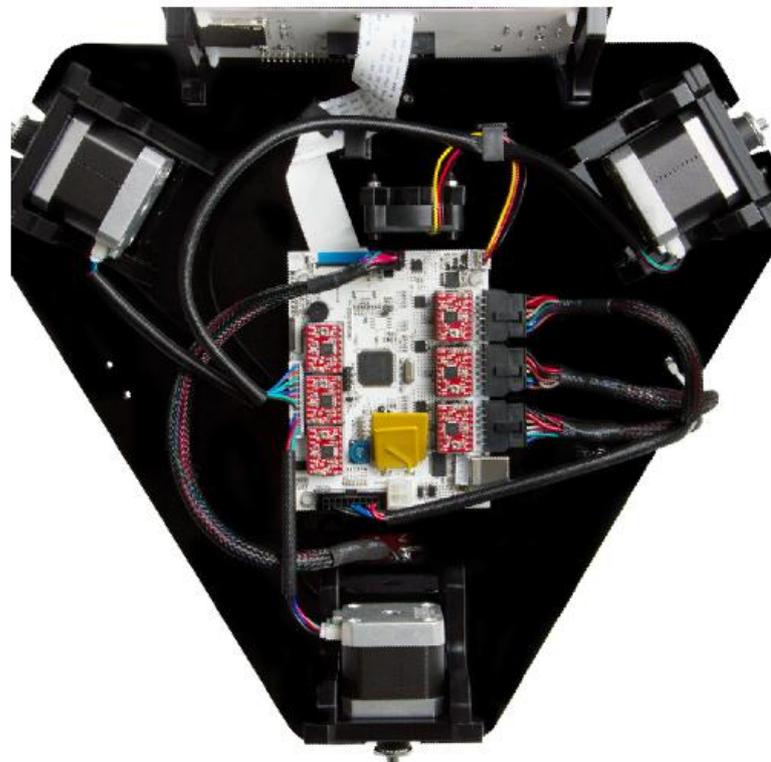
**1.5 Mount the control board.**

Name	Part #	Qty.	Picture
Control board GTM32 set	#55	1	

Spacer	#39	4	
M3 x 12 Screw	#20	4	
M3 washer	#5	4	

Step 1. Plug the aircraft-type spacer (#39) into the 4 screw holes on the underside of the control board (#55).

Step 2. Attach the control board (#55) to the base plate (#A2) with 4 M3 x 12 Screws (#20) and m3 washers (#5).



Don't forget to stick the heat sink (#44) on the chip of the A4988 stepper motor driver with sticker (#43).

[Videos](#) (in the video, we take GT2560 control board as example, still you can refer to it)

**1.6 Mount the print bed.**

Name	Part #	Qty.	Picture
Building platform	#M5	1	
Heat-bed	#56	1	
Hex sunk screw	#15	3	
Spring 3.5 x 20mm	#30	3	
Wing nut	#12	3	
M3 washer	#5	6	

\* Note: For your convenience the heat-bed has been pre-soldered you can quickly and easily mount them together.

Step1. Stack the building platform (#M5) on top of the heat-bed (#56) keeping the holes aligned.

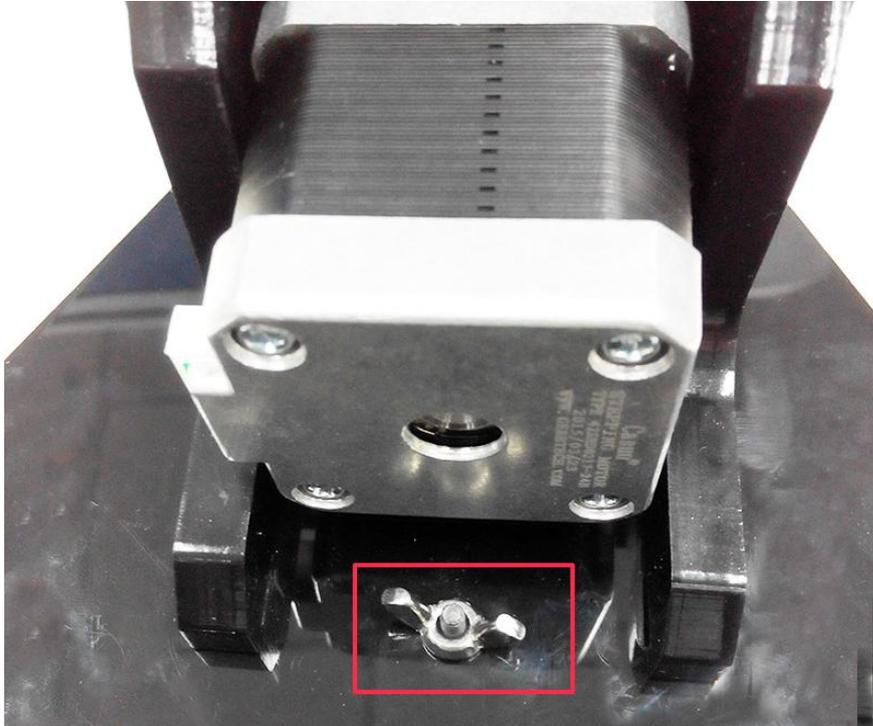
Do not let the soldered part directly attached to the metal building platform in case of short circuit



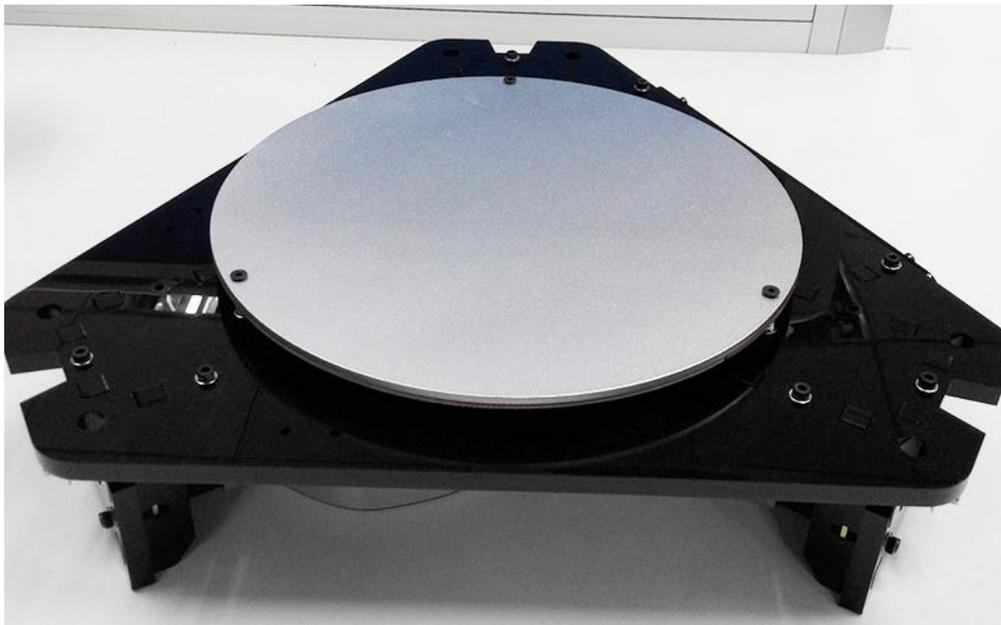
Step 2. Thread the M3x30mm Hex sunk screw (#15) through the building platform (M5) and heat-bed (#56), add washers (#5) and spring (#30); the assembly should now look like this:



Step 3. Locate the assembly over the holes provided in the base plate (#A2) and then lock the complete assembly in place with a wing nut (#12).



Here is the finished picture.



Make sure the building platform is leveled.

[Videos](#)

## 2 Top Plate Assembly

### 2.1 Drive wheel mount

Name	Part #	Qty.	Picture
Drive wheel mount	#A5	3	
M3x25 Screw	#23	6	
M3 nut	#9	6	
M3 washer	#5	6	

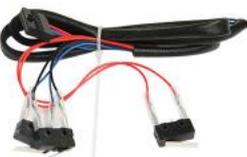
Step 1. Mount the drive wheel mount to the top plate (#A5) on A1; screw them up with M3 x 25 screws (#23) , M3 nut (#9) and washers (#5).



Repeat the procedure for the other two drive wheel mounts.

[Videos](#)

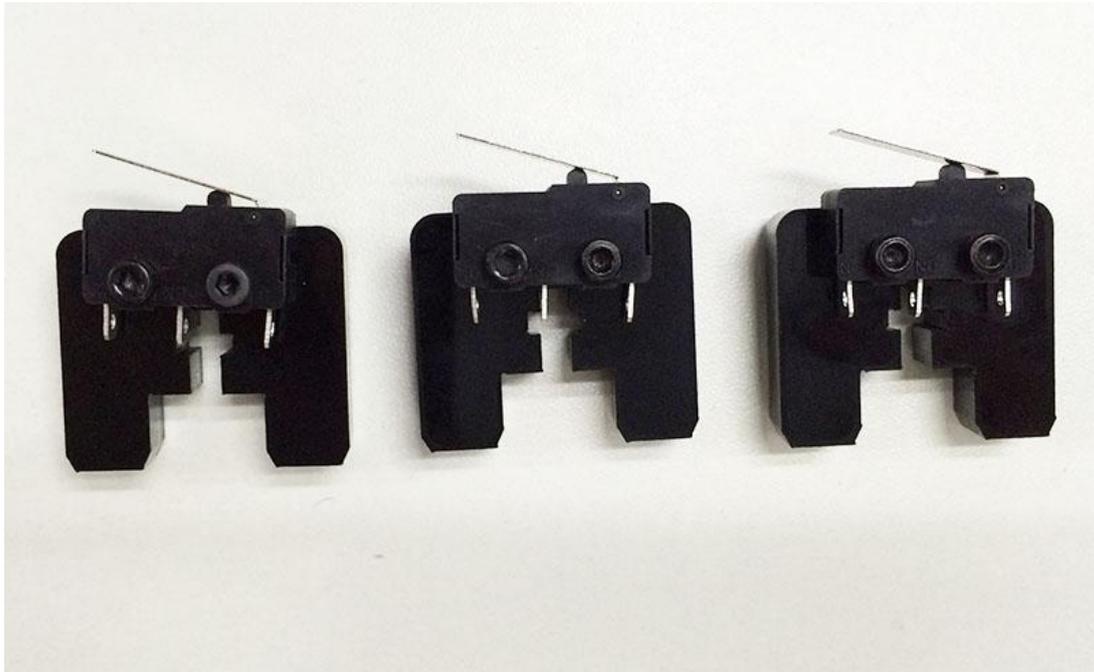
**2.2 Endstop mount**

Name	Part #	Qty.	Picture
Top plate	#A1	1	
Endstop mount	#A6	3	
Endstop	#47	3	
M2.5 x 16 screw	#17	6	

M3 x 16 Screw	#21	3	
Square nut	#13	3	
M3 washer	#5	9	
M2.5 nut	#8	6	

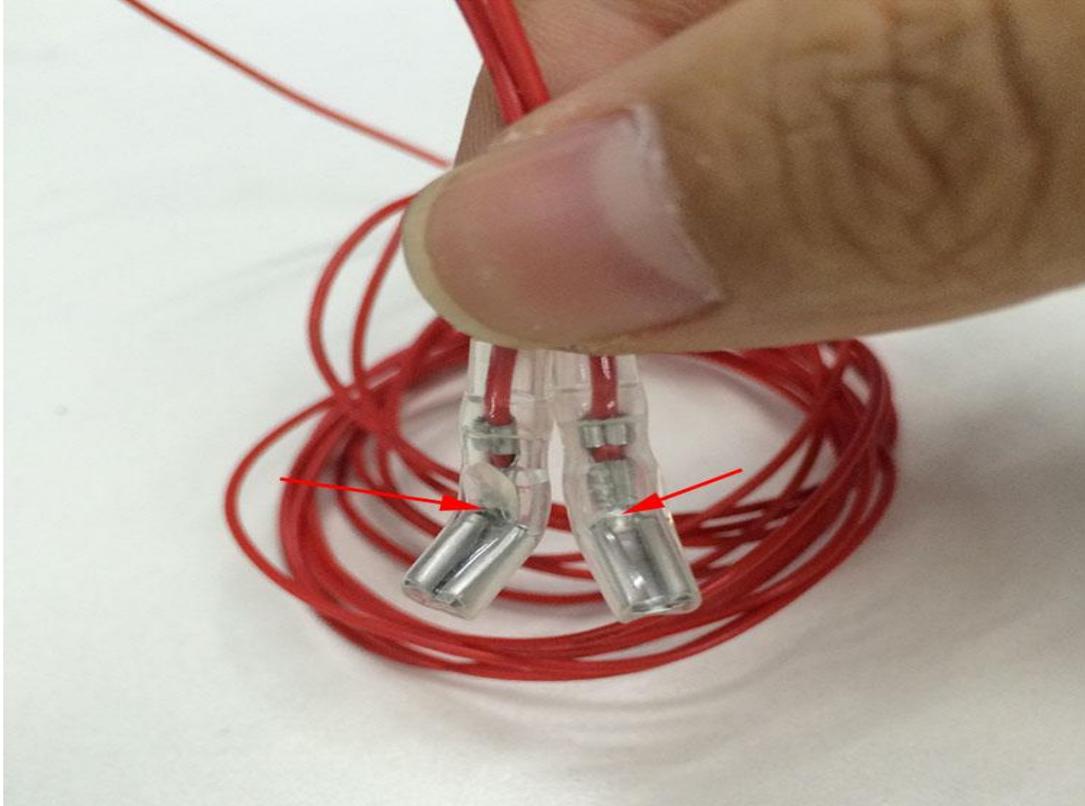
Upgraded item: The holes design of the extruder is upgraded to fit different model of Rostock type 3d printers, such as the single extruder, the dual extruder and this 3 extruder model.

Step 1. Mount the three endstops (#47) onto the endstop mounts (#A6) in the same direction. Fix in place with M2.5 x 16 screws (#17) and M2.5 nut (#8) ensuring that they are tightly fixed.



Step 2. Bend the wire connector a small amount taking care not to break the connector.

Note: You should be very gentle and note the direction, or the connector will easily break.



Step 2. Mount the assembled parts onto the top plate (#A1). And attach them with the M3 x 16 screws (#21), M3 square nuts (#13) and M3 washers (#5). Again, take note of the endstop mounting direction.

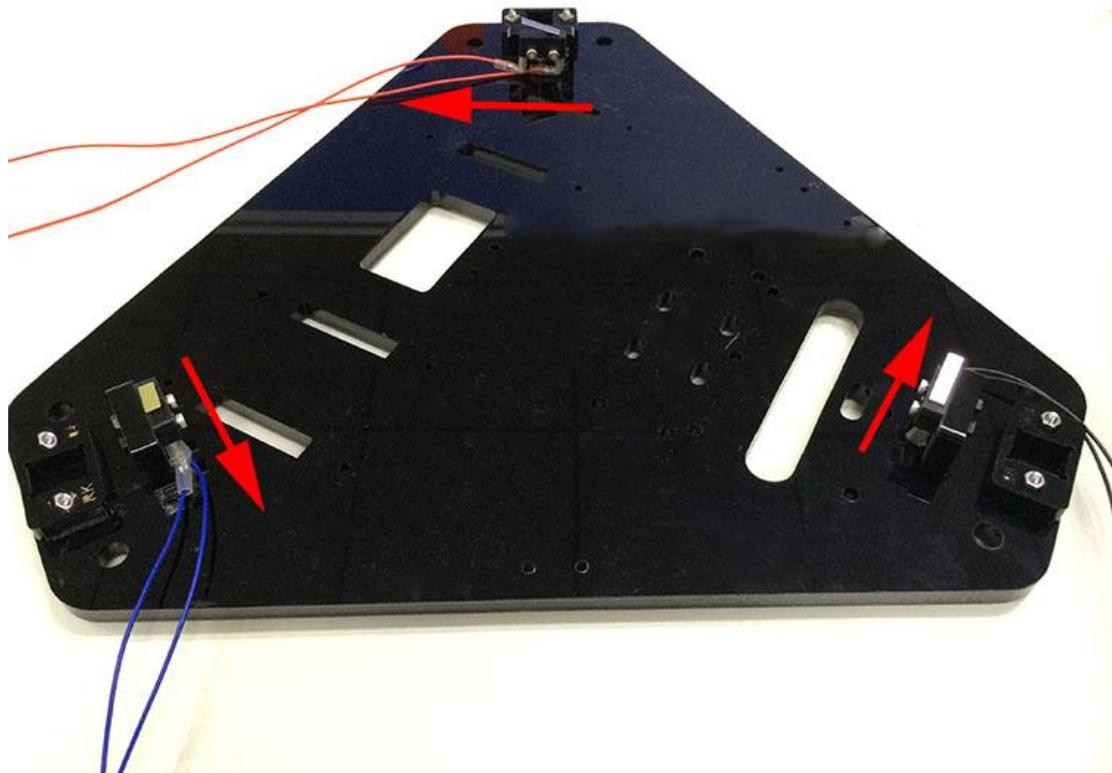
\* Note:

1. The opening of all the endstops should either be in the clockwise or anti-clockwise direction – but they need to be all mounted in the same direction.
2. As we have upgraded the wire of the endstops, now the wire color for the endstop is fixed now. You can identify the axis by the laser engraving mark on the top plate.

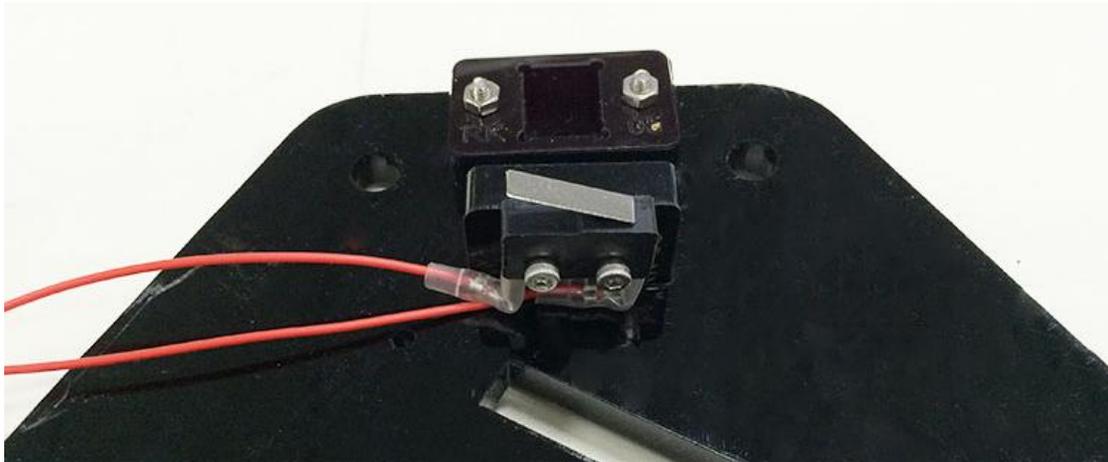
RED X axis

Blue Y axis

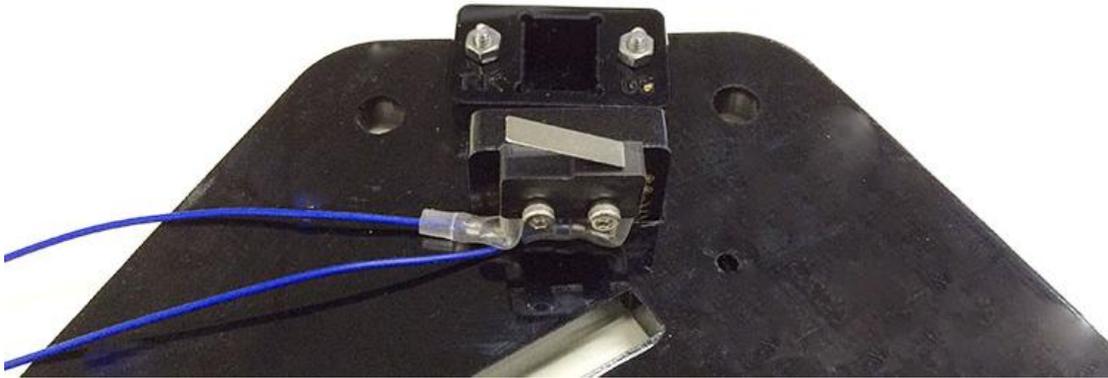
Black Z axis



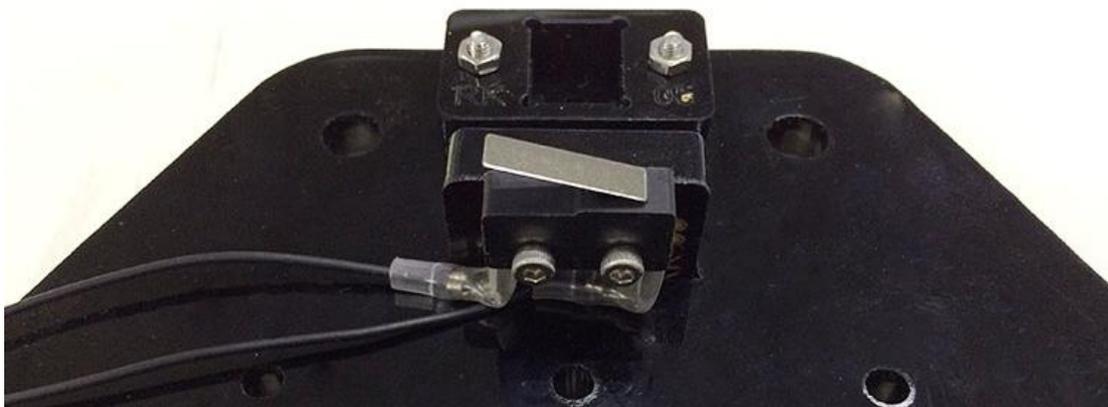
(\*Wire color in this picture is not right)



X axis endstop



Y axis endstop



Z axis endstop

[Videos](#)

### 3 Assembling the carriage

Name	Part #	Qty.	Picture
Carriage mount	#A12	3	
Belt mount	#M2	3	
Endstop trigger mount	#M3	3	
Diagonal Rod joint	#M4	6	
PCS10UU Linear Bearing	#37	6	
M3x8mm Screw	#19	6	
M3x12mm Screw	#20	12	
M5x16mm Screw	#28	12	
M5x20mm Screw	#29	12	
M3x40mm Screw	#24	3	

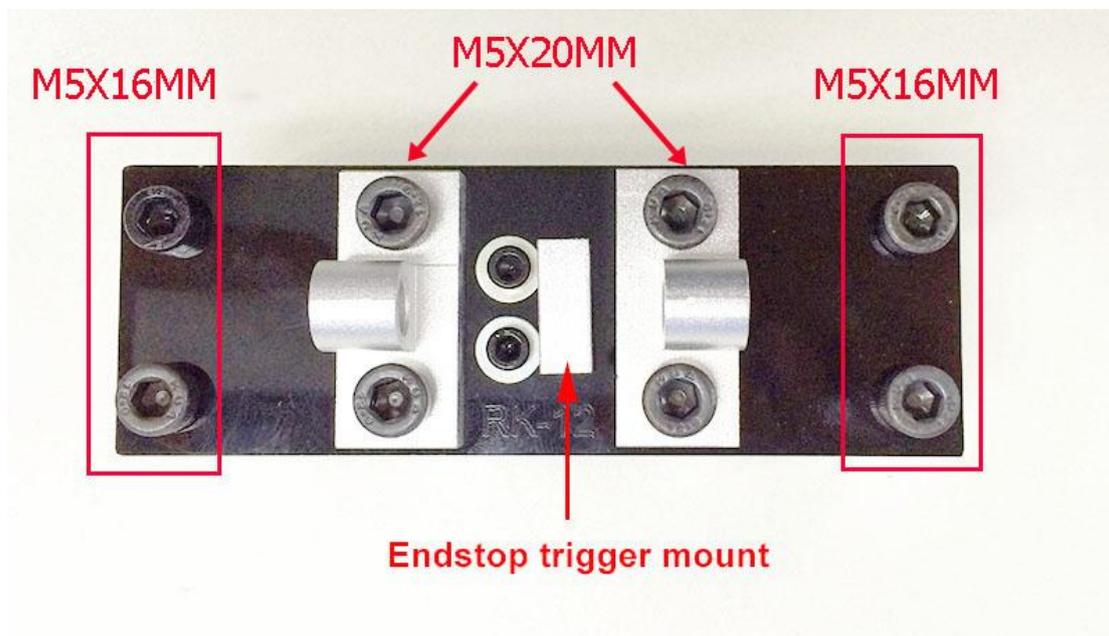
Spring	#31	3	
M3 washer	#5	24	
Rod-end bearing holder	#3	6	
M5 nut	#10	24	

\* PCS8UU linear bearings is a modified version of PCS8UU linear bearings, the block is made of high strength ABS, which is lighter and more flexible.

Why we changed the PCS8UU linear bearings into the PCS8UU ?

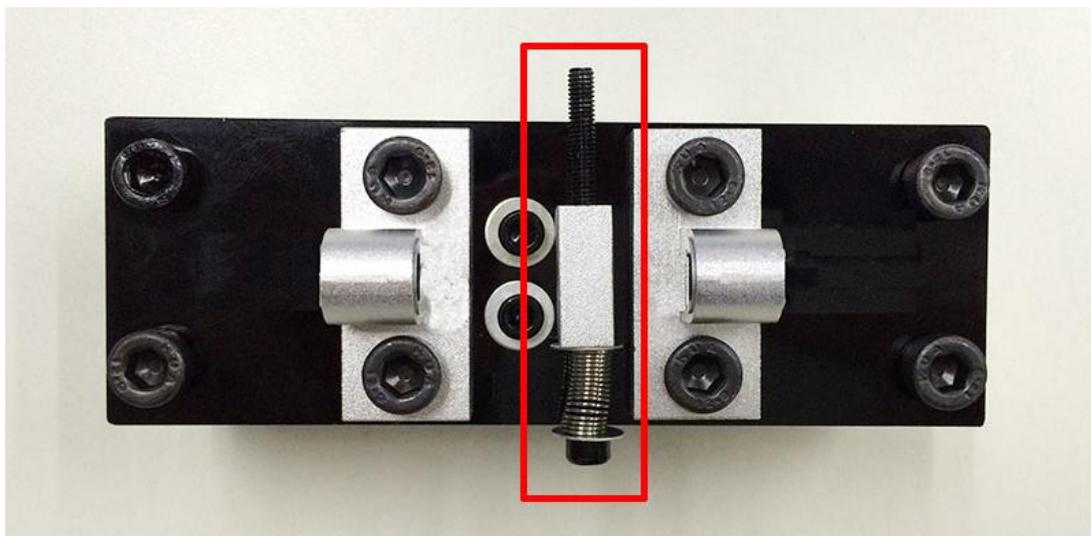
To lighten the loads of the carriage in case it slide down during printing and to reduce the drag of each axis so that the carriage can move more flexible therefore increase the precision of printing.

- Step 1. Fix the belt mount (#M2) on the carriage mount (#A12) using 2 M3 x12 screws (#20) and washer (#5).
- Step 2. On the other side of the carriage mount (#A12) fix the endstop trigger mount again with 2 M3 x 12mm screws (#20) and washer (#5).
- Step 3. Connect the diagonal rod joint (#M4) and the PCS10UU linear bearing (#37) on to the carriage mount (#A12) ensuring that the bearing sleeves (round holes to fix the rod-end bearing holder) are mounted to the outside of the assembly (refer to the picture below). Fix with M5x16mm screws (#28) and M5x20mm screws and M5 nuts.
- Note: Take special note of the direction of the diagonal rod joint, the wider edge is near the Endstop trigger mount.

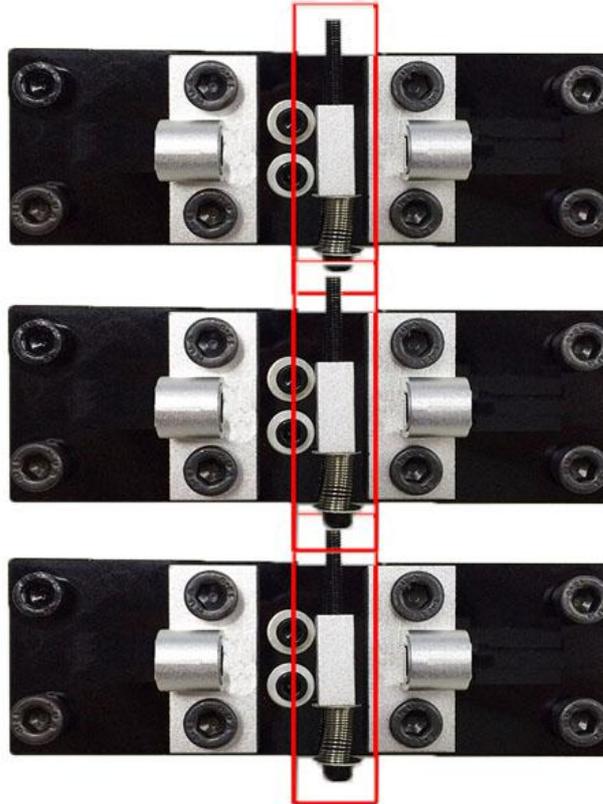




Step 3. Now insert the M3x40mm screw (#24) into the endstop trigger mount with a spring (#31) in between. Here you need to use washers (#5) to correctly complete the assembly.

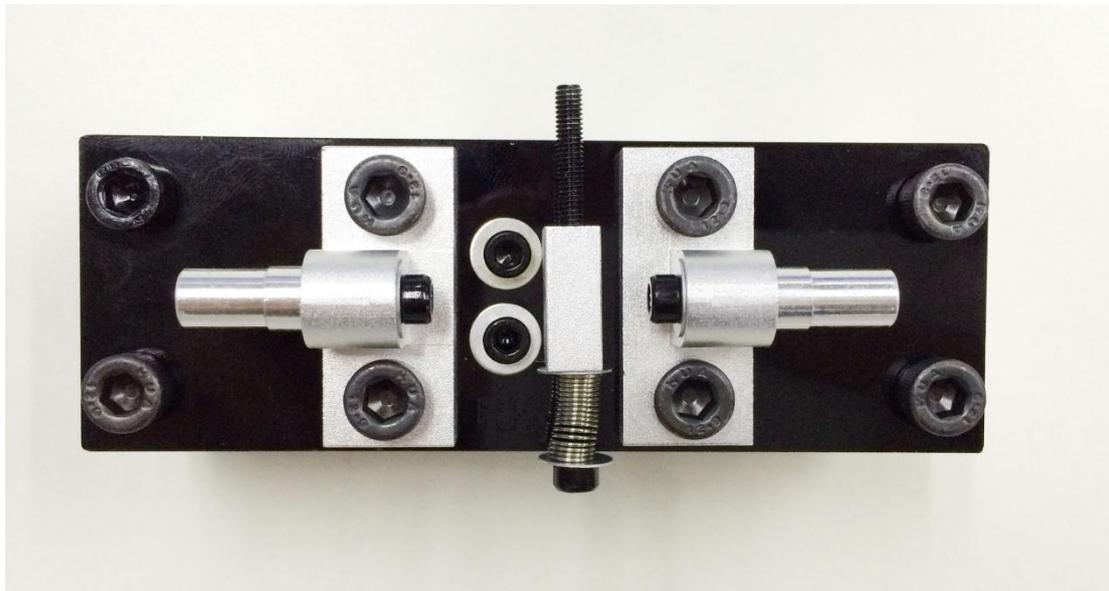


Repeat the steps for the remaining two carriages. When you have completed these all three carriages should be exactly the same and look as in this picture:



Step 4. Finally insert the rod-end bearing holder (#3) into the diagonal rod joint (#M4) fixing it place with M3x8mm screw (#19) and M3 washer (#5).

Repeat the step for the other 2 carriages.



[Videos](#)

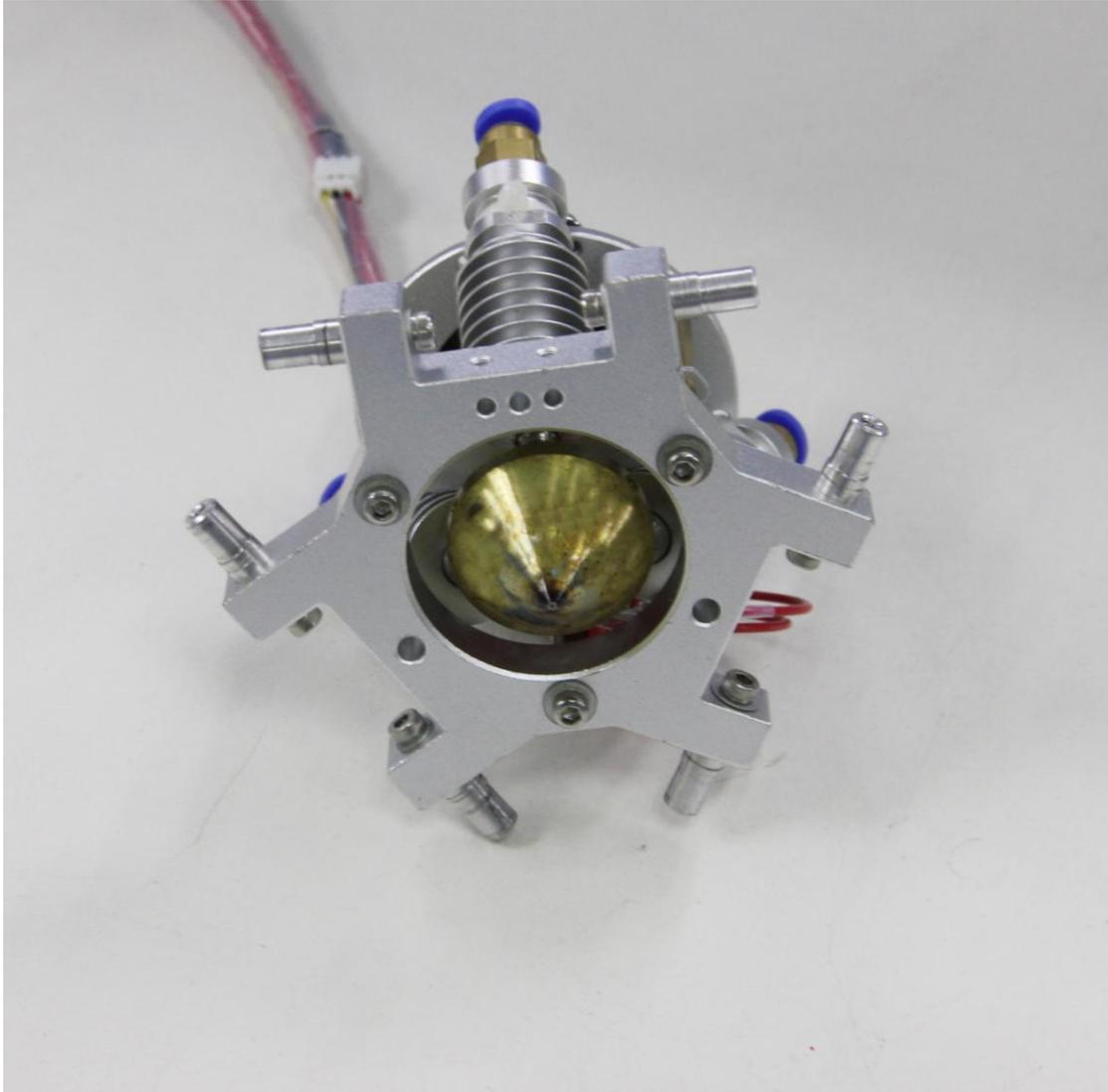
#### 4. Mount the print head.

[Video](#)

##### 4.1 Mount the hotend.

Name	Part #	Qty.	Picture
Hotend	#60	1	
M3 x 16 screw	#21	3	
Spider	M1	1	

Step 1. Mount the hotend (#60) on the spider (#M1) with 3 M3 x 16 screws (#21).



#### 4.2 Mount the rod-end bearing holder and diagonal rod

Name	Part #	Qty.	Picture
Diagonal Rod	#4	6	

rod-end bearing holder	#3	6	
Round head screw with pad	#16	6	
M3 washer	#5	6	
M3 x 8 screw	#19	6	

- Step 1. Insert the rod-end bearing holder (#3) into the diagonal rod joint location of the spider (#M1), fix it in place with M3x8mm screw (#19) and M3 washer (#5).



Step 2. Slide the diagonal rod (#4) on to the rod-end bearing holder (#3) and fix it in place with a round head screw with pad (#16).

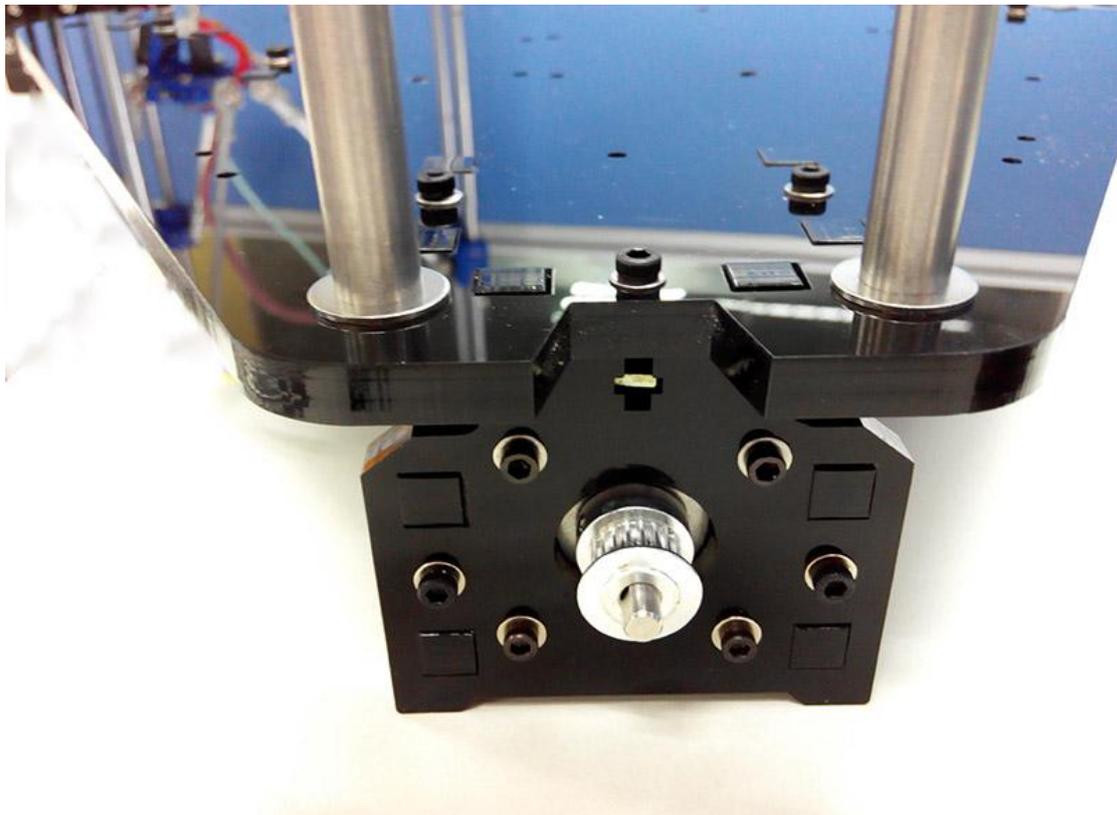


### 5 Mount the smooth rods

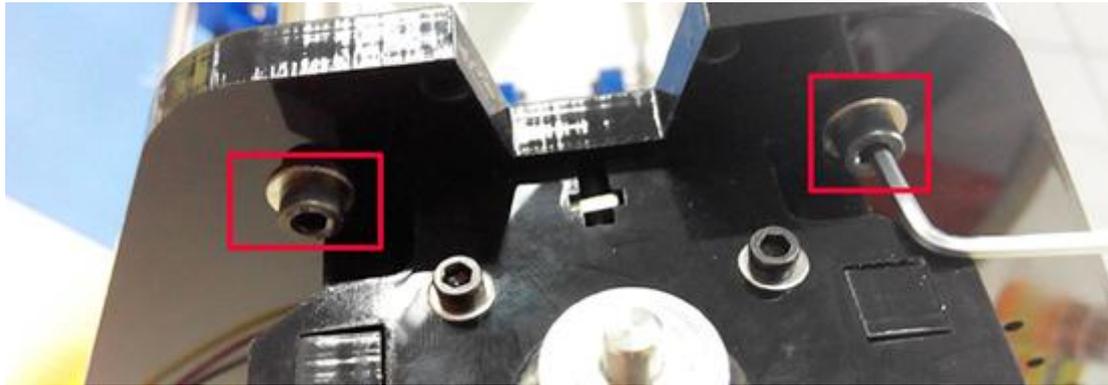
Name	Part #	Qty.	Picture
Smooth Rod	#1	6	

M4 x 8 Screw	#25	6	
M8 Washers	#7	6	
M4 washer	#6	6	

Step 1. Slide a M8 washer (#7) on to an end of the smooth rod (#1). Insert that end of the rod (#1) into one of the holes located on the tower of base plate (#A1).



Step 2. Fix the rod (#1) in place with M4 washer (#6) and M4x8 screw (#25).



Step 2. Repeat this step for the remaining 5 rods (#1).



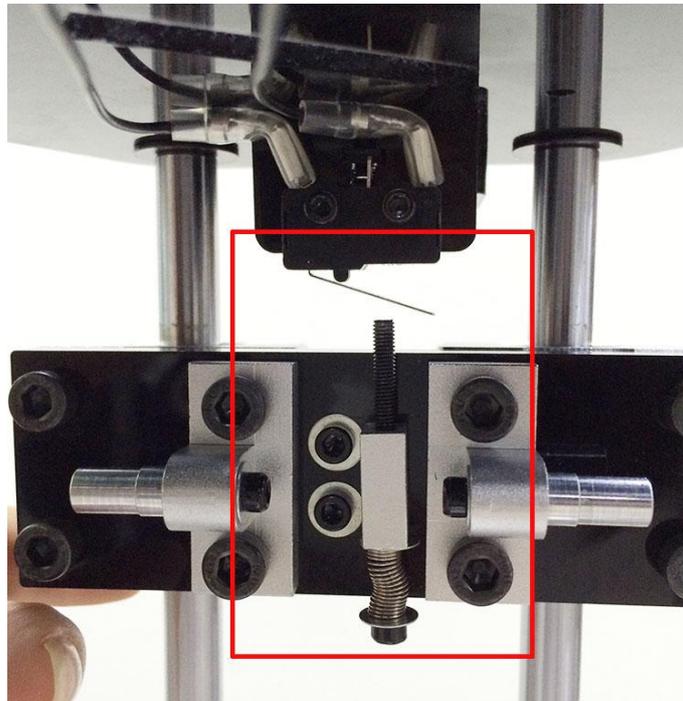
[Videos](#)

## 6 Mount the carriage and the top plate

Name	Part #	Qty.	Picture
M4 x 8 Screw	#25	6	
M8 Washers	#7	6	
M4 washer	#6	6	

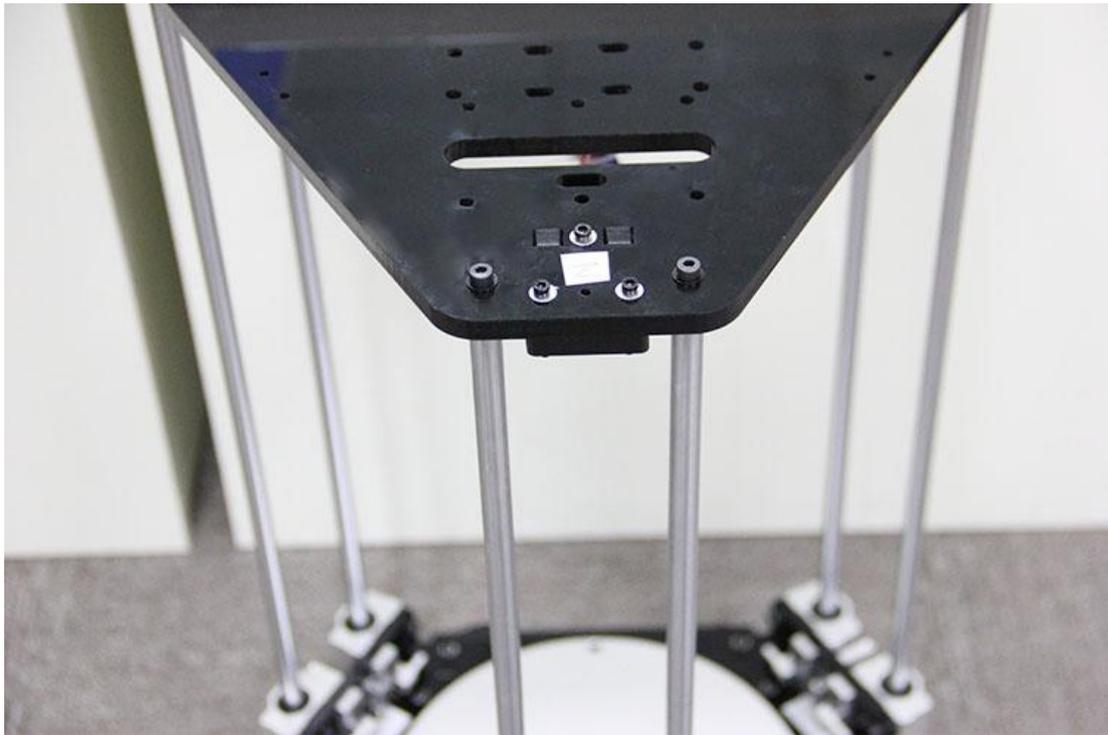
Step 1. Slide the carriages down the smooth rods (#1) pairing one carriage with each set of 2 smooth rods (#1). You should now have the beginnings of three towers (X, Y and Z).

\*Note: At this point it may be a good opportunity to check that the carriage endstop screws (#24) actually connect with the endstops (#47). Align the top place (#A1) on to the top of the rods (#1) and check that the endstops are correctly orientated.

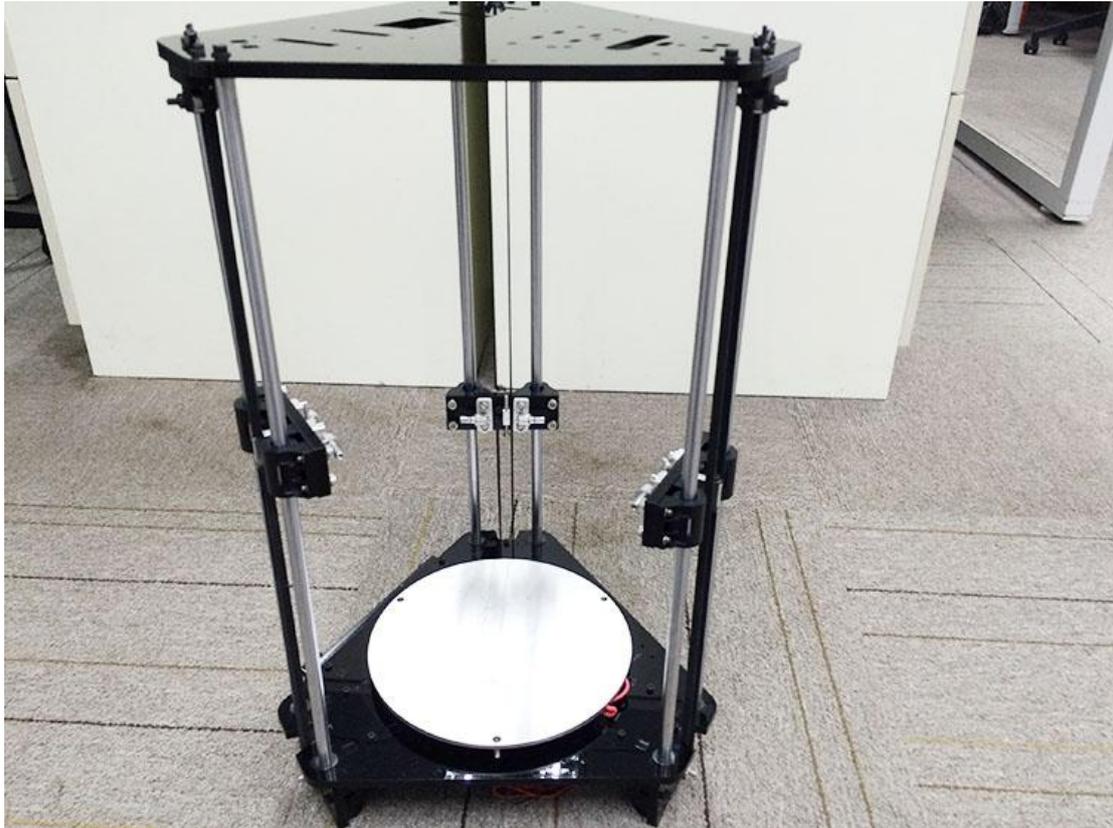


\*Note: If you find it difficult to slide the carriage along the rod, or the carriage does not slide smoothly, you can slightly loosen the screws on the difficult linear bearing (#37) to release some alignment pressure with the smooth rod (#1).

Step 2. Slide a M8 washer (#7) on each top of each smooth rod (#1) and then align the top plate (#A1) and smooth rods (#1) until with some pressure the top place (A1) slides on to the three towers. Fix the top place (A1) in place with the M4x 8 screws (#25) and M4 washers (#6).



\*Photos with PCS8UU linear bearings in this instruction is the previous version, here we use PCS8UU instead. Picture is just for reference.



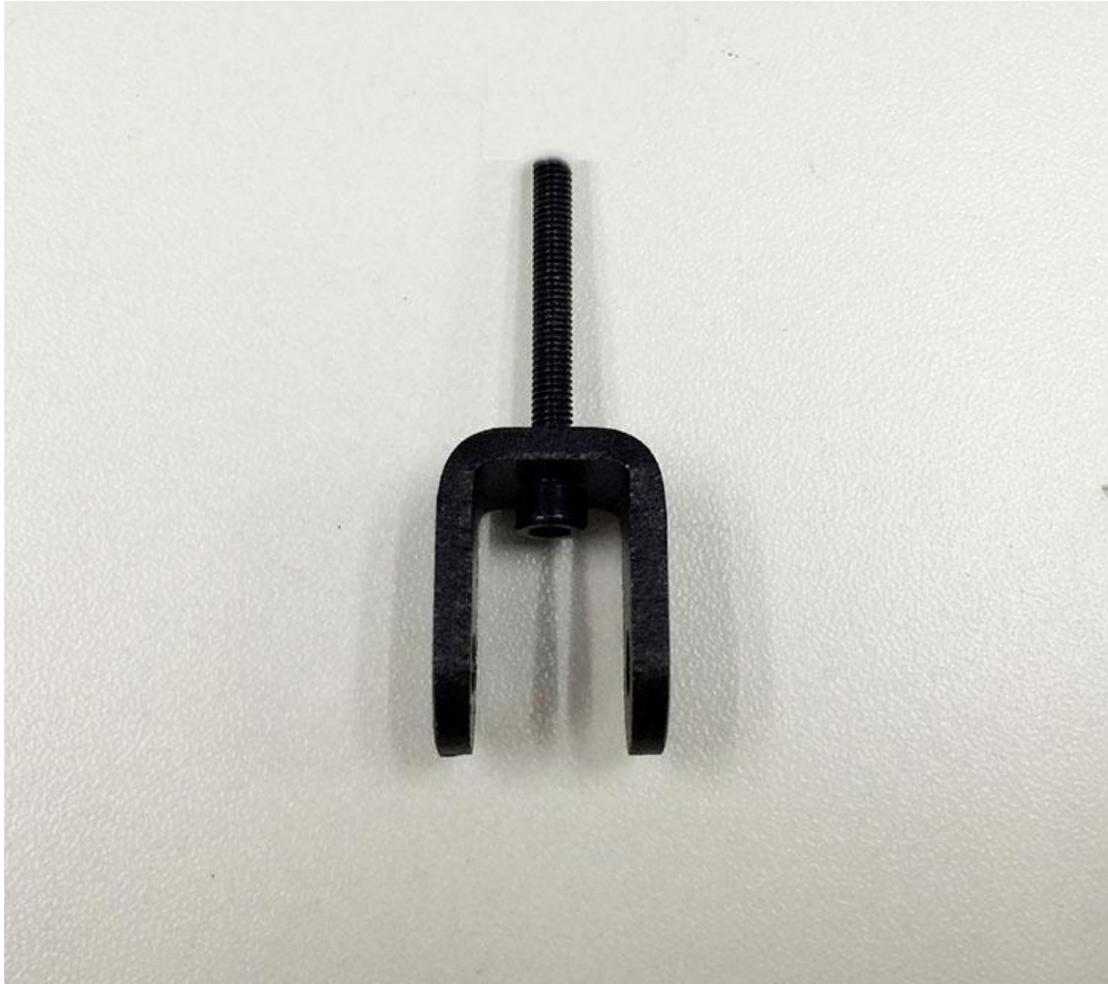
[Videos](#)

## 7 Mount the Belt

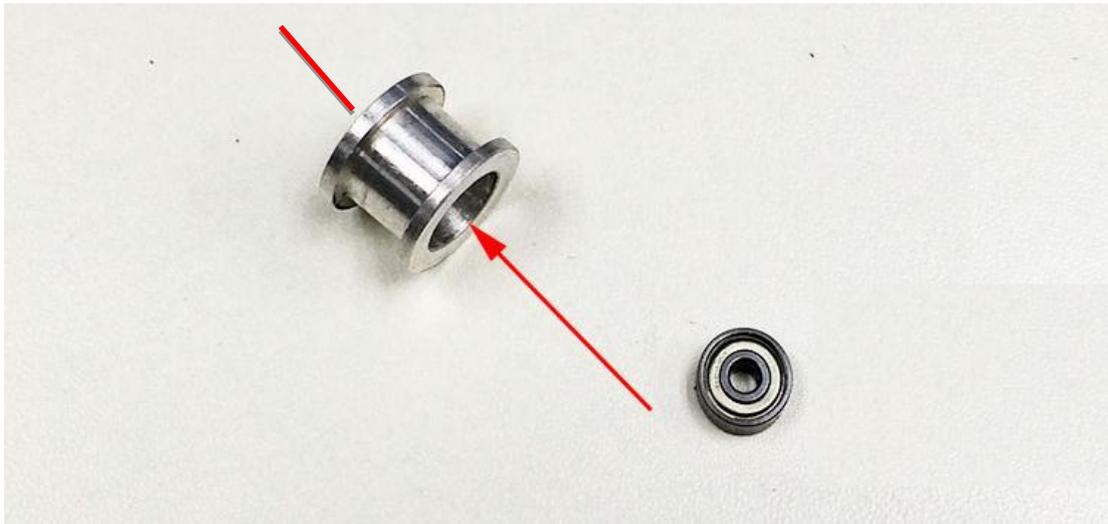
### 7.1 Assemble the drive wheel

Part name	Part #	Qty.	Picture
Drive wheel holder	#35	3	
Drive wheel	#34	3	
R84zz Ball Bearing	#33	6	
M3 x 16mm screw	#21	3	
M4 x 20mm screw	#27	3	
M4 washer	#6	3	
M4 lock nut	#11	3	
wing nut	#12	3	

Step 1. Thread the M3 x 16 screw (#21) through the top hole on the drive wheel holder (#35).



Step 2. Pick up 2 MR84zz ball bearings (#33). Insert 1 MR84zz ball bearings (#33) into both ends of the drive wheel (#34). (We have done this step for you before shipping)



Step 3. Place the drive wheel (#34) in to the drive wheel holder (#35) and fix it in place with an M4 x20 screw (#27) and M4 washer (#6). Lock the other end with a M4 lock nut (#11). You may need a wrench to tighten M4 locking nut (#11).

\*in the video, we use M4x25mm, it is too long, so we can use M4x20mm here.





\*Note: Do not screw it too tightly as it may restrict the free movement of the drive wheel. It is important that you leave enough room for the wheel to turn freely.

Repeat these steps to assemble the other two drive wheel assemblies.

Step 4. Fix the drive wheel assembly loosely on the top plate (#A1) with a wing nut (#12).

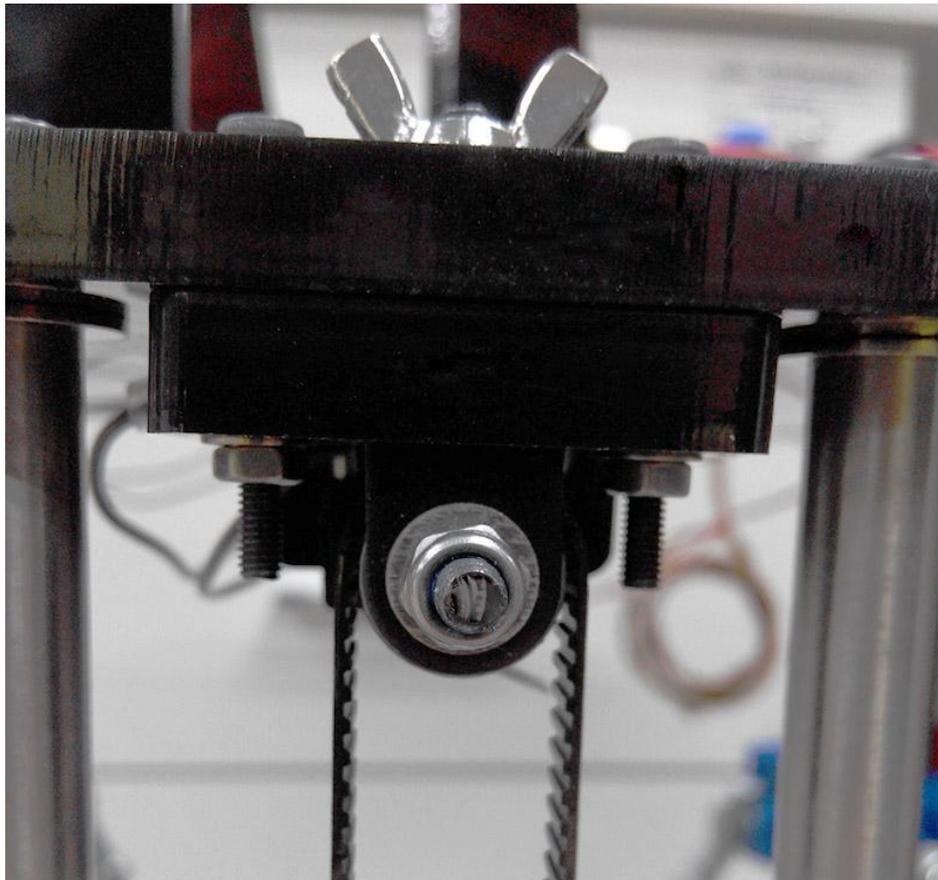
Repeat these steps to mount the other two drive wheel assemblies to the top plate (#A1).

## 7.2 Add the belt

Name	Part #	Qty.	Picture
Timing Belt	#38	3	
M3 x8 Screw	#19	6	

M3 washer	#5	6	
-----------	----	---	---

Step 1. Thread the timing belt (#38) through the drive wheel with the pitched side in direct contact with the drive wheel and the smooth side facing out.

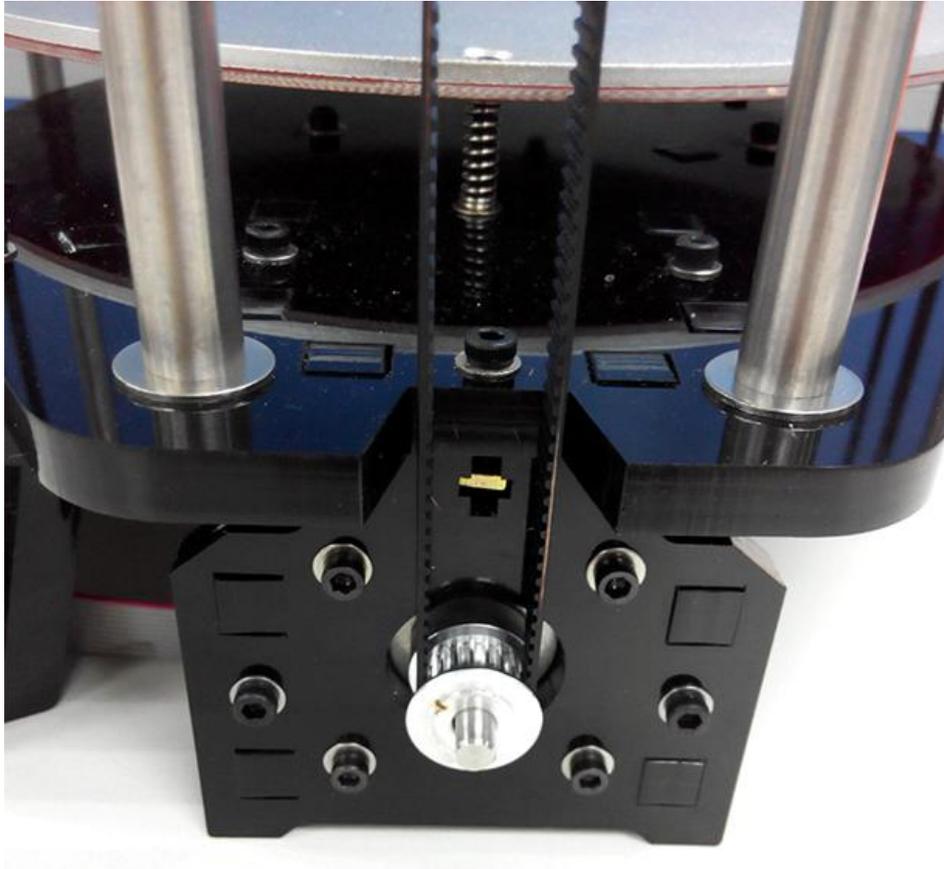


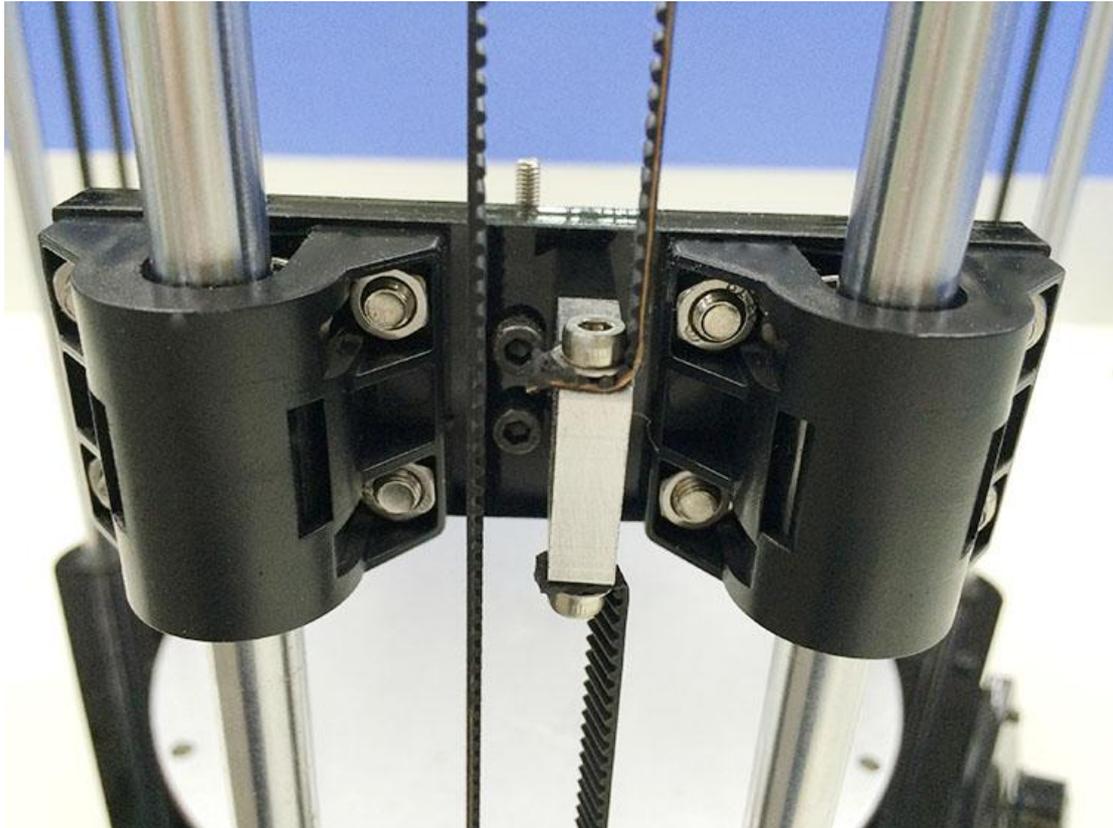
Step 2. Punch a 2-2.5mm hole in to the timing belt with a leather hole punch or similar (not supplied).

Step 3. Fix one end of the timing belt to the belt mount (#M5) with an M3x8mm screw (#18) and M3 washer (#5).

Step 4. Guide the timing belt around the motor pulley (#36) and back up to the underside of the belt mount (#M2). Mark the location of the new hole to be punched to allow the timing belt to be fixed to the belt mount. Trim the timing belt, punch the hole and fix it to the belt mount with a M3x8mm screw (#19) and M3 washer (#5).

\*Note: Before you cut the belt, be sure that you have the correct length; it should be about 110cm long in total.





Step 5. Tighten the wing nut (#12) to to reduce the slack in the timing belt.

Repeat the above steps for the other 2 timing belts.

[Videos](#)

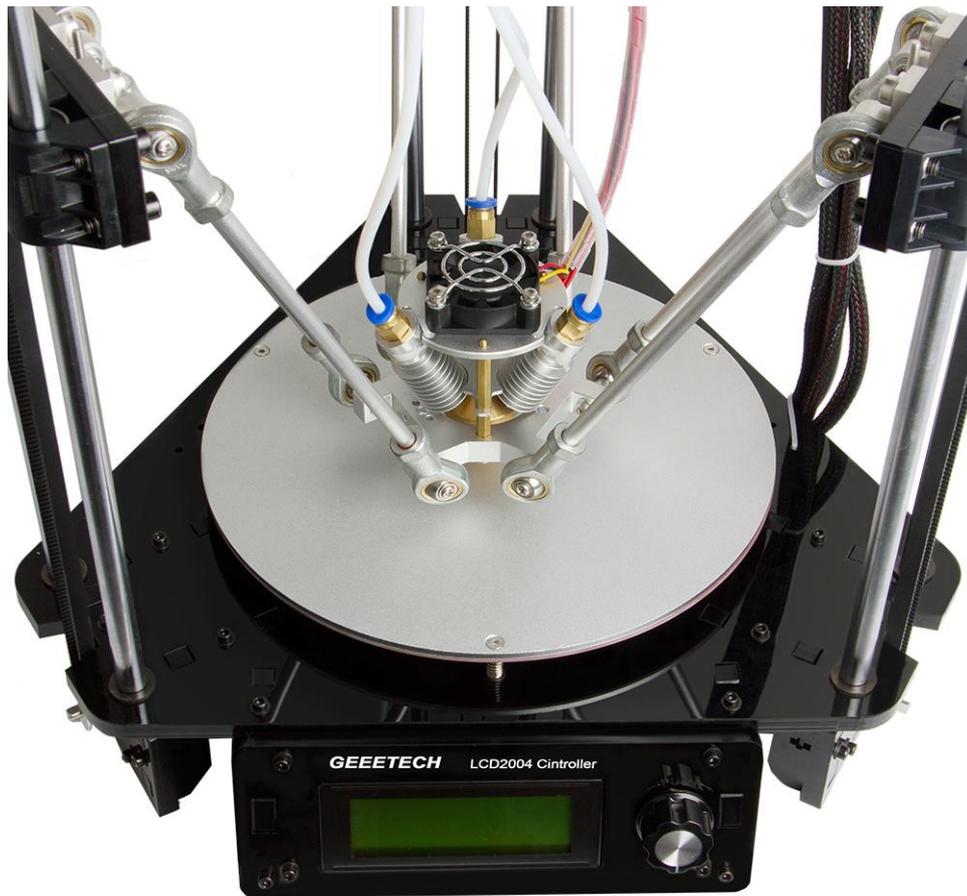
## 8 Connect the Diagonal Rod to the carriage

[Video](#)

Name	Part #	Qty.	Picture
Round head screw with pad	#16	6	

- Step 1. Place the print head assembly on to the building platform.
- Step 2. Working with the “X” axis first, slide the diagonal rod (#4) on to the on the rod-end bearing holder located on the assembled print assembly, fixing it on with a round head screw with pad (#16).
- Step 3. Fix the other end of the diagonal rod (#4) to the carriage located on the “X axis” tower with a round head screw with pad (#16).





**\*You can insert the PTFE pipe later after extruder is mounted.**

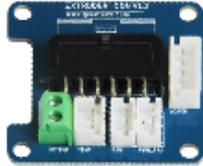
Fix the remaining diagonal rods (#4) to the carriages with a round head screw with pad (#16).

[Videos](#)

## 9 Mount the extruder

[Video](#)

Name	Part #	Qty.	Picture
------	--------	------	---------

Extruder	#58	3	
Extension board	#59	3	
Extruder wire	#52	3	
Extension wire	#49	1	
Extruder Motor wire	#51	3	
Hex copper spacer	#46	6	
Extension board cover	#M6	3	
M3 x 5screw	#15	12	

M4 x 12 screw	#26	8	
---------------	-----	---	---

### Mount extruder 0(E0)

For this extruder, we will connect the wires of the hotend to it.

Step1. Take one extruder and mount it on the top plate with 4 M4x12mm screw.

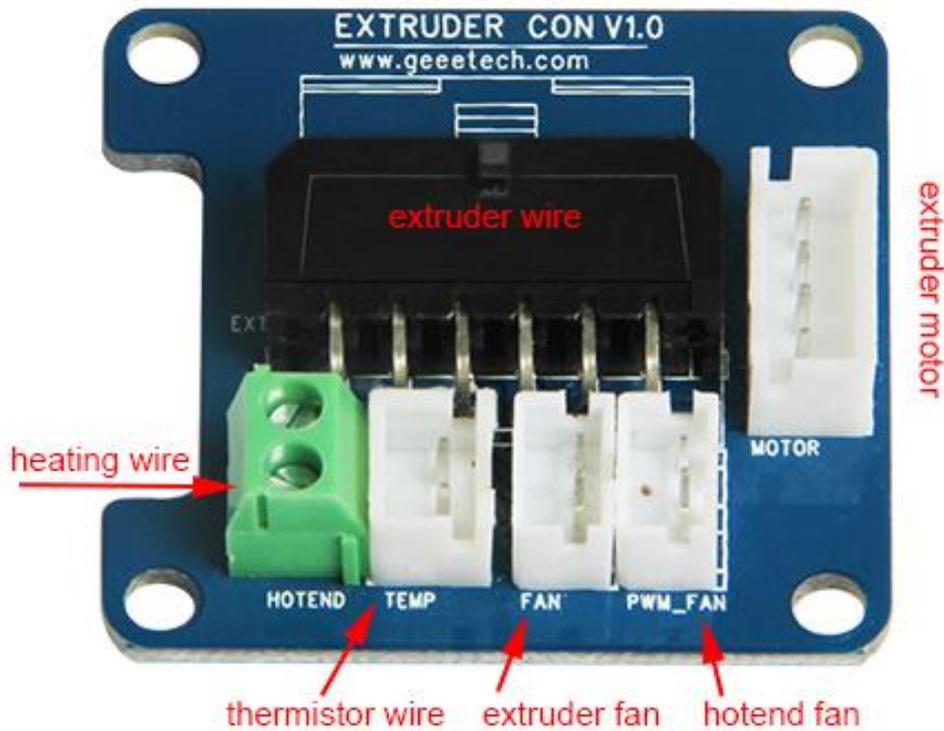
Step2. Thread the motor wire and the fan wire on the extruder into the metal sheet. Do the same with the wires on the hotend. You need to use the extension wire here for the hotend fan.

Step3. Mount the extrusion extension board on the extruder with 2 M3x5mm screws and hexagon copper spacer.

Note: the black connector should be faced to the fan of the extruder.

Step4. Connect the wires as shown in the following picture.

Step5. Cover the extension board, fix the cover on the hexagon copper spacer with 2 M3x5mm screw.

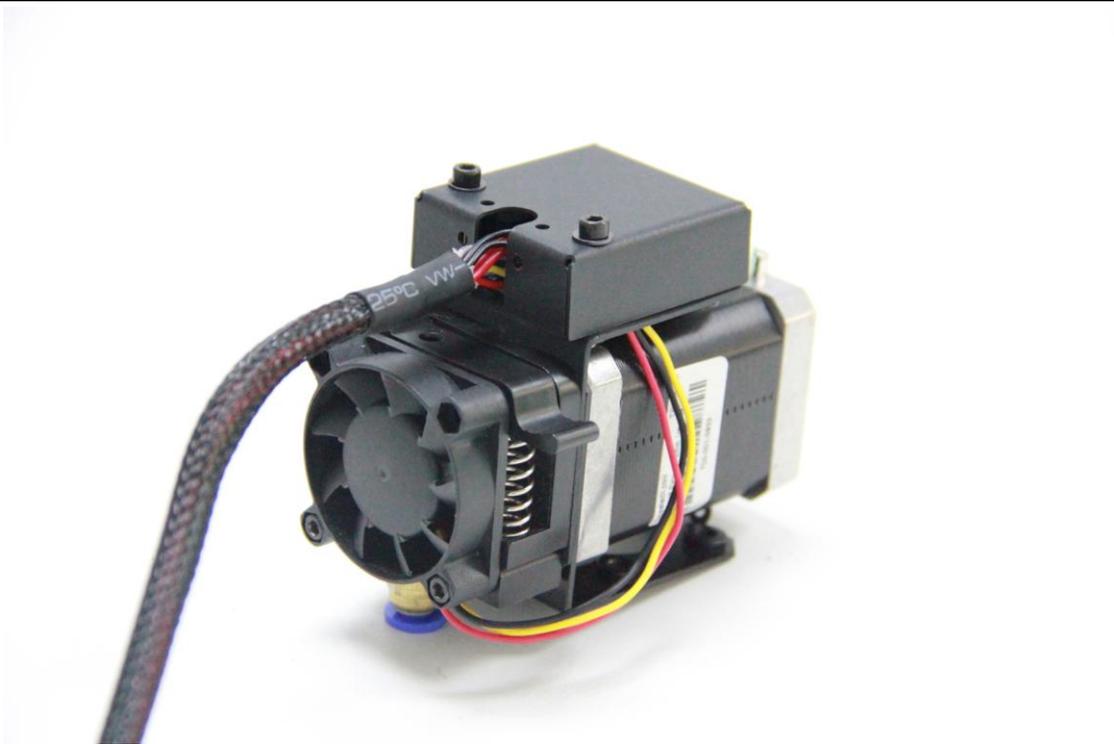


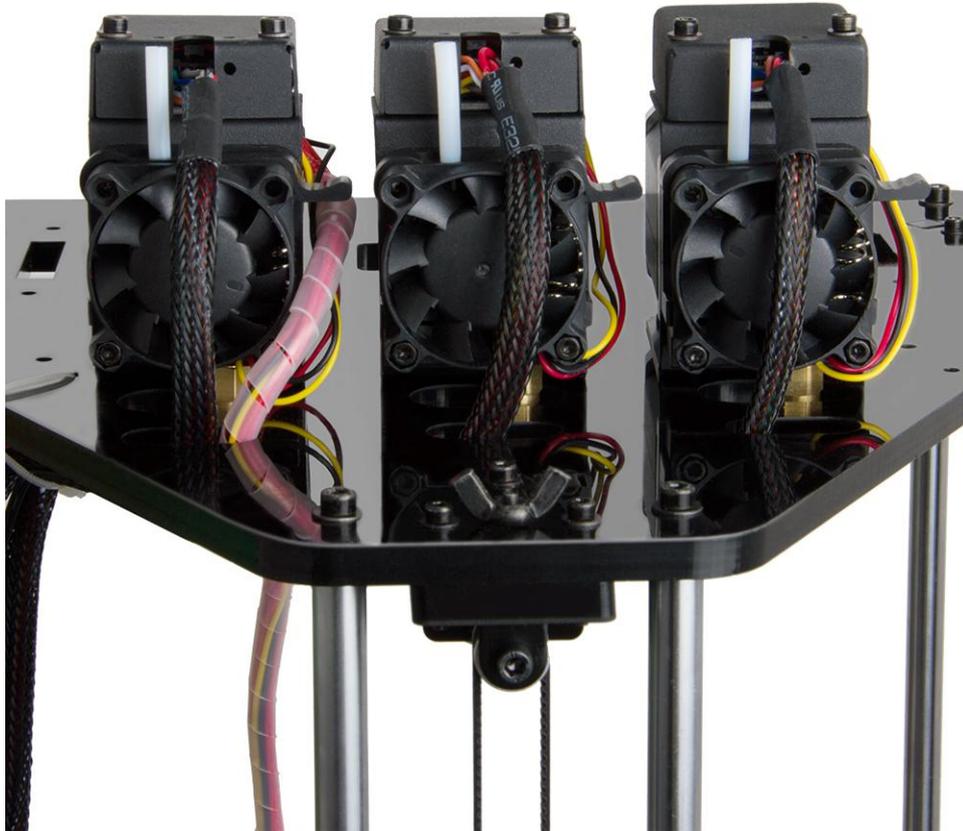
### Mount extruder 1(E1) and extruder 2(E2)

Extruder 1 and Extruder 2 are much easier to be assembled. You can follow the above steps except that there are no wires for the hotend, so you just need to connect the motor wire and the fan wire.

You can finish the extruder assembly first and then mount them on the top plate.







Cut a piece of PTFE pipe and insert it into the filament feeding hole.

## 10 Mount the filament holder

Note: If you prefer, this step can be left for the very end of the assembly and configuration process.

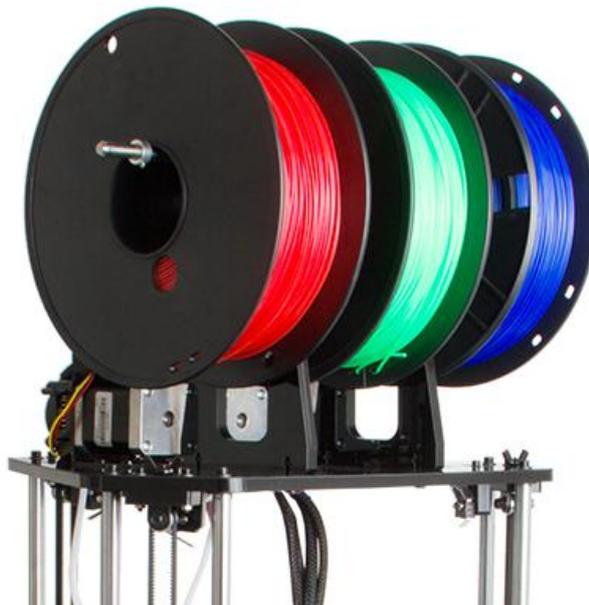
Name	Part #	Qty.	Picture
Spool holder Side panel	#A10	1	

Spool holder Side panel	#A11	1	
M3x16 screw	#21	4	
Square nut	#13	4	
locking ring	#30	4	
Filament Spool	#2	1	

- Step 1. Fit the spool holder side panel (#A10) in to the locating holes on the top plate (#A1) and fix in place with M3x16 screw (#21), M3 square nut (#13) and washer (#5).
- Step 2. Repeat the previous step with the other spool holder side panel (#A10) fixing in place with M3x16 screw (#21), M3 square nut (#13) and washer (#5).
- Step 3. Slide the Filament Spool (#2) through the holes and lock the two sides in place with the locking rings (#30). Then put filament on the two sides and lock them with locking rings.

You can finish this step later when you start printing.

[Video](#)

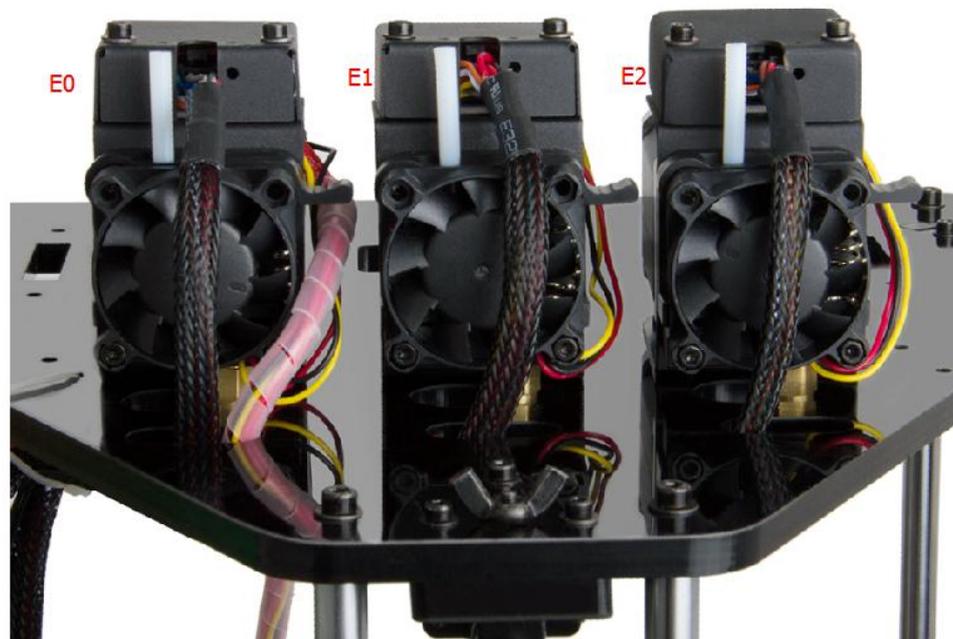


## 11 Connect the Bowden tubes

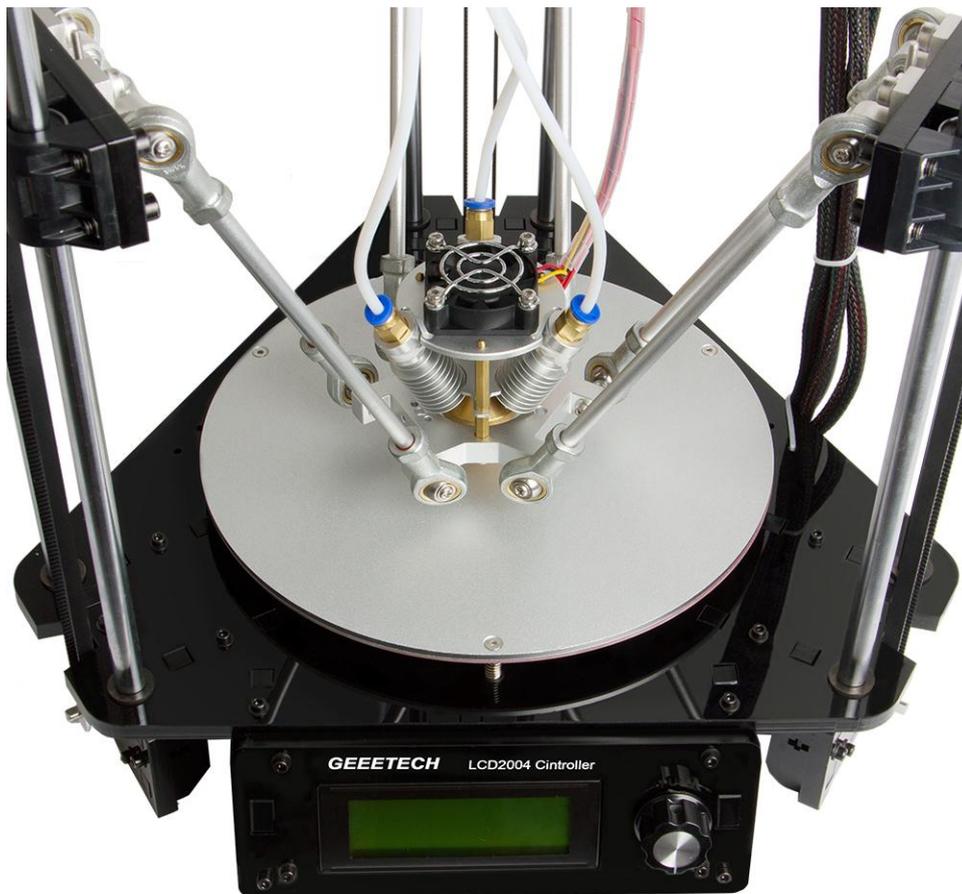
Name	Part #	Qty.	Picture
bowden tubes	#41	3	

Step 1. Plug one end of the bowden tubes (#1) into the push-fitting located at the top of the hot end (identified by the blue plastic ring) and the other end into that of the extruder.

Note: Before connecting the feeding pipe, you need to match the extruder and the hot end. From the viewpoint of back (“Z” tower) the left side extruder is referred to as “extruder 0” and the right one is “extruder 2”.

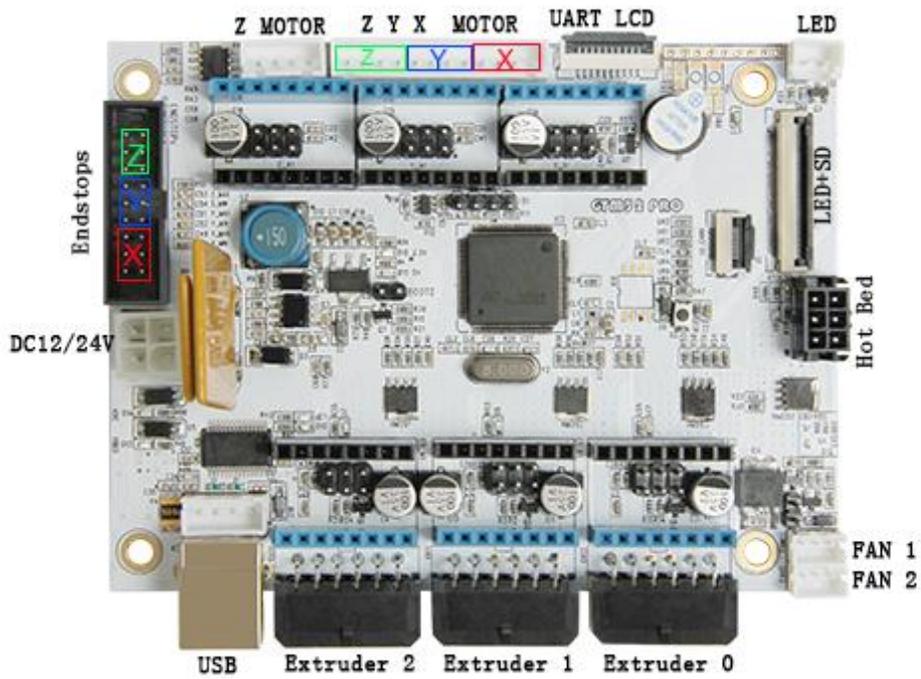


1. Before inserting the bowden tube into the HeatSinks, cut off a small piece perpendicular the end as to make a perfect right angle cut. This is to eliminate the gap between the tube and the hotend which will also help avoid clogging.
2. At the motor end of the bowden tube, drill the inside of the tube using an exacto knife (or another sharp tool) in order to create a small funnel. When loading filament this will help guide the filament into the tube. Be absolutely sure to remove all excess from drill remaining before inserting the tube into the extruder coupling since you do not want this residue ending up inside the hotend as it will most likely cause clogging of your hotend.
3. Prior to applying filament you must fully insert the bowden tubes (approx. 60 mm) into the end of the three HeatSinks. If you do not, the HeatSinks will get clogged and the filament gets stuck!



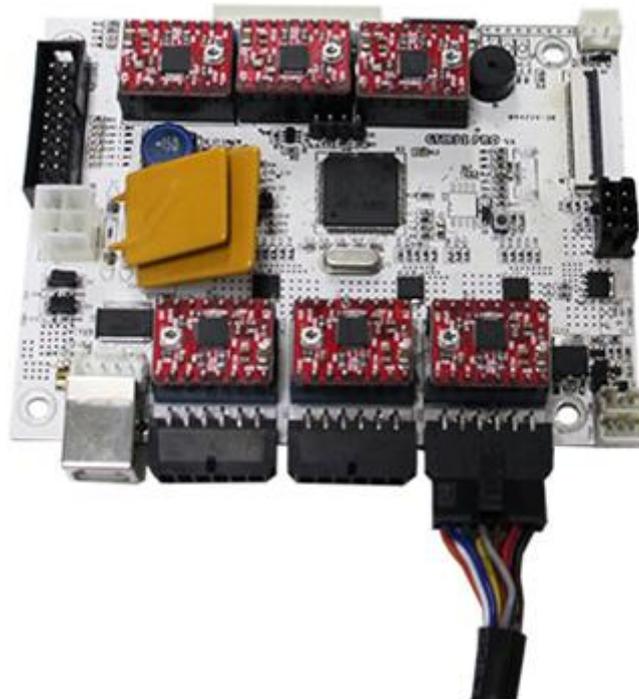
## 12 Wiring

Before you start wiring, please take a look at the wiring schematics.

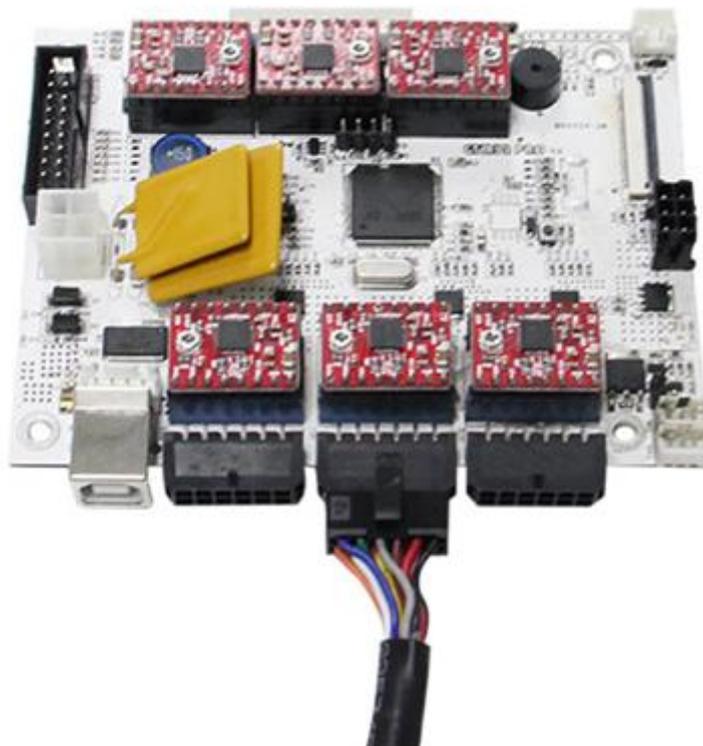


**1 Connect wires for motors.**

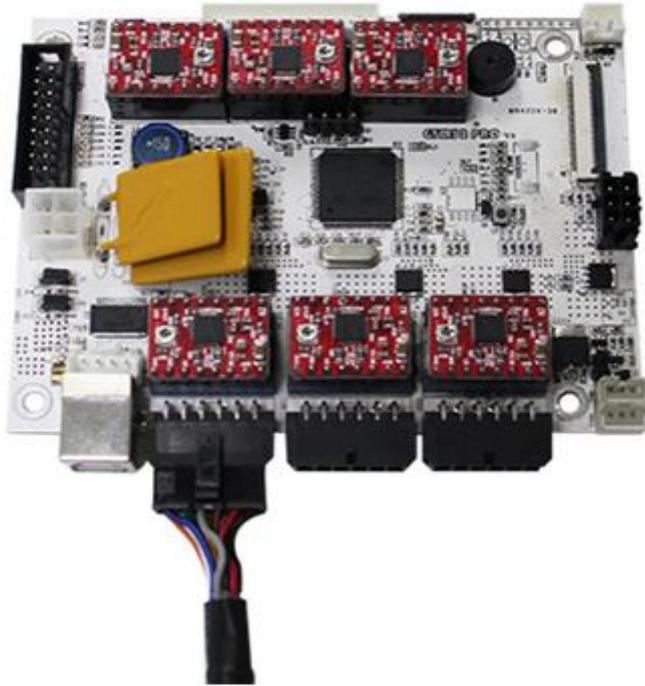
Step 1.Connect wires for E0.



Step 2.Connect wires for E1.

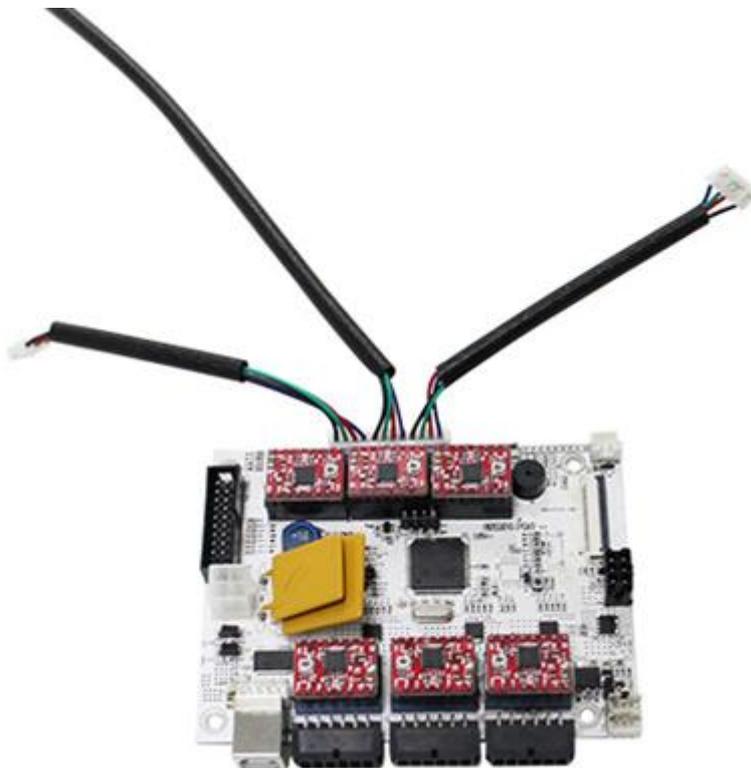


Step 3.Connect wires for E2.

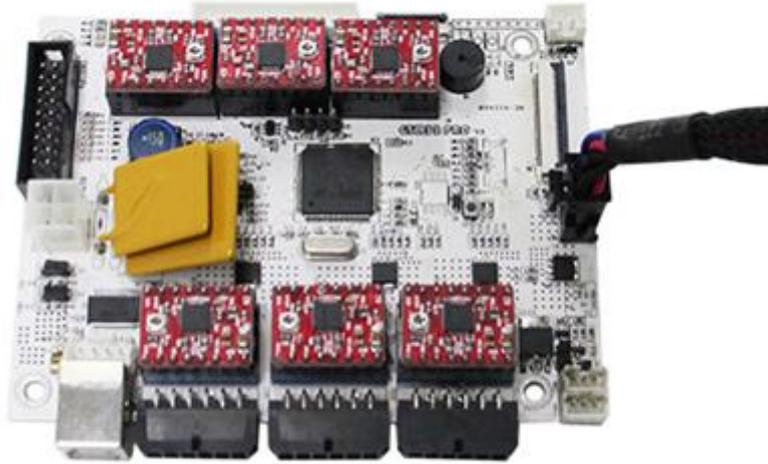


## 2 Connect X/Y/Z motor(s)

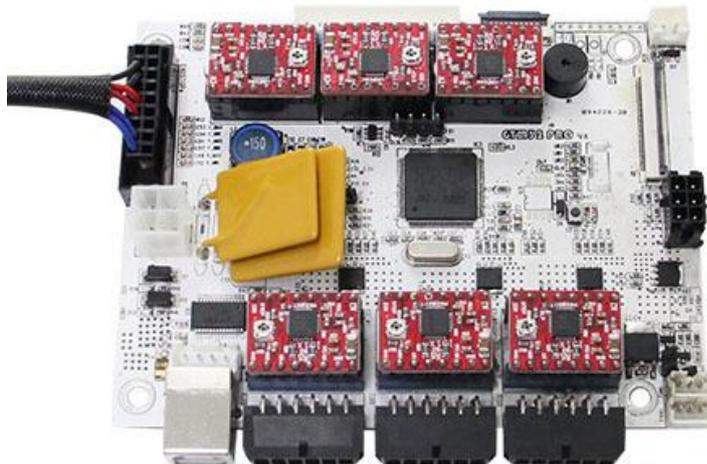
Step 1.Identify which MOTOR you are connecting; this connector plug is for X/Y/Z.



**3 Connect heat-bed wires**

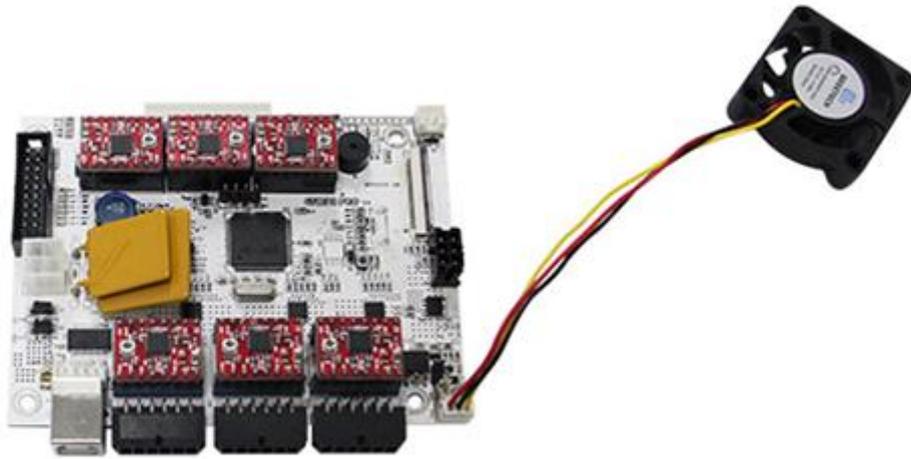


**4 Connect wires for endstop**

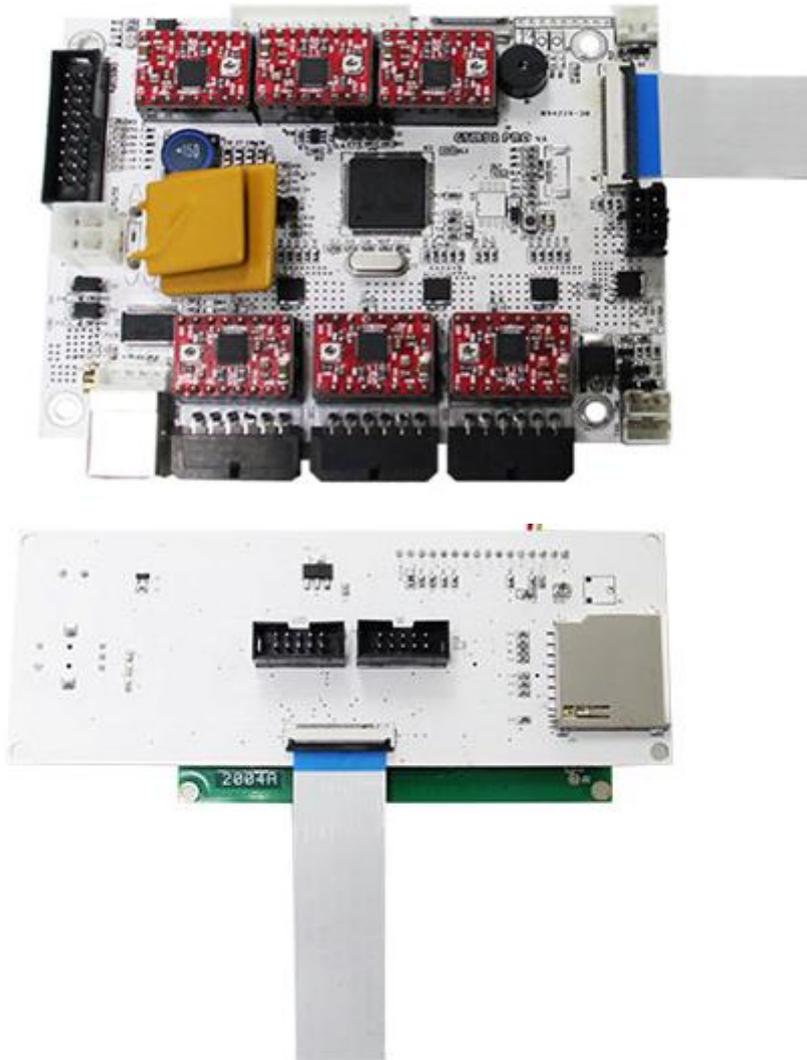


## 6 Connect wires for Fan

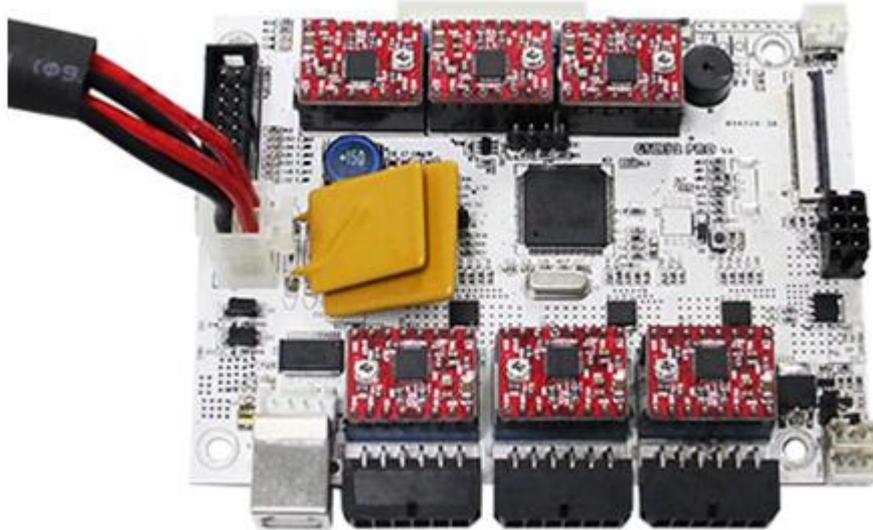
Step 1.Connect control board fan to FAN0.



**7. Connect wires for LCD panel**

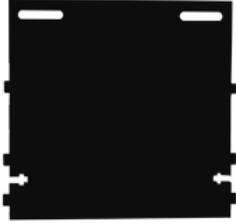


**8 Connect wires for power input**



### 13 Assembly of PSU protective case

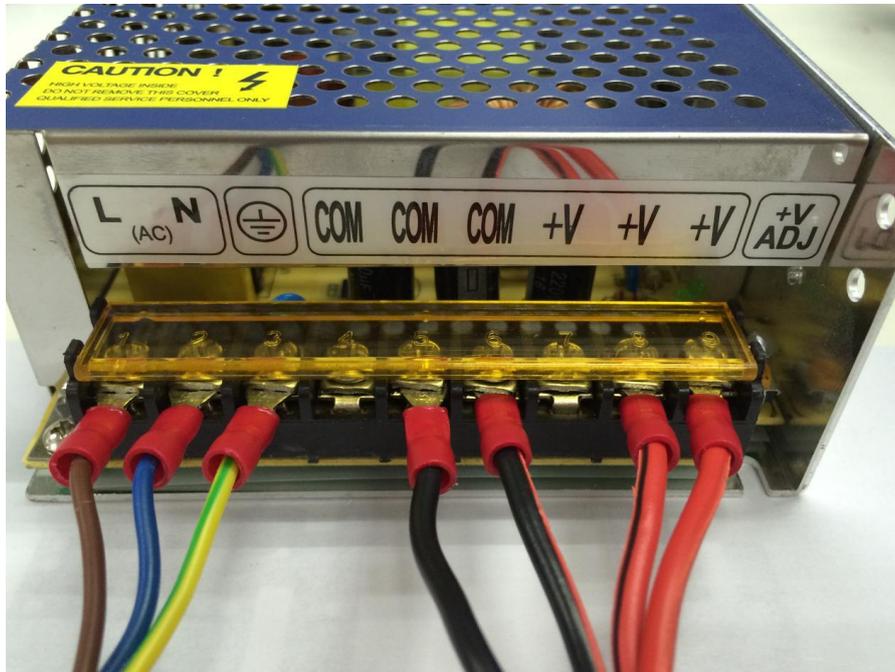
Name	Part NO.	Qty	Pic
Power Supply Unit	NO.58	1	
Power Cable	#63	1	
Power Cable	#60	1	
PSU case part1	A13	1	

PSU case part2	A14	2	
PSU case part3	A15	1	
PSU case part4	A16	1	
Hex sunk screw	#14	2	
M3 nut	#9	2	
M3 x 12 mm screw	#20	6	
Square nut	#13	6	
M3 x 5mm screw	#18	3	

[Video](#)

**Caution: You must take extreme care at this point. Ensure that you connect the correct wires to the corresponding locations on the power supply.**

Step 1. Connect the wires as shown below.



You should take note of the colors and their corresponding connection as a mistake can cause you harm or damage the printer. If you are unsure of your skills and abilities here, please consult a professional.

---

BROWN		Live (L)
BLUE		Neutral (N)
GREEN /		Ground (GND)
YELLOW		
RED		Positive (+)
BLACK		Common (COM)

As the power supply unit (PSU) is not physically connected to the actual printer, it is best to be kept next to the printer, you should take good care of it; keep it away from kids and pets.

We add a protective case for the PSU.

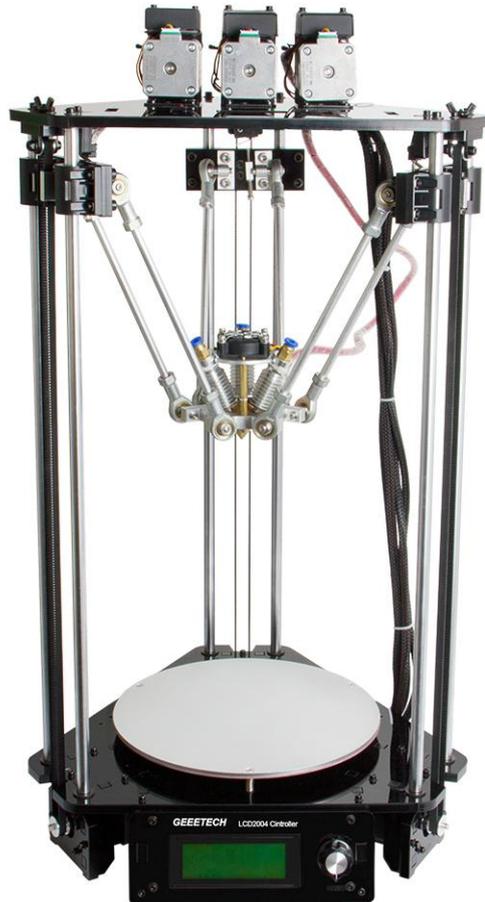


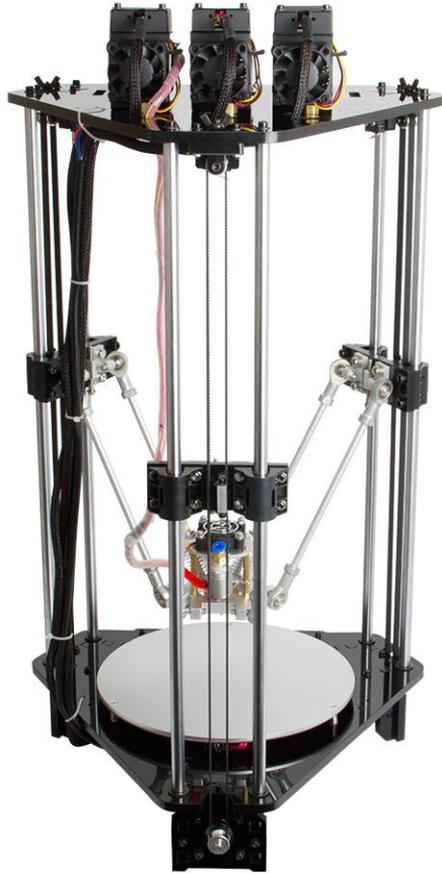


## 14Tidy out the wires

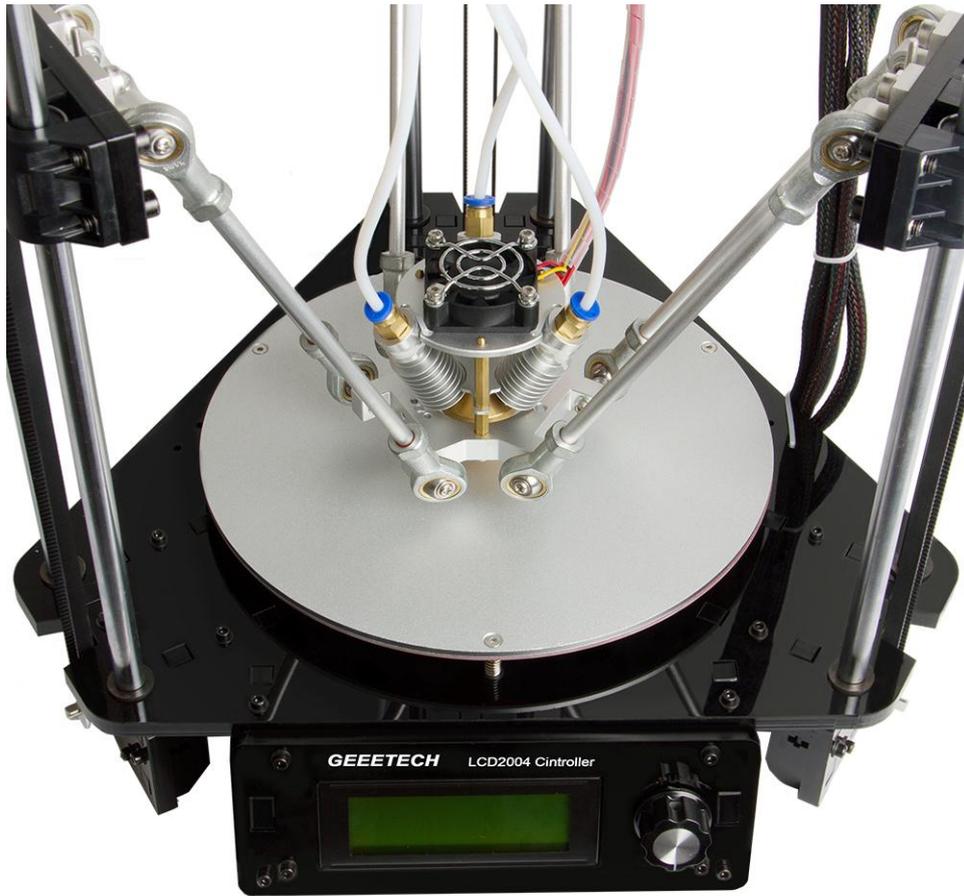
Use the provided spiral coil and zip ties to neatly bundle those wires together.

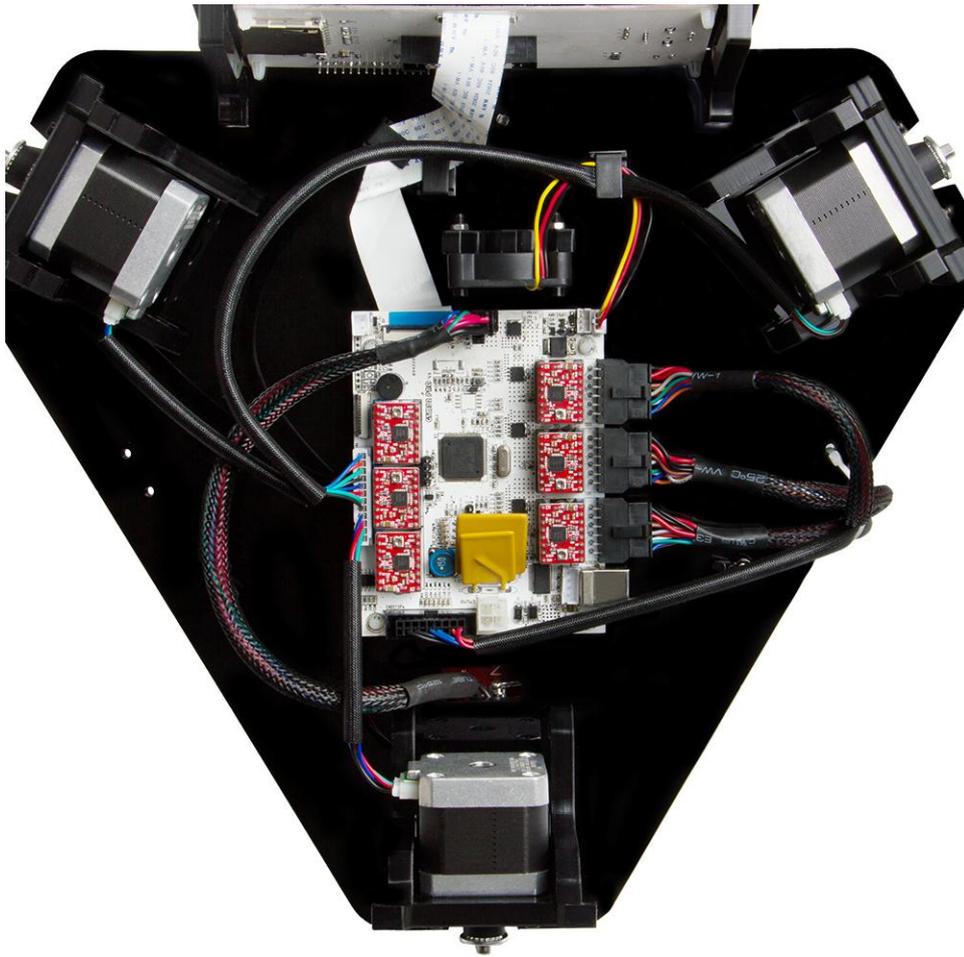
If you bundle the wires up before wiring the printer, you are advised to mark each wire with its function or location so as not to mix them up.











The Rostock 301 has been fully assembled.

## 15 Tips

Before printing your first project, it is critical that you correctly calibrate the printer. Skipping or rushing this step will result in frustration and failed prints later, so it is important to take the time to make sure your printer is correctly set up.

Each printer will have its own calibration procedure and this manual can not attempt to cover every variations and possible scenario. Instead we have provided you with a list of key points that should be addressed as your configuration and set up procedure.

- Frame is stable and correctly aligned.
- Rods are correctly aligned
- Belts are taut.
- Driving wheel turns smoothly
- Bed is level in relation to the path of the extruder.
- Filament rolls freely from the spool, without causing too much tension on the extruder.
- 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.

Extruder is calibrated in the firmware with the correct steps per mm of filament.

The point regarding the extruder step rate is vital. Slic3r expects that the machine will accurately produce a set amount of filament when told to do so. Too much will result in blobs and other imperfections in the print, too little will result in gaps and poor inter-layer adhesion.