Hardware Installation Manual

Support：VG-X4

Overall Size：570×436×88（L×W×H）

Print Size：310×256mm（L×W）

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Catalogue: 1. Parts list, 2. Installation, 3. Notice

1．Parts list

1.1 list of VG-X4 Writing Machine Kits

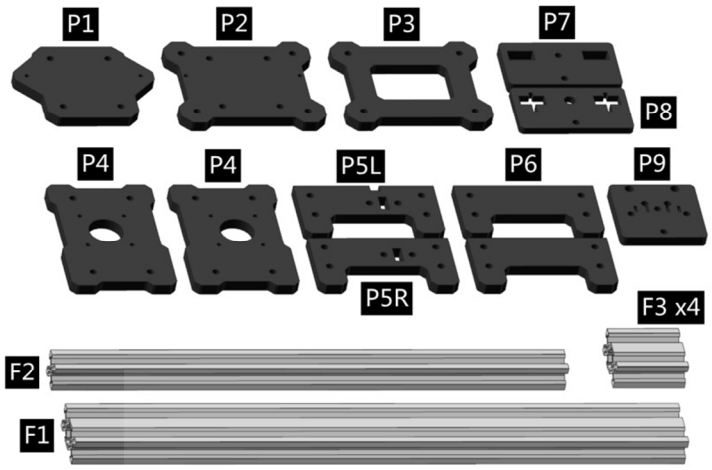
Serial N	Parts	Quantity
F1	430mm Aluminum profile	1
F2	360mm Aluminum profile	1
F3	50mm Aluminum profile	4
P1	Acrylic central plate A（Top，Thickness 8mm）	1
P2	Acrylic central plate B（Middle，Thickness 8mm）	1
P3	Acrylic central plate C（Bottom，Thickness 8mm）	1
P4	Acrylic motor plate（Thickness 8mm）	2
P5L、P5R	Acrylic leg A（Inside，Thickness 8mm）	2
P6	Acrylic leg B（Outside，Thickness 5mm）	2
P7	Acrylic rear plate A（Thickness 8mm）	1
P8	Acrylic rear plate B（Thickness 5mm）	1
P9	Acrylic front plate（Thickness 8mm）	1
W1	Flat pulley	8
M1	Stepper motor	2
M2	Synchronous pulley and Set screw	2 kits
W2	Driven pulley	4
S1	Inner hexagon screw（M5×45，Fastening the acrylic central plate and flat pulley）	8
S2	Inner hexagon screw（M5×20，Fastening the acrylic leg plate, front plate, rear plate and pen control kit/Laser kit）	9
S3	Inner hexagon screw（M5×12，Fastening the acrylic motor, leg and front plate）	25
N1	Antiskid nut（M5，Fastening the acrylic central plate and flat pulley）	8
N2	Square nut（M5，Fastening the acrylic motor plate and synchronous belt）	13
N3	L type connector（M5 Nut，Fastening the acrylic front and rear plate）	2

Serial N	Parts	Quantity
S4	Set screw（M5，Fastening the acrylic front plate, rear plate and synchronous belt）	4
N4	Nut column（M5×6，Fastening the acrylic central plate, flat pulley and pen control kit/Laser kit）	18
S5	Inner hexagon screw（M3×35，Fastening the Driven pulley）	2
S6	Inner hexagon screw（M3×10，Fastening the Stepper motor）	8
N5	Nut（M3，Fastening the Driven pulley on central plate）	2
N6	Nylon column（M3×5，Fastening the Driven pulley on central plate）	2
N7	Nylon column（M3×7，Fastening the Driven pulley on central plate）	2
S7	Inner hexagon screw（M5×8，Fastening the control board）	3
S8	Smooth axle（M3×20，For the Driven pulley on the rear plate）	2
B1	Synchronous belt（1800mm）	1
M3	Motor wire（600mm）	1
/	Motor wire（100mm）	1
/	Flat wire（500mm）	2
C1	Main control board	1
C2	Side switchboard（Contain 3Pin wire）	1
C3	Central switchboard	1
C4	Front switchboard	1
C5	USB cable	1
/	Encryption lock	1
/	Power adapter	1
/	Single-sided adhesive pad(10mm x 2)	1
D1	Pen control kit	1
L1	Laser kit	□
/	Protective glass	□
/	Hardware installation manual	1

2 . Installation

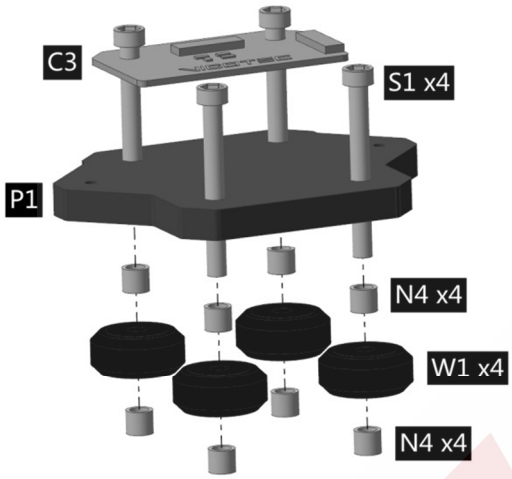
Please read the following installation instructions and control board instructions carefully, and pay attention to the sequence of installation. The shape of parts in the following installation instructions is only as a sigh. Please refer to the shape of the actual parts purchased. Please pay attention to the clearance between the pulley and the profile in center part, and also it should be able to slide smoothly in both directions. Please pay attention to the position of the synchronous wheels on the stepper motors.

2.1 Installation instructions

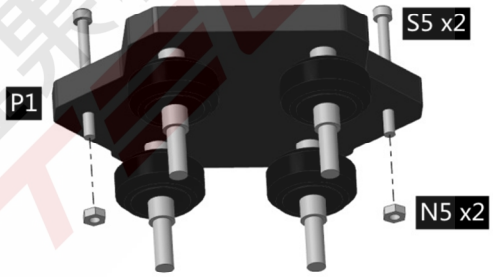


1. Part examples and serial numbers A。

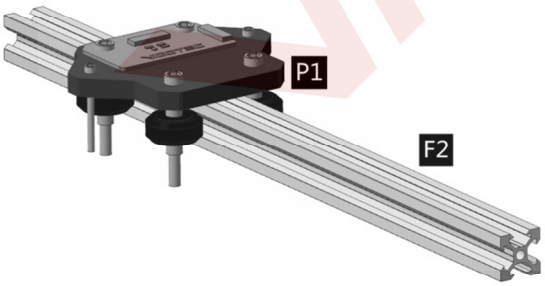
2. Part examples and serial numbers B。



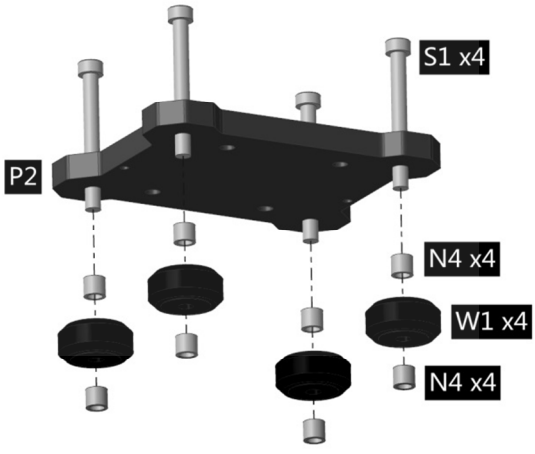
3. Install the plate P1, central switchboard C3 and flat pulley W1.Because there is a small clearance between S1 and hole of P1, this part needs to be adjusted in the following steps.



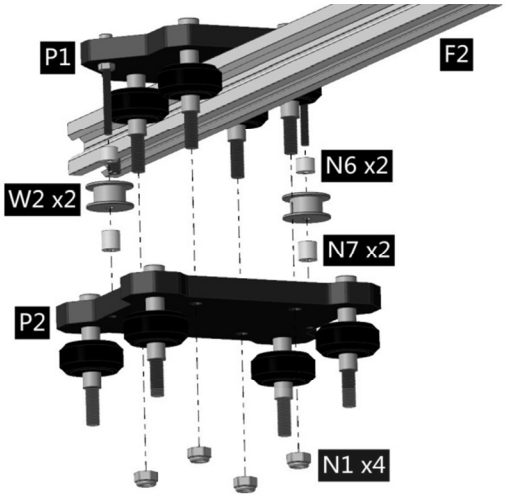
4. Install the driven pulley screw S5 and nut N5 to the plate P1.



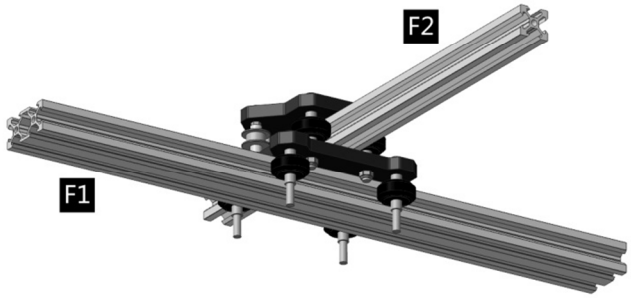
5. Slide the profile F2 into the central plate P1. As described above, please adjust the S1,N4 and pulley W1 in step 3 repeatedly to ensure no clearance between pulley W1 and profile F2. At the same time, it should slide smoothly.



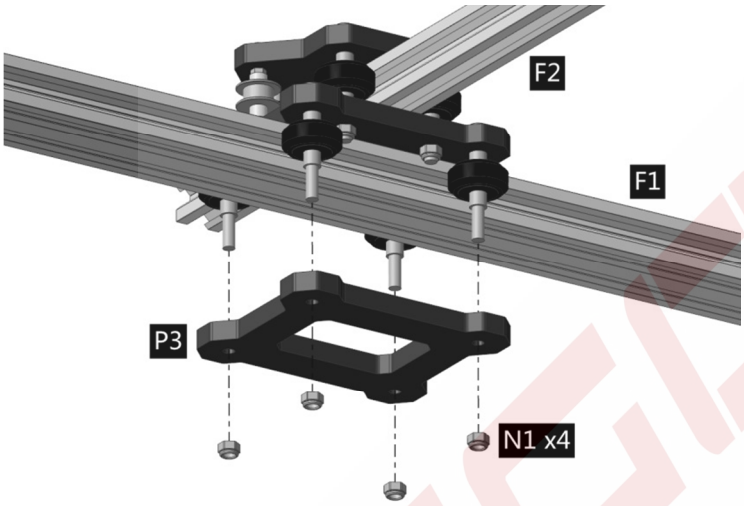
6. Install the central plate P2 and flat pulley W1. Because there is a small clearance between S1 and hole of P2, this part needs to be adjusted in the following steps.



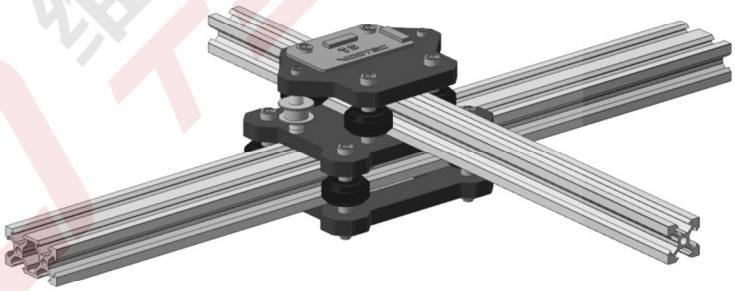
7. Install P2 to P1, and Fastening it with nut N1.



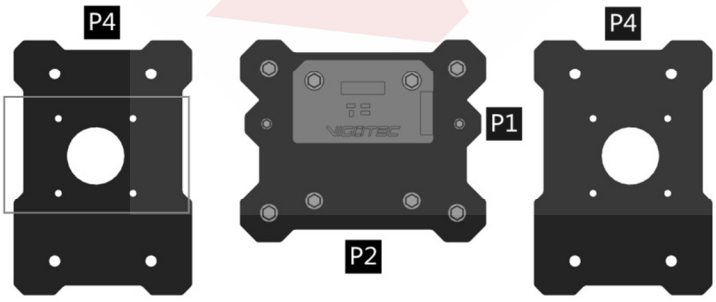
8. Slide F1 into P2 and cross with F2. As described above, please adjust the S1,N4 and pulley W1 in step 6 repeatedly to ensure no clearance between pulley W1 and profile F1. At the same time, it should slide smoothly.

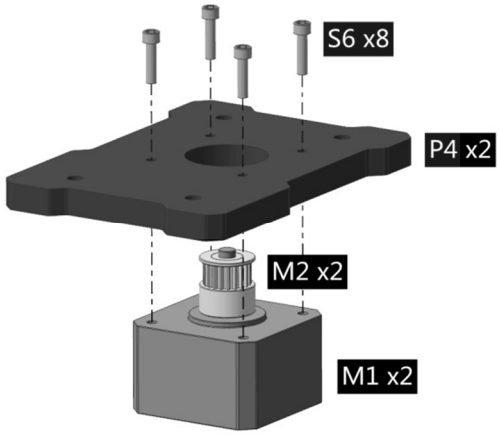


9. Install P3 and fastening it with nut N1, so the central cross structure is finished.

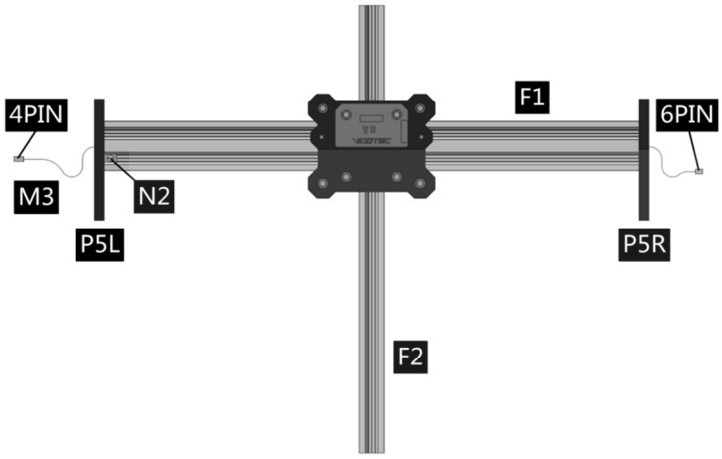


10. The central cross structure after completion.

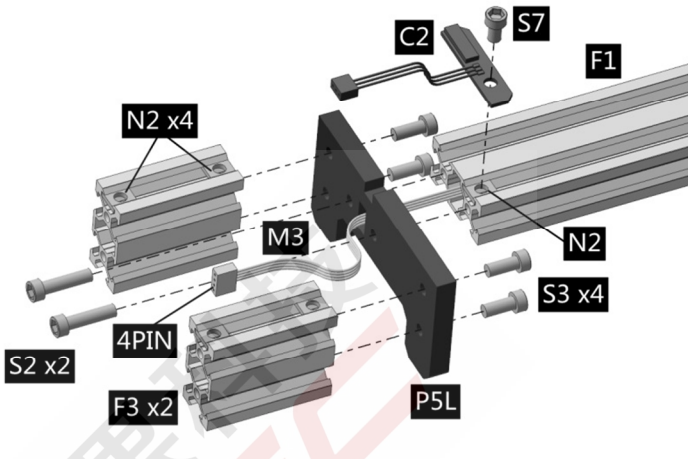




11. The relative position with the motor plate P4 and the plate P1. Plate P4 is symmetrically arranged. Please pay attention to the installation position of the stepper motor M1 on the plate P4 in the frame line.

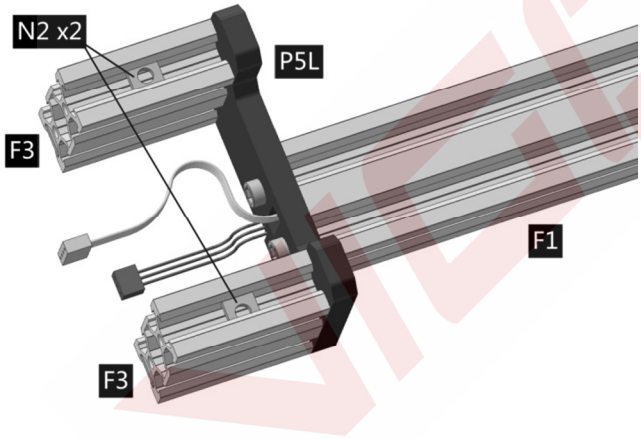


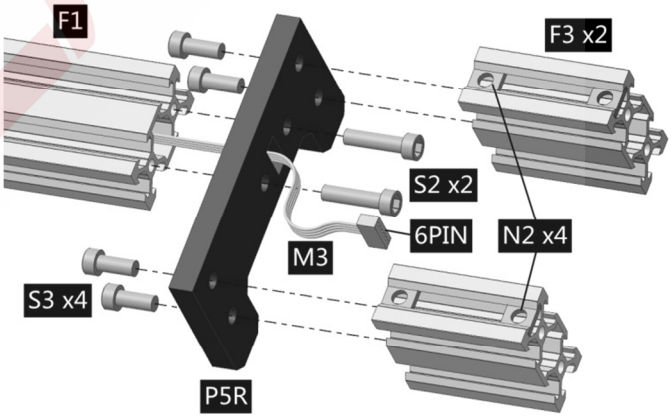
12. Please install M2 on M1 first, and pay attention to the position of M2.The gap between M2 and M1 is about 1mm and ensure that the synchronous belt remains level. Then, install M1 on P4, and notice that the position of stepper motor on P4 should be symmetrical.



13. The position of P5L, P5R. Motor wire M3 and N2 is showed above. M3 need to pass through the middle cavity of P5L, P5R and F1, and note that 4PIN is left on the left while 6PIN is left on the right. N2 should be slide into the left end of F1 and it will be used to fastening C2.

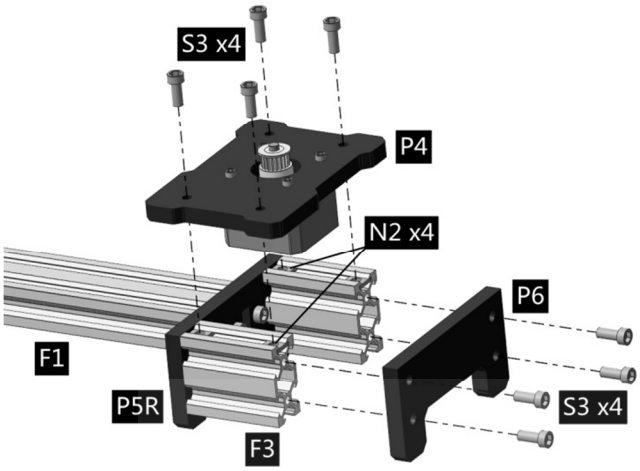
14. Install the left P5L, F3, etc. Notice that N2 should slide into F1 and F3 in advance, and notice that 4Pin of the motor wire M3 should be left here.



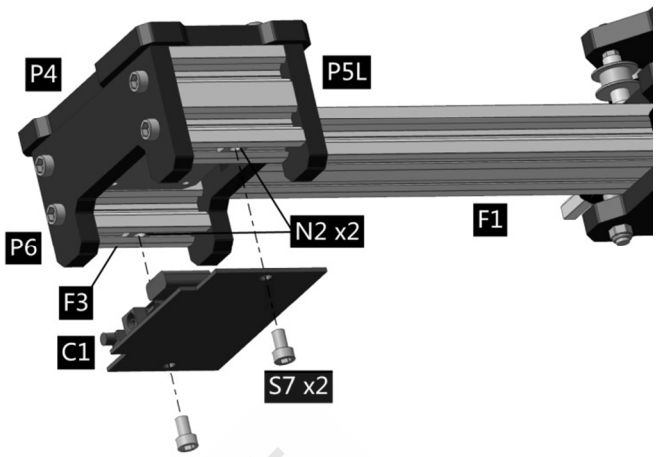


15.N2 should slide into the lower bottom of F3, and will be used to fastening the main control C1

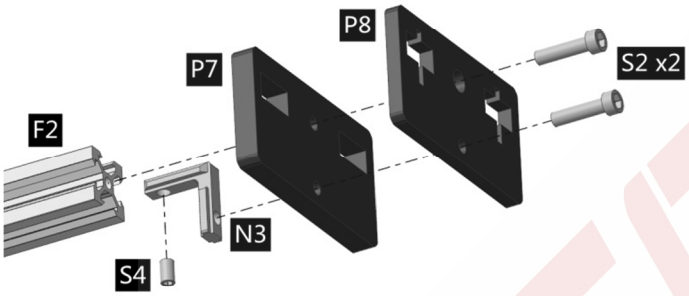
16. Install the right P5R, F3, etc. Notice that N2 should slide into F3 in advance, and notice that 6Pin of the motor wire M3 should be left here.



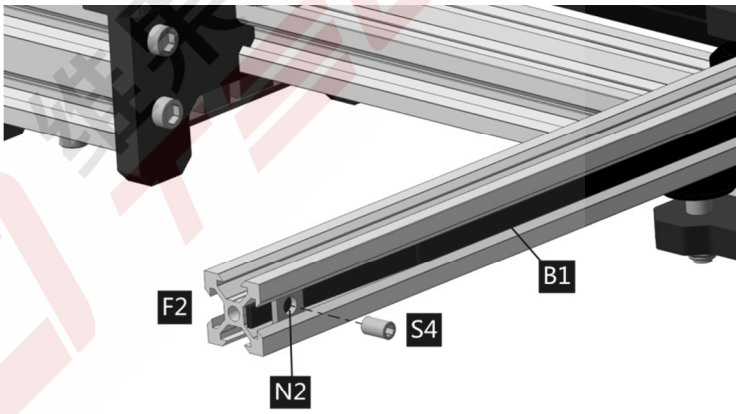
17. Install the right P4 and P6, and same way to install the left P4 and P6. Once again, please pay attention to the position of P4 on both sides. Cut the Single-sided adhesive pad to fit and stick them under the feet of P5 and P6.



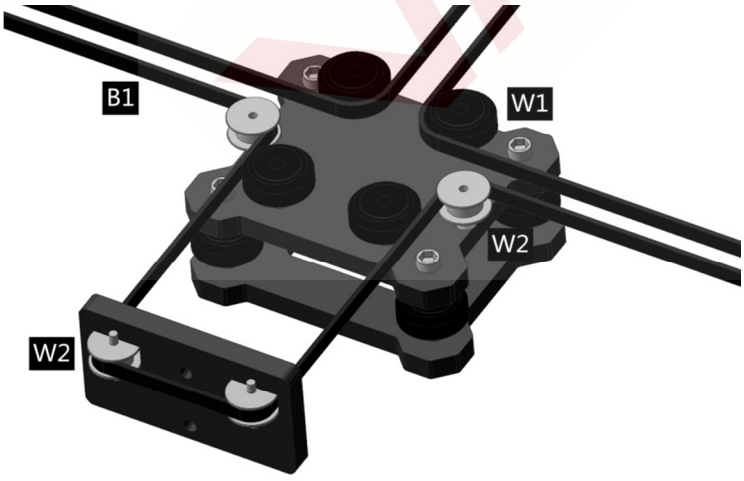
18. First, two motor wires and one PWM control line on C2 are inserted on the main control board C1, and then fastening C1 to F3.



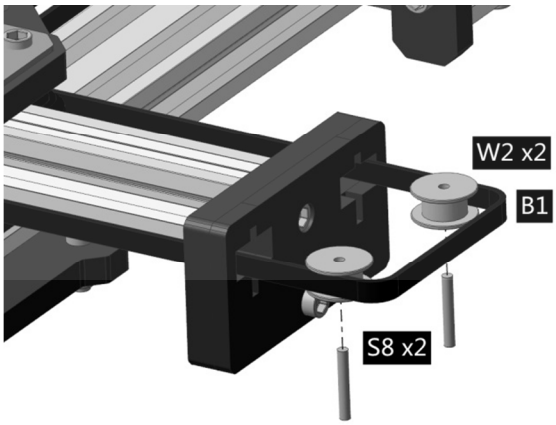
19. Install the rear plate P7 and P8.



20. Install the synchronous belt, please fastening it at the starting point with S4 and N2.

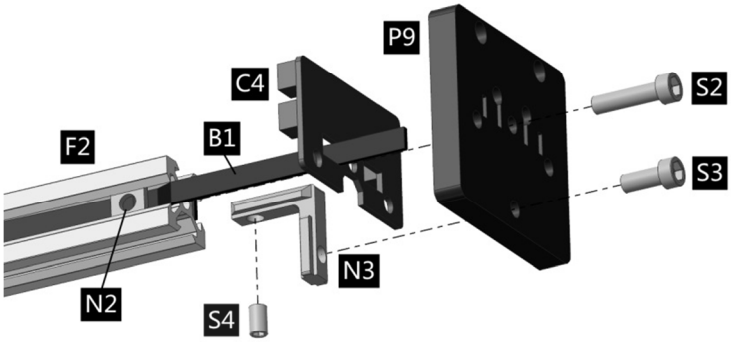


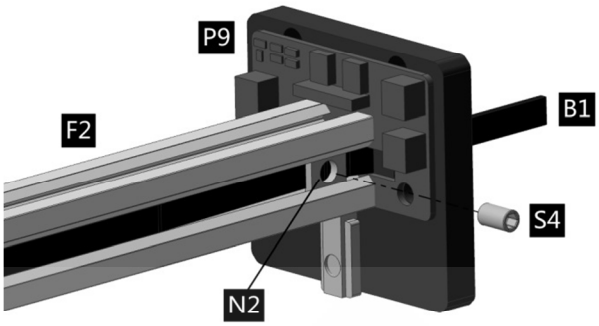
21. Install the synchronous belt according to the diagram above. It shows the position of synchronous belt at central



22. Install the synchronous belt at the rear plate.

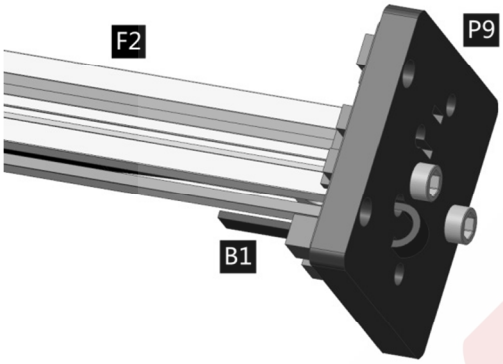
cross structure.

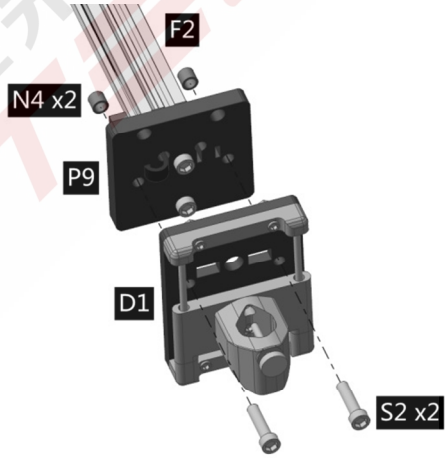




23. For convenience, please insert the flat wire into C4 first and then install the front panel parts. And cross the synchronous belt through C4 and P9. Please note that N2 should slide into F2 in advance.

24. Tighten the synchronous belt and fastening it with S4 and N2.

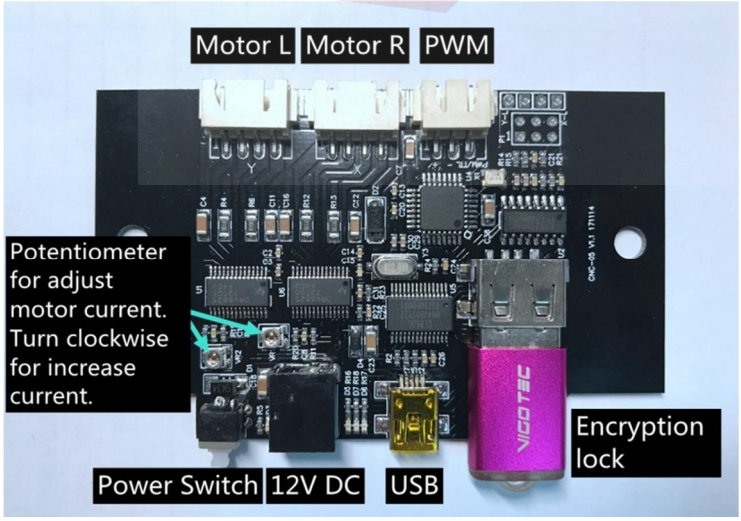


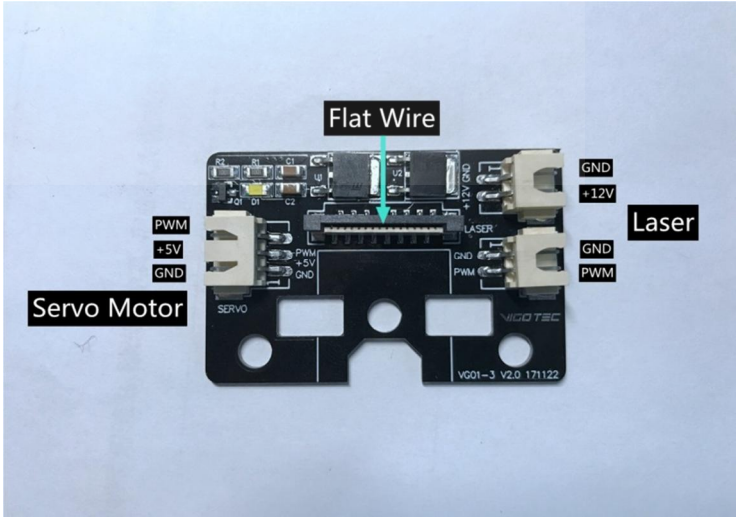


25. Put the synchronous belt back through the side hole and put in order.

26. Install the pen control kit.(The same way to install Laser kit if needed)

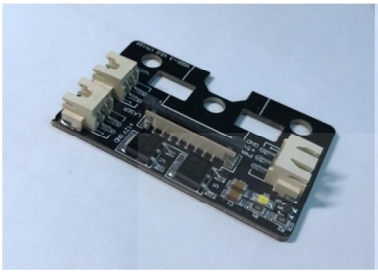
2.2 Control board instructions



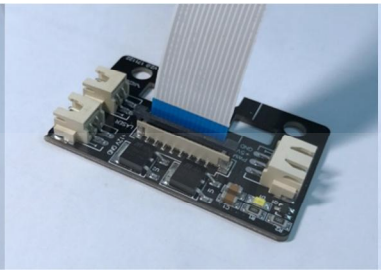


1. Instructions of main control board C1. The Motor L and R interface should connect to the left and right motor. Control interface should connect to the 3Pin wire of C2. In general, there is no need to adjust the motor drive current.

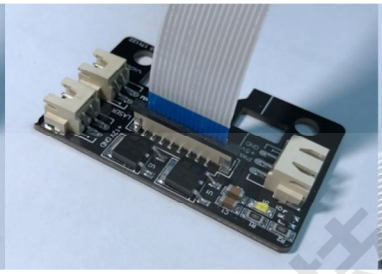
2. Instructions of switchboard C4. The left 3Pin interface is for servo and the right interfaces are for laser. Please not that never connect the servo to the right interface or the servo will be burned. And note that the flat wire interface of C4 is drawer type.



3. The flat wire interface of C4 is drawer type. Please lift the lock up first.



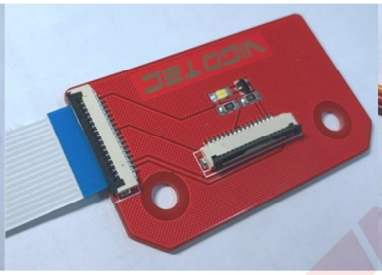
4. Insert the flat wire the hard contact behind.



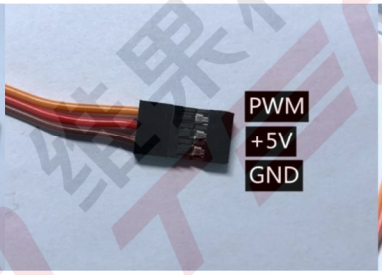
5. Press the lock down.

6. The flat wire interface of C2 and C3 are both flip type. Please turn the lock up first.

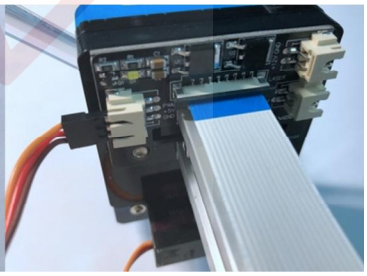
7. Insert the flat wire with the hard contact down.



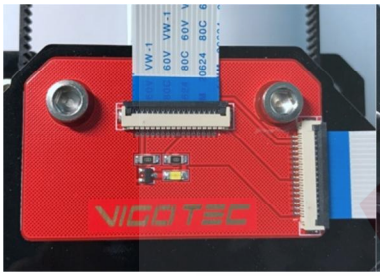
8. Press the lock down.



9. Instruction of servo. The orange line on servo is the PWM signal line

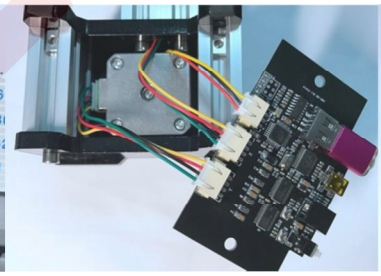


10. The switchboard C4 after the connection.

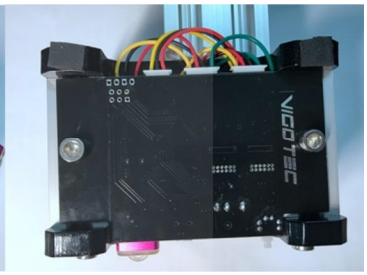


11. The switchboard C3 after the connection.

12. The switchboard C3 after the connection.



13. The main control board C1 after the connection.



14. The main control board C1 after the installation.

3 . Notice

Please pay attention to the sequence of the installation steps to avoid repeated disassembly. Please note that there are two types of drawer and flip in the flat cable port of the transfer board.

The shape of all parts above in this description is only as a sign. There may be a difference between the actual parts and the parts in the installation instructions. Please refer to the shape of the actual parts purchased.

Before opening the supporting software, please connect the device to the computer first. After connecting, the key indicator light is slowly flashing. And when the power switch is switched on, the power indicator light will always bright. When the software is communicating with the device, the communication indicator lights will flicker, and the lights are always bright on the central switchboard C3.

If the motor or servo is not working properly, please check the connection and the power supply first!

As described above, please pay attention to the clearance between the pulley and the profile in center part, and also it should be able to slide smoothly in both directions. Please pay attention to the position of the synchronous wheels on the stepper motors. If deviation happened in motion or it is not running smoothly, please check the above parts and adjust to best conditions.

4. Update

Our software will be updated continuously.

Please visit our website: www.vigotec.cn for more new products and software.

If use the Laser Kit:

Warning:

Strictly forbidden for laser irradiation of the eyes!

Strictly forbidden for watching laser without wearing protective glasses!

Strictly prohibit the use of children!

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