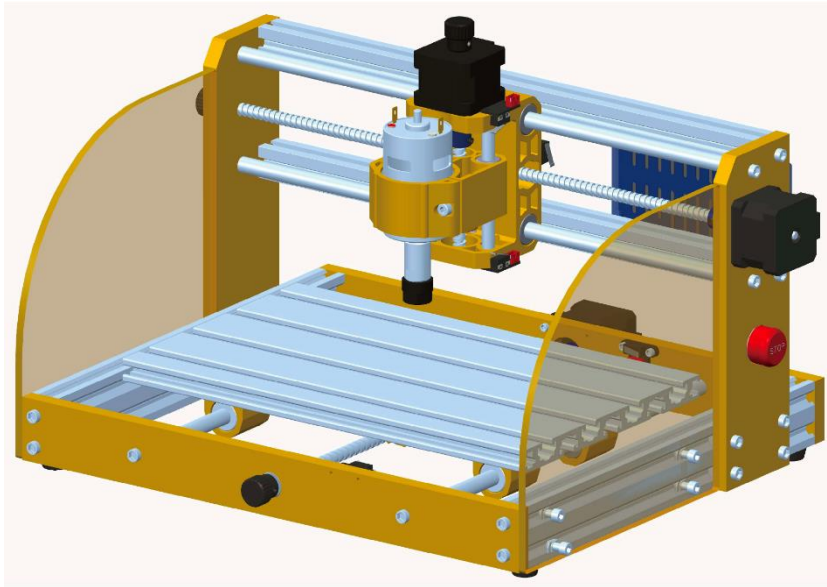


S3018 Prover CNC Engraving Machine



Catalog

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Scan for videos and guides



Safety Notice



Avoid direct laser radiation on eyes or skin



Away from children



Always wear protective glasses when use the laser



Prohibited from use in flammable objects or gases



Please cut off the power immediately in case of emergency

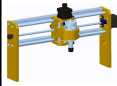
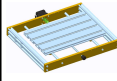














Shutdown steps: first cut off the power, then pull out the USB cable






Precautions

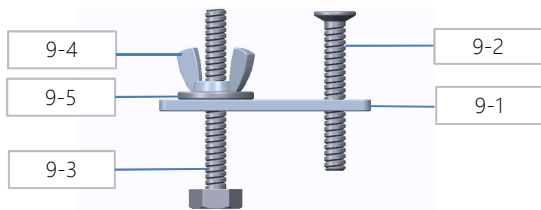
- (1). All parts description just for illustrative purpose. If there is any difference, please refer to the actual part shape.
- (2). Please make sure that the machine is under care when it is working.
- (3). If your machine is equipped with an offline controller, please note that the offline controller and the computer cannot be connected to the engraving machine at the same time, otherwise it will not work normally.
- (4). If the U disk in the machine kit can't be read, please scan the QR code to see how to download the software and related content.

1.Parts List

3018 Prover Parts List				
Part No	Part Name	Explanation	Quantity	Picture
1	Component for X-axis	—	1Set	
2	Component for Y-axis	—	1Set	
3	Inner hexagon screw	M5*16	8	
4	Trapezoidal nut	M5-20	8	
5	Inner hexagon screw	M4*10	4	
6	Trapezoidal nut	M4-20	4	
7	Rubber mat	—	4	
8	Milling cutter	—	2Set	
9	Fixture	—	4Set	
10	Inner Hexagon Wrench	2/2.5/3/4/5mm	1Set	
11	Nut Wrench	14/17mm	1Set	
12	Soft brush	—	1	
13	Line pressing plate	290/150mm	1	—
14	Protective wire net pocket	300mm(optional)	1	—
15	Winding pipe	500mm(optional)	1	—
16	Cable ties	—	6	
17	Instruction manual	—	1	—
18	U Disk	—	1	

Fixture (9) assembly


Part No	Part Name	Explanation	Quantity	Picture
9-1	Pressing plate	50*20*3	4	
9-2	Screw	M6*40	4	
9-3	Screw	M6*45	4	
9-4	Butterfly nut	M6	4	
9-5	Washer	M6*2mm	4	




Optional package

Laser Guard plate Emergency stop and limit switch Offline controller












Laser package (optional)

Part No	Part Name	Explanation	Quantity	Picture
L1	Laser kit	Optional	1 Set	—
L2	Laser wire	3P	1	—
L3	Protective glass	Optional	1	








Guard plate package

Part No	Part Name	Explanation	Quantity	Picture
D1	Guard plate	—	2	
D2	Inner hexagon screw	M5*10	8	
C3	Ship nut	M5-10	8	


Emergency stop and limit switch package

Part No	Part Name	Explanation	Quantity	Picture
G1	Emergency stop switch	—	1Set	
G2	X-limit switch	Already assembled	1	
G3	Y-limit switch	Already assembled	2	
G4	Z-limit switch	Already assembled	2	
G5	Y-limited block	Already assembled	1	
G6	X-limited block	Already assembled	1	
G7	Inner hexagon screw	M6*14,Already assembled	2	
G8	Inner hexagon screw	M3*6,Already assembled	4	
G9	Self-tapping screw	M2.6*8,Already assembled	2	
G10	Self-tapping screw	M2.6*6,Already assembled	4	
G11	Shim	Already assembled	2	
G12	Z1/Z2-Limit wire	2.0-2.54,Length 600mm	2	—
G13	X/Y2-Limit wire	2.54-3P,Length 600mm	2	—
G14	Y1-Limit wire	2.54-3P,Length 300mm	1	—

Control board package

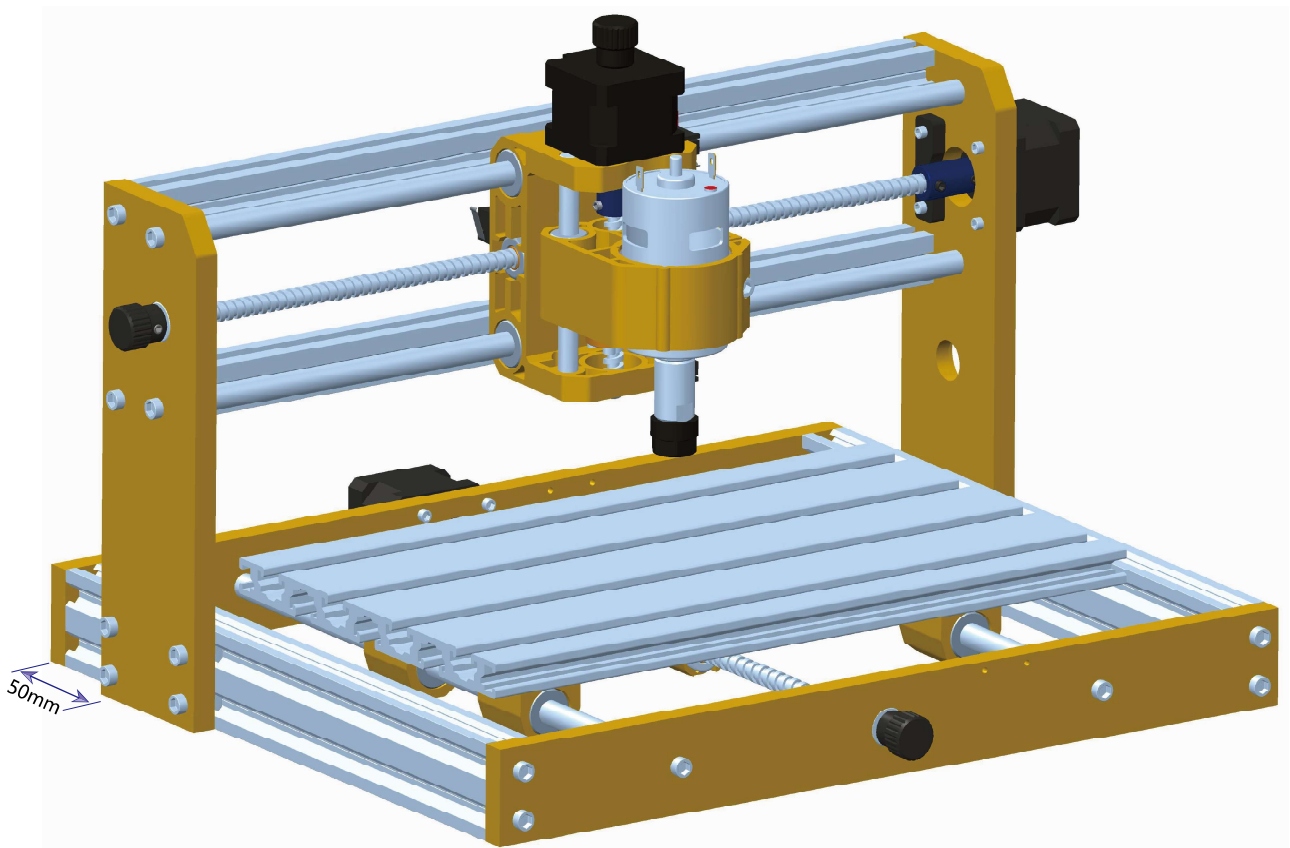
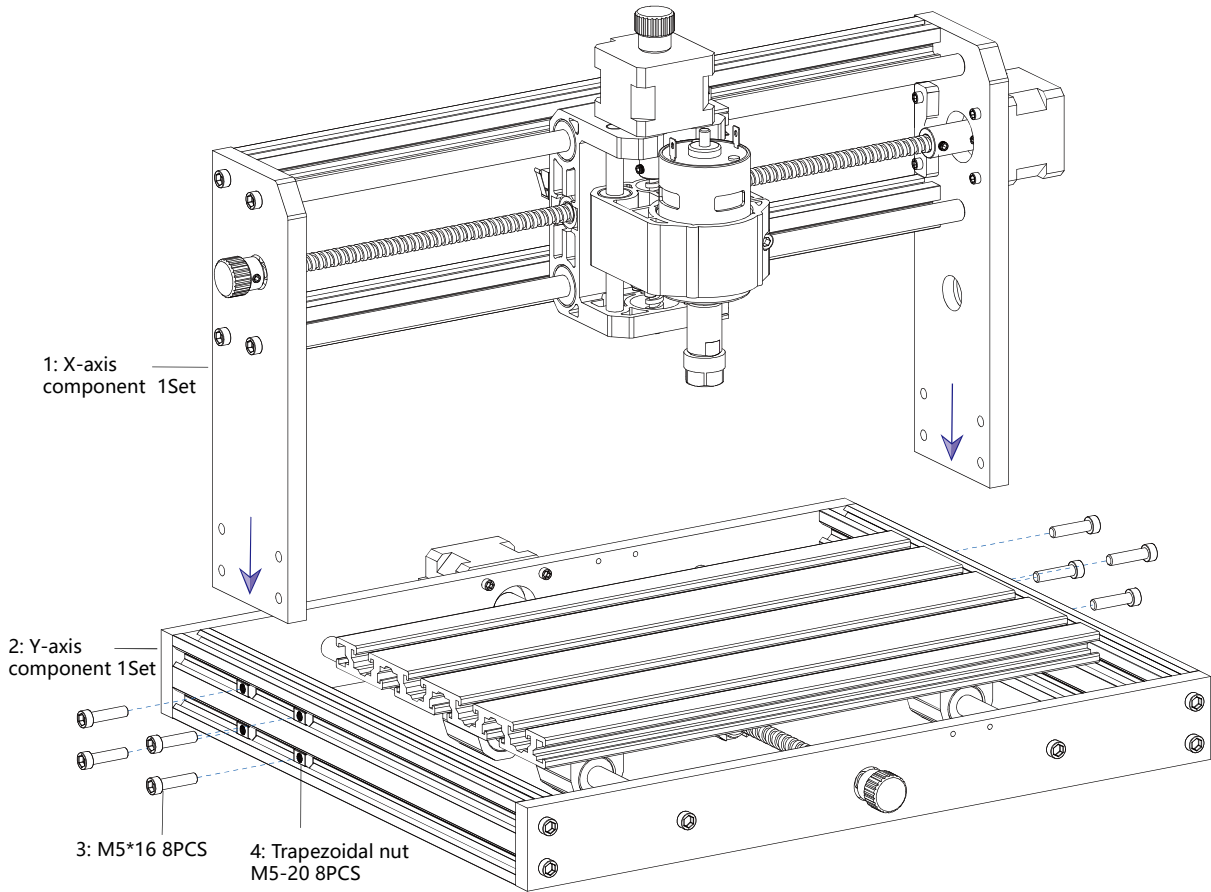
Part No	Part Name	Explanation	Quantity	Picture
C1	Control board	VIGOTEC	1Set	
C2	Inner hexagon screw	M5*12	4	
C3	Ship nut	M5-10	4	
C4	Stepper motor wire	4P,Length 480mm (X/Z)	2	
C5	Stepper motor wire	4P,Length 150mm (Y1)	1	
C6	Spindle motor wire	2P,Length 480mm	1	
C7	USB cable	—	1	—
C8	Power supply	24V,5A	1	

Offline controller

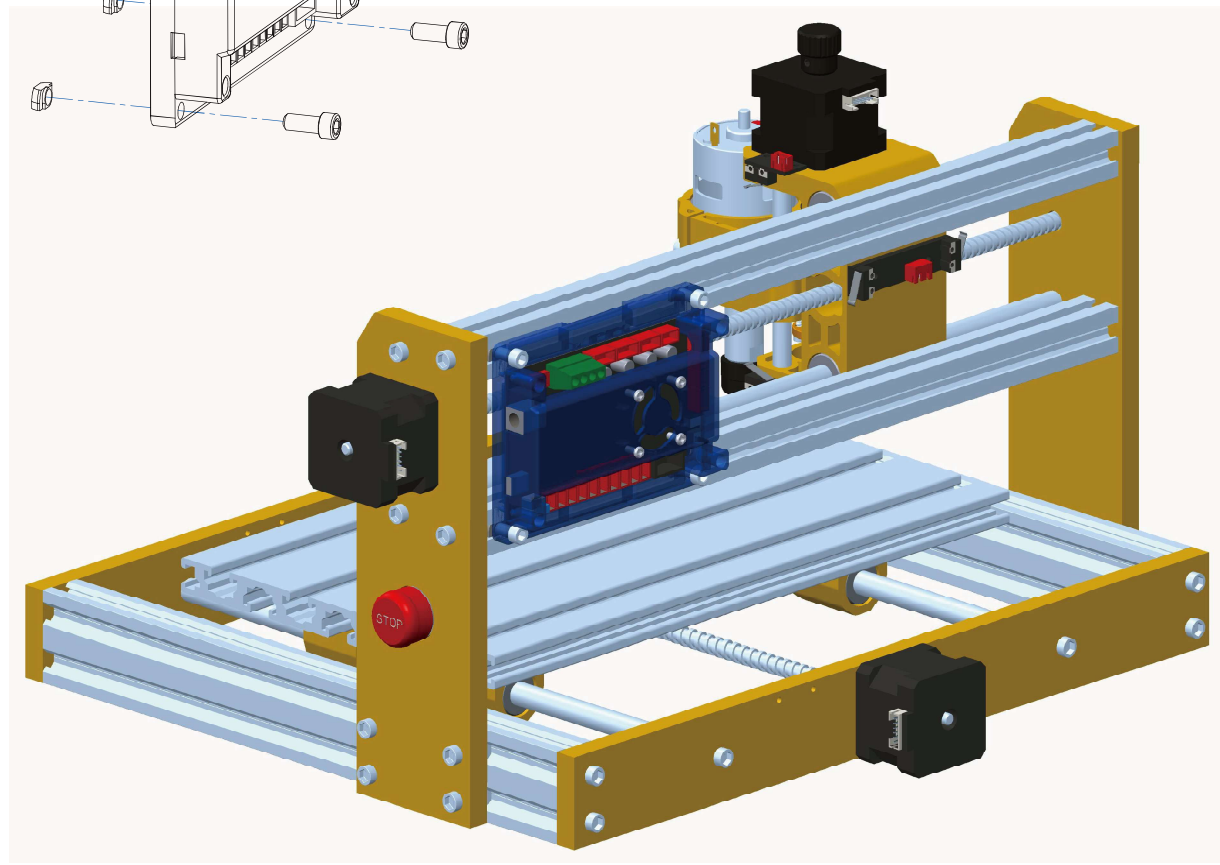
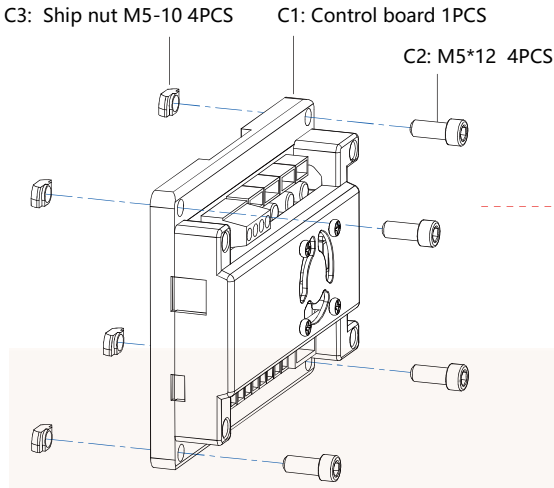
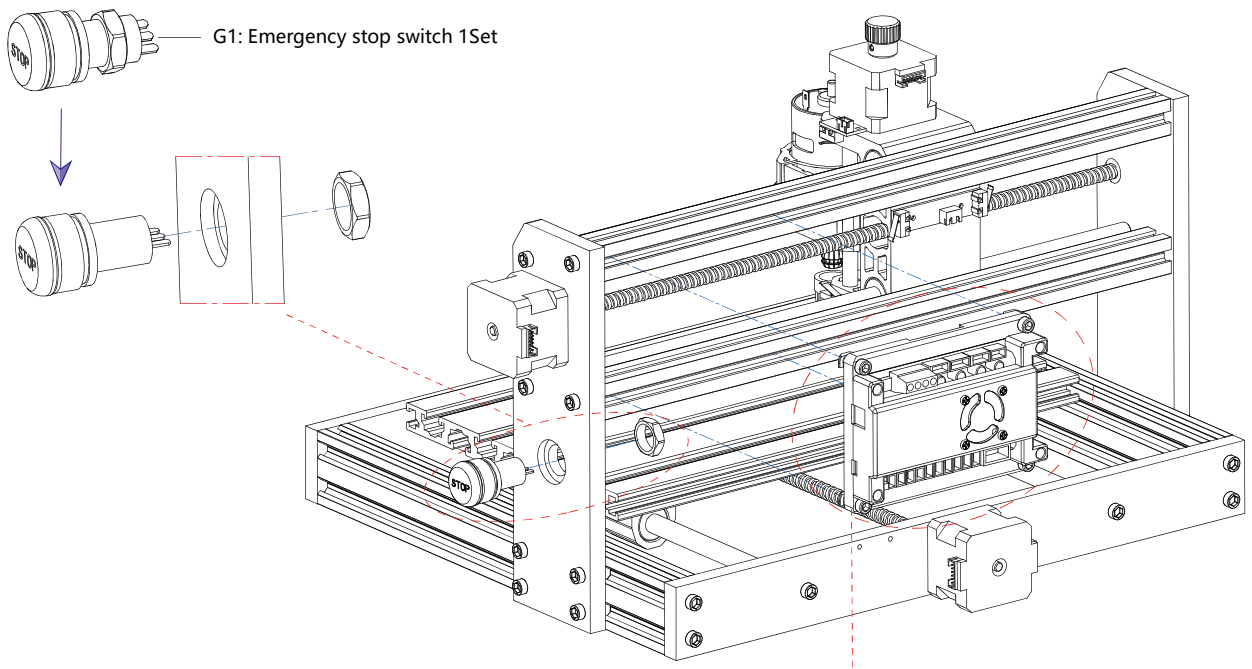
Part No	Part Name	Explanation	Quantity	Picture
C9	Offline controller and data cable	1.8 inches with SD card	1Set	

2. Machine Assembly

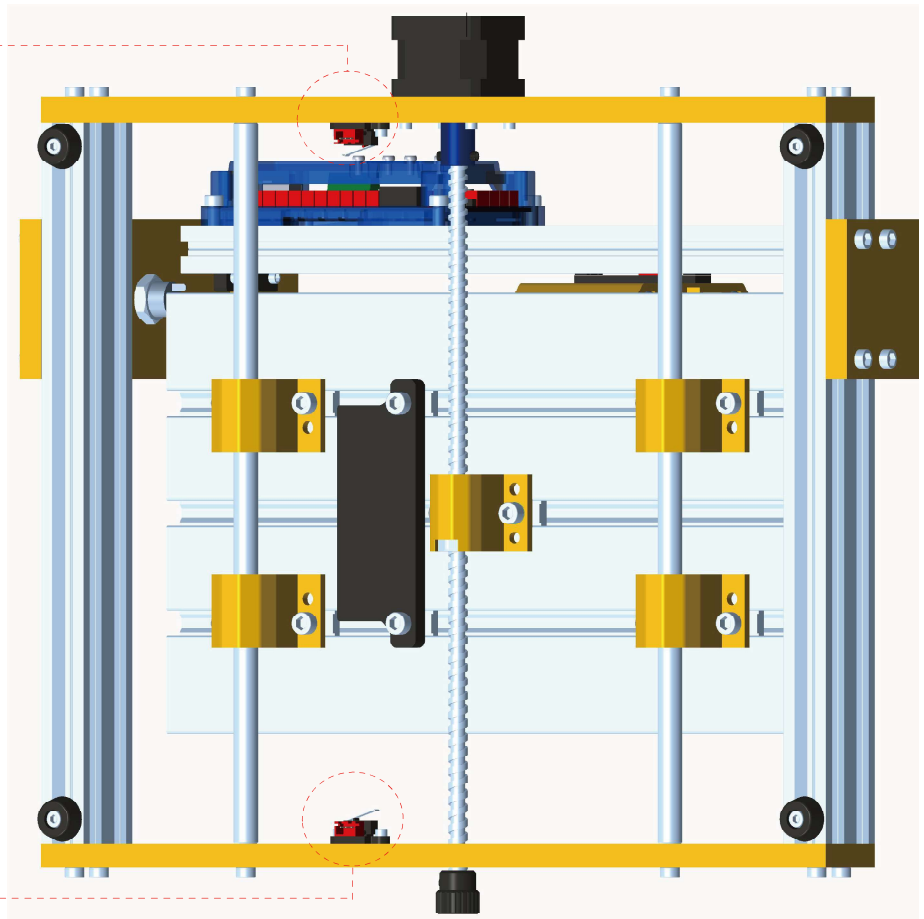
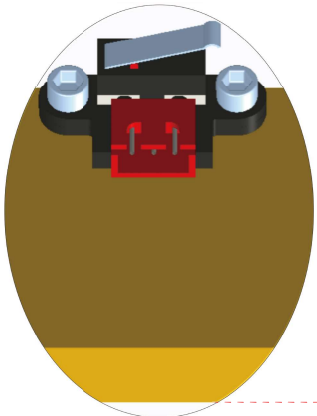
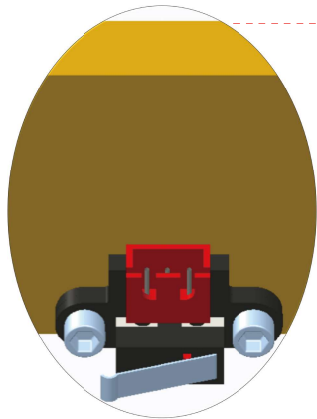
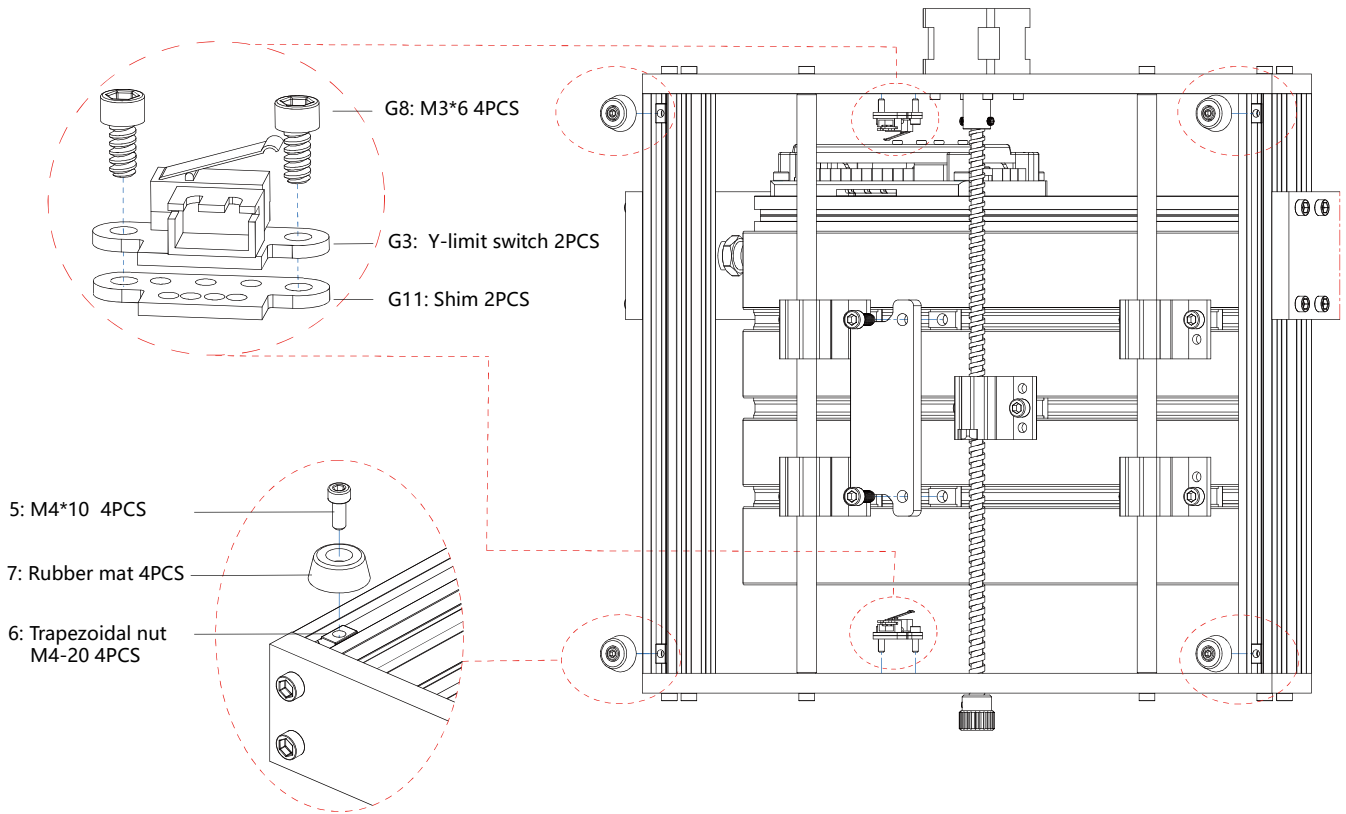
① X-axis and Y-axis component assembly



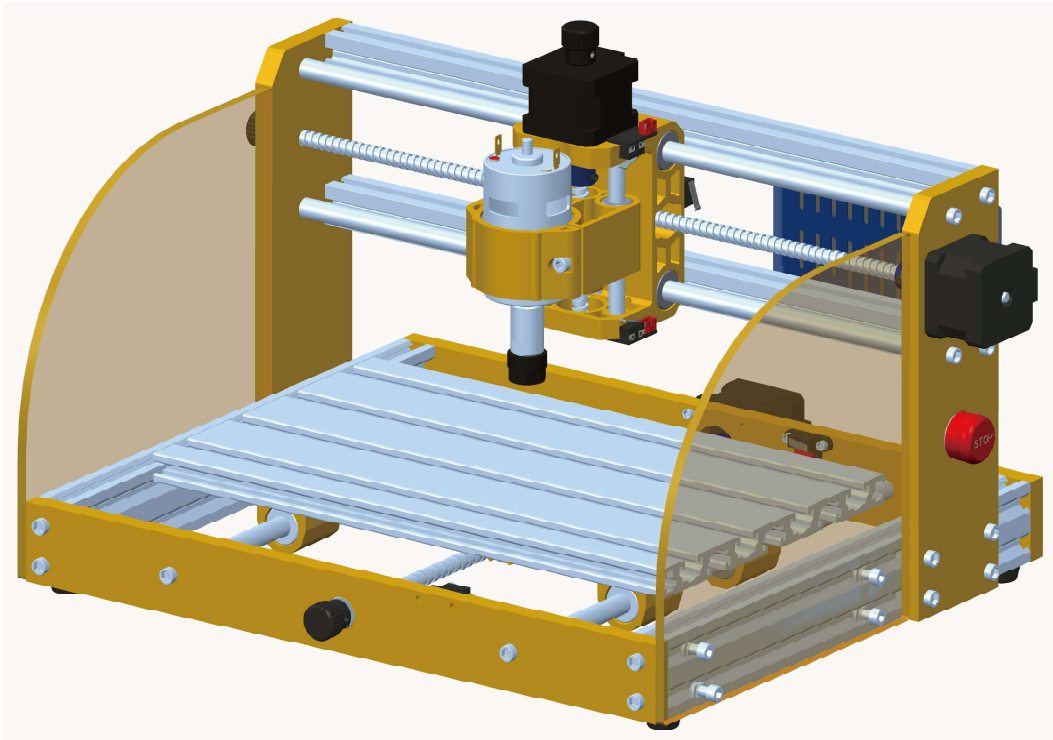
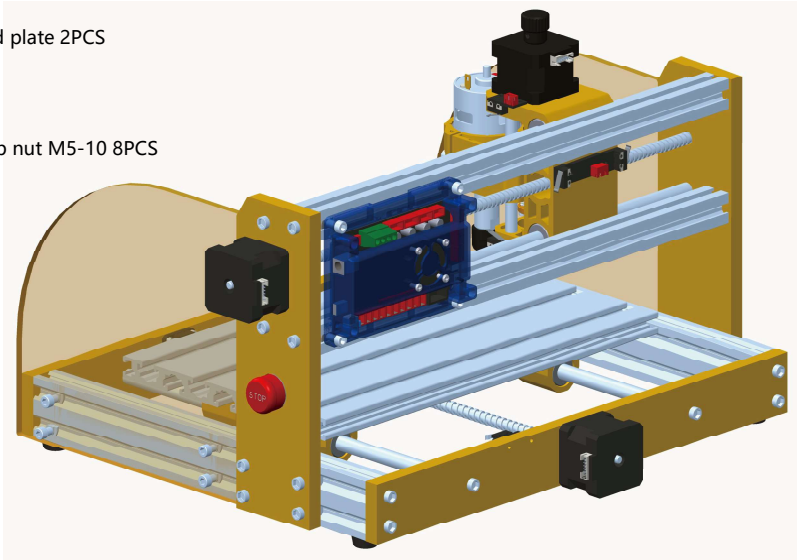
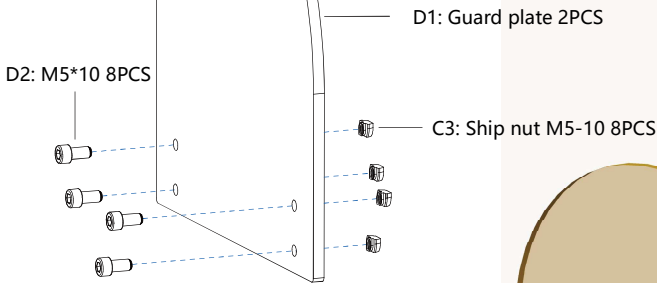
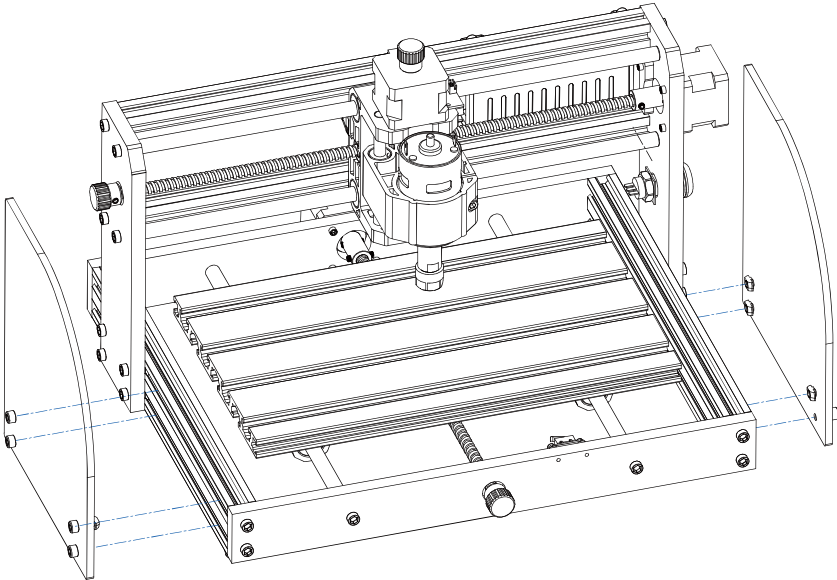
② Control board and emergency stop switch assembly



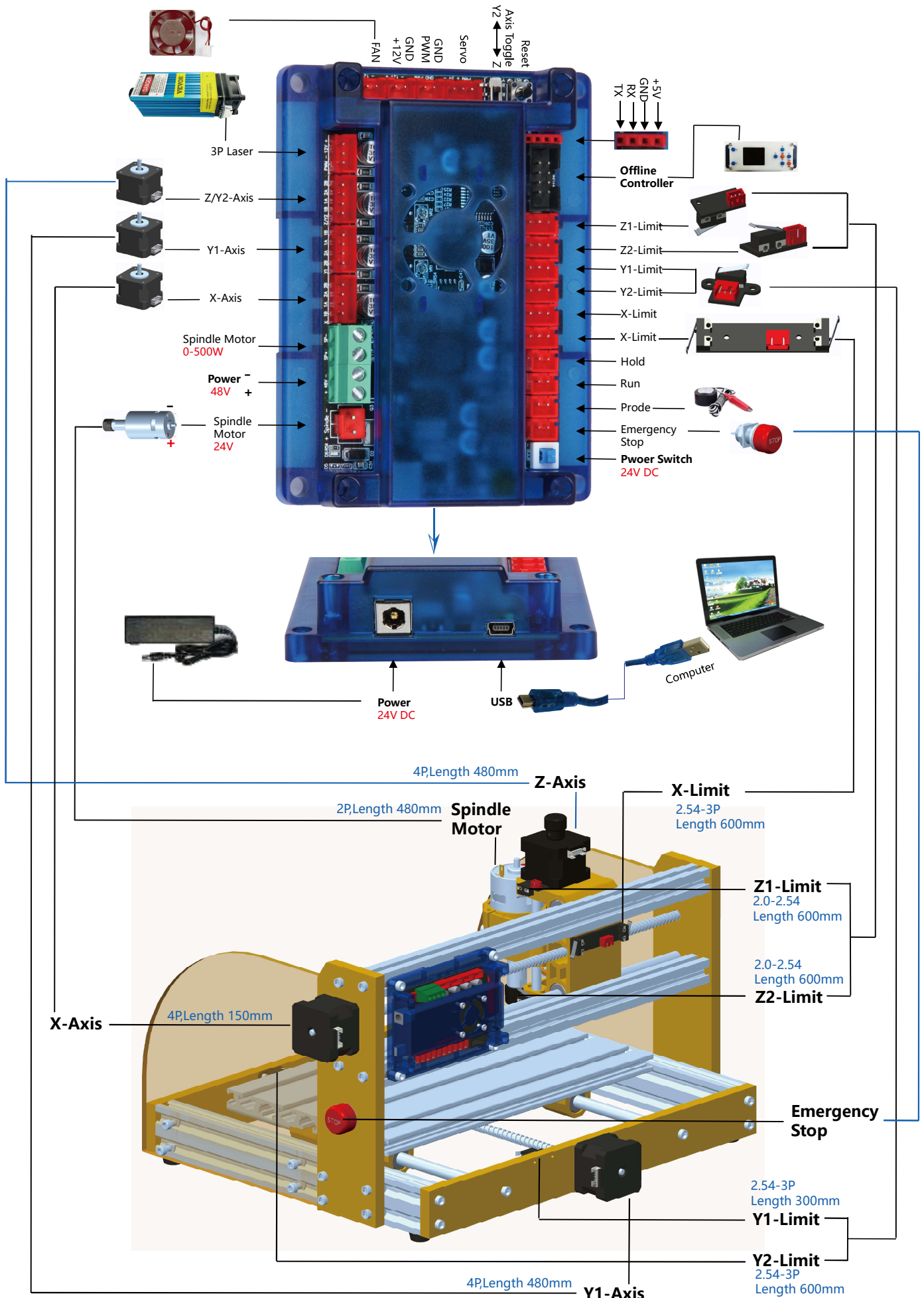
③ Y-limit switch and rubber mat assembly



④ Guard plate assembly

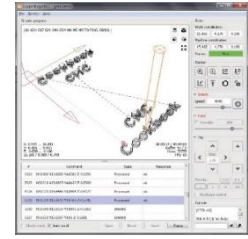


3. Instructions for control-board



3. Candle Software

Candle is a GUI application for GRBL-based CNC-machines with G-Code visualizer. Candle is an open-source software suitable for CNC machine tool processing. It supports G code file processing and visual display.



Supported functions:

- (1) Controlling GRBL-based CNC-machine via console commands, buttons on form, numpad.
- (2) Monitoring CNC-machine state.
- (3) Load, edit, save and send G-code files to CNC-machine.
- (4) Visualizing G-code files.

3.1 States

Work coordinates:

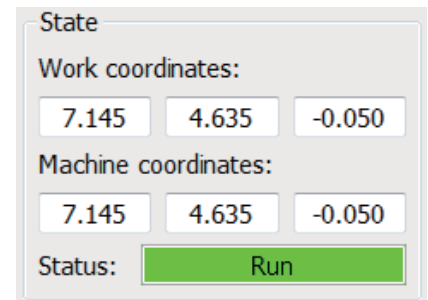
Represents current X, Y & Z local coordinates of the CNC.

Machine coordinates:

Represents current X, Y & Z absolute machine coordinates.

One of following CNC status:

- ◉ Idle - waiting for a G-code command
- ◉ Running - running a G-code command
- ◉ Home - homing cycle is executing
- ◉ Check - G-code command check mode is turned on
- ◉ Hold - paused by a "!" command, need to be restarted by a "~" command
- ◉ Alarm - CNC doesn't know where it is and blocks all G-code commands



3.2 Control



Home button

Starts the homing cycle procedure with "\$H" command



Z-probe

Starts the zero Z-axis search procedure using the command specified in the settings ("Z-probe commands" box). Example command: G91G21; G38.2Z-30F100; G0Z1; G38.2Z-1F10



Zero X/Y

Zeroes the "X" and "Y" coordinates in the local coordinate system. Also retains an local system offset ("G92") for later use.



Restore X/Y/Z

Restores local system coordinates with "G92" command.



Safe Z

Moves tool by "Z"-axis to safe position. Position coordinate can be specified in the "Safe Z" setting. Position must be specified in machine coordinates.



Reset

Resets CNC with "CTRL+X" command



Unlock

Unlocks CNC with "\$X" command.



3.3 Software using steps

(1). Install the driver

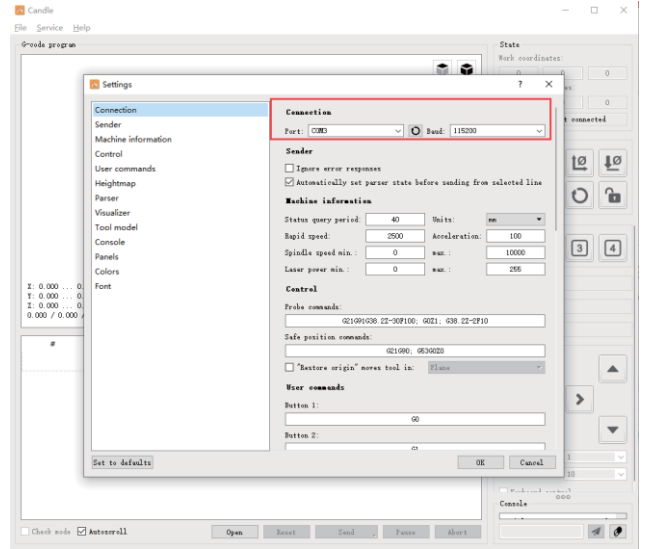
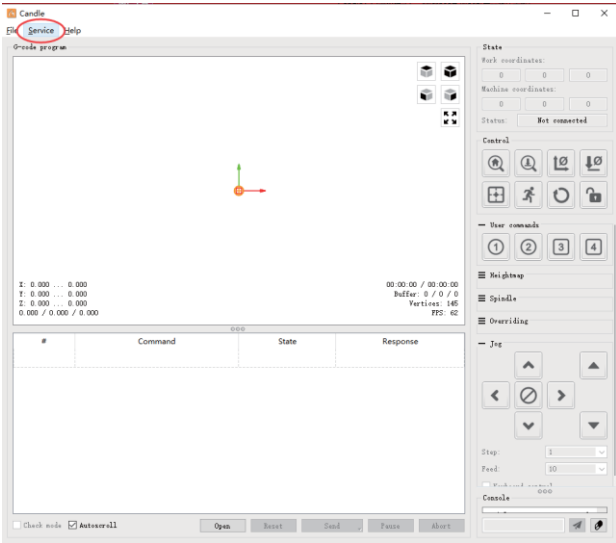
For the first time use, please connect the device to the computer via USB cable, and click the CH340-Driver.exe file in the driver folder to install the driver. Under normal circumstances, the Win10 system will automatically identify and install the driver. For Win7 and Win8 systems, please install it manually.

(2) Set the port and connection

After installing the driver, open the device manager of the computer and click on the port option to see the content inside the red box on the screen shown in the figure below (the port information is in brackets).

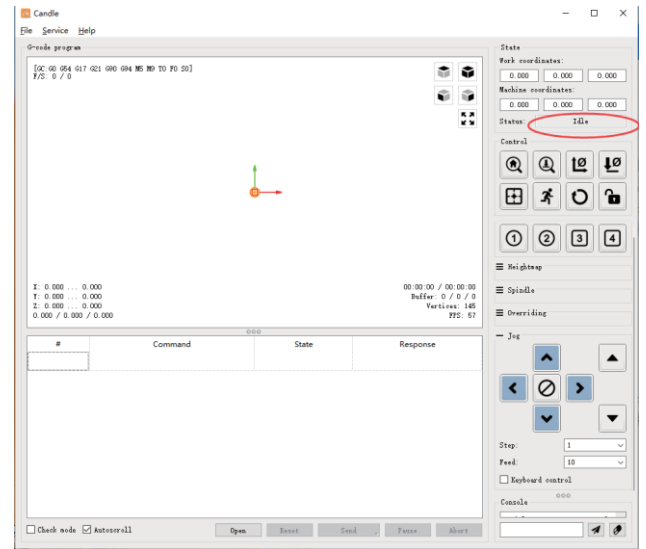


Remember the port information queried above, switch to the **Candle** software interface and click the "Settings" option in the upper left corner. Selecting the setting will pop up the setting window. Under "Connection", select the port name you queried, select the baud rate 115200, and then click the "ok" to finish the setting.



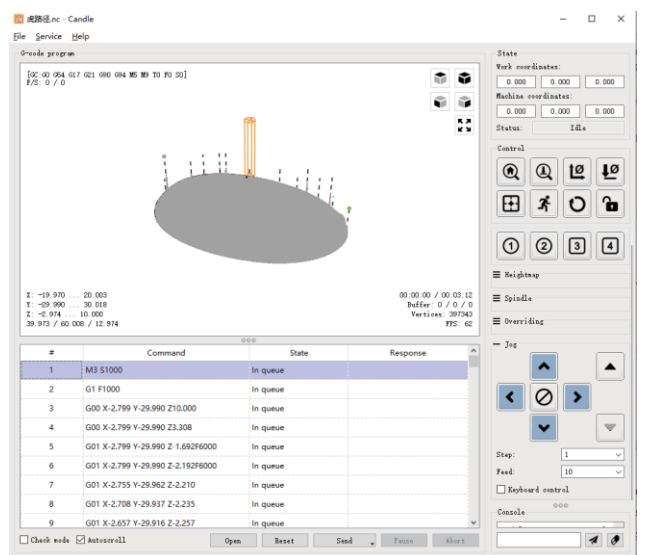
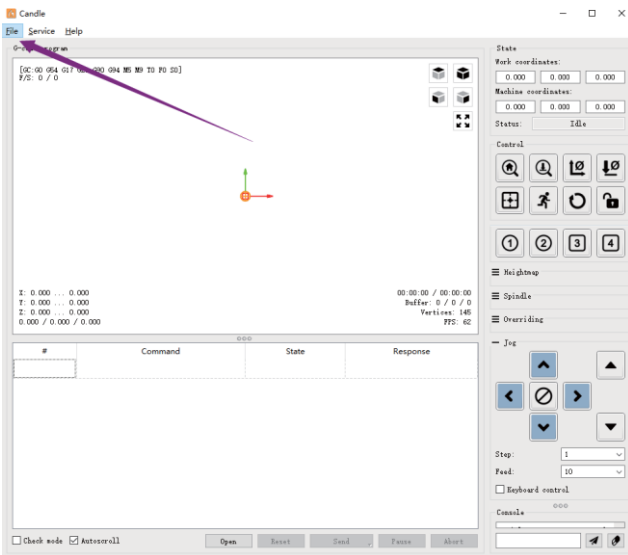
(3). Complete connection

After setting the port and baud rate, click Finish. The status bar at the top right of the Candle interface will show Idle, and at the same time, the console at the bottom right will display the information shown below, indicating that the connection has been successfully established.



(4). Processing documents

Click "File" option at the top of candle, then click "New" to create G-Code. On the command bar at the bottom of the interface, click "Open" to select a G code file that has been made to import the file. After importing, the middle of the interface will display a visual graph composed of tool paths (the position of the pen-shaped graph in the graph is the current tool position). In the visualization window, hold down the left mouse button to move to rotate the graph, and hold down the right button to move. Graphics, scrolling



the middle wheel can zoom in and out of the graphics. At the same time, the content of the G-Code will be displayed in the lower command bar. During processing, the machine will run one by one according to the G-Code commands.



(5). Fixture, tool installation and Set the working coordinate origin

The fixture in the product kit is not assembled. There are four sets in total. The appearance and usage of the assembled fixture are shown in the right figures.

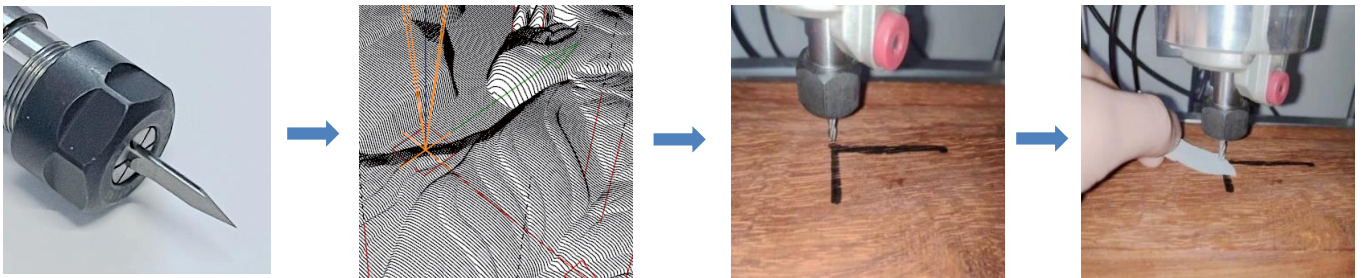
Before running the G code program, you need to find the position of the engraving figure relative to the overall engraving plate. There is a three-axis coordinate system in the visual graphics. The origin of the three-axis coordinate system is the tool setting point of the actual processing graphic.



You can move the tool to determine the position of the engraving graphic relative to the overall engraving plate based on the position of this origin. The engraving figure in the figure below is taken as an example.

After the selected tool position is started, the X/Y and Z axes are reset to zero (the   are zeroing X/Y and Z axes buttons). Before returning to zero, make sure that the tool approaches the distance of one sheet of paper for engraving, and then return the X/Y and Z axes to zero (please use a flat-bottom sharp knife when engraving, and use a cylindrical milling cutter when machining planes, slots, and holes) The effect is that the sculpted figure will be carved with the blade tip as the origin.

The ER11 collet on the spindle motor should be clamped into the fixed head first, and it must be clamped in place. When installing the cutter, please do not extend the collet too much, as shown in the first figure below.

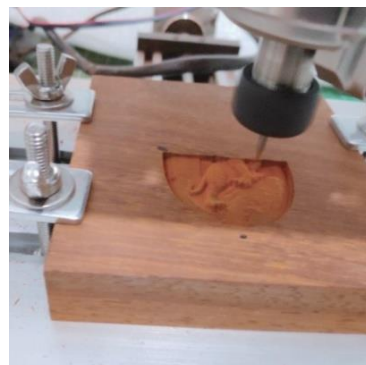
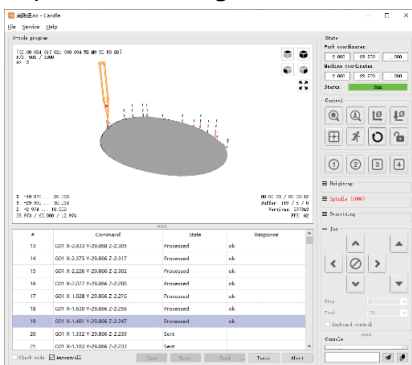


(6) Start carving

After finding the engraving position, click the send button below and the device will automatically start engraving. The status bar at the top right shows running. The visualization window shows that the tool is moving along the tool path. You can choose the pause and stop buttons below when engraving. (After pausing, click again to continue the previous carving. After termination, click Send to start processing from the beginning).

(7). Finished processing

After the processing is completed, the visualization window prompts that the engraving is completed and the time required for carving.



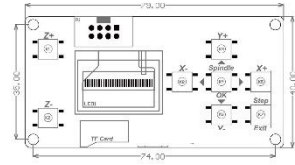
4. Offline controller (Optional)

Note: The offline controller and the computer cannot be connected to the engraving machine at the same time. When using the offline controller, please make sure that the USB cable of the machine and the computer is disconnected.

4.1 Main page:

Y-: right **Y+**: left **Z+**: Send \$X to the GRBL motherboard to unlock it.

OK/SPN: Confirm button.



4.2 Control page:

Manually move each axis to the desired position.

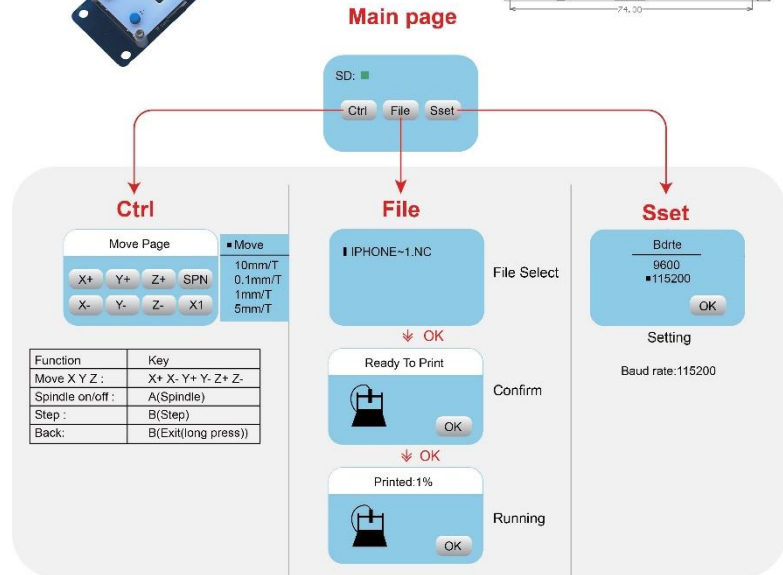
X+: X axis move right direction, **X-** opposite.

Y+: Y axis move forward direction, **Y-** opposite.

Z+: Z axis move up direction, **Z-** opposite.

OK/SPN: Spindle test switch, press to open the spindle (corresponding to SPN gray on the screen), press again to close the spindle (the corresponding SPN on the screen returns to normal). Long press to enter changing spindle speed page. At this page, **Y+/Y-** is High/Low spindle speed, long press **OK/SPN** to exit the changing spindle speed page.

Exit/STP: Function 1: Tap on each axis button of XYZ to change the movement distance by 0.1, 1, 5, 10 cycles each time. Function 2: Press and hold for about 2 seconds to exit.



4.3 File page:

File list Select the file to be engraved. Support documents include: NC, NCC, TAP, TXT, Gcode, GCO, NL, CUT, CNC .

Y+: up, **Y-**: down

OK/SPN: Confirm the selection and enter the confirmation engraving page.

4.4 Confirm the engraving page:

Confirm that the engraving file is started without errors.

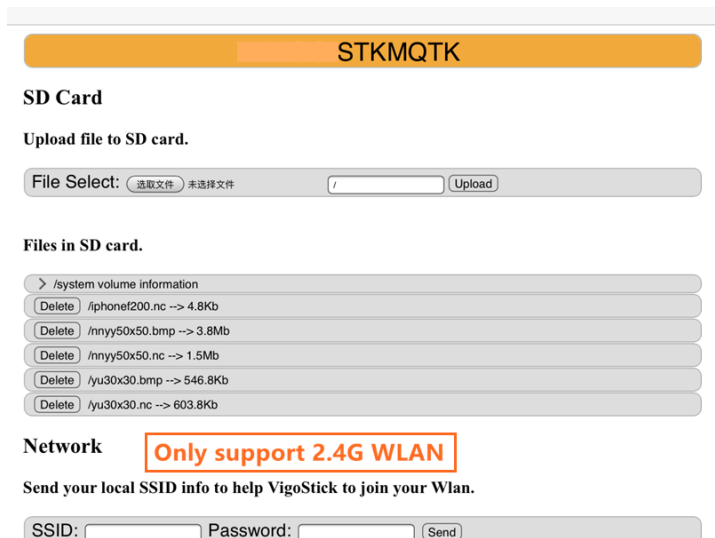
OK/SPN: Confirmation starts, ready to print becomes the progress display percentage, the file selection page is returned after the engraving is completed.

4.5 Settings page:

X+ / X-: Chang Baud rate; **Y+ / Y-**: Change Feed rate by ± 100 /Click; **Z+ / Z-**: Change Feed rate by ± 10 /Click;

4.6 WiFi Network

The offline controller has WiFi wireless network function. By default, the WiFi hotspot of **VIGO-STK****** is automatically established. You can connect to the hotspot through the WiFi of your computer or mobile phone, and then open **192.168.0.1** or **vigostick.local** in browser to manage (upload or delete) the files on the SD card of the offline controller, and you can also enter the SSID (Only support 2.4G signal) account and password to help the offline controller access your local WiFi network. After the controller is connected



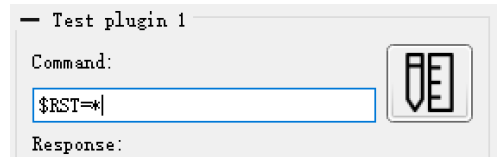
to the local 2.4G WiFi, the current IP address of the controller or the domain name **vigostick.local** can still be opened to enter the web management interface. You can open **About** page of the controller to check the IP address.

Network status: There is a dot in the upper left corner of the main page. The **RED** dot indicates that **VIGO-STK****** hotspot is active, and the **GREEN** dot indicates that the controller has connected to Local WiFi.

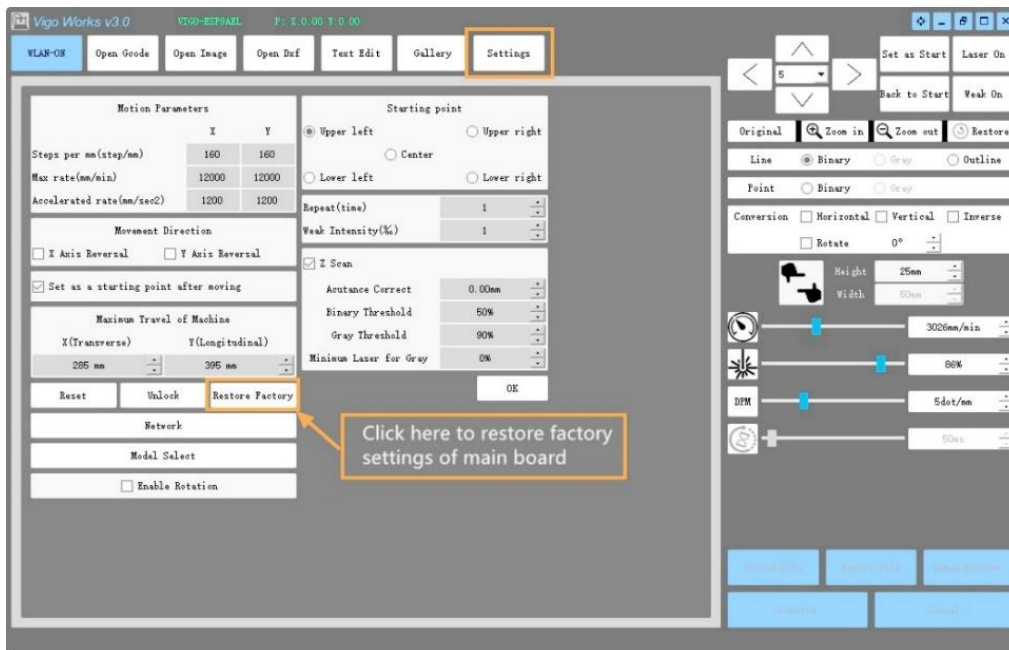
5. Restore factory settings

If the mechanical movement of the machine is smooth, but the engraving movement appears stuck, or the stepper motor does not move, please try to restore the factory settings of the main-board. The recovery method is as follows:

Method 1: Go to our website www.VevorEngraver.com to download **VigoWorks** software (For Windows) and run it. Click the button **Connect**. After the software connected the machine successfully, click **Settings**. On the settings window, Click **Restore Factory** button, then reboot the machine.



Method 2: Run Candle software and send command **\$RST=*** to the machine, then reboot the machine.



6. Assembly video and online guide

Please scan the QR code below to watch the machine assembly video. **If the U disk in the machine kit can't be read, please scan the QR code to see how to download the software and related documents.**



www.vevor.com

Contact: service@vevor.com

Call us:

(+626) 275-4507 (For USA)

(+44) 1173182739 (For Europe)

(+001) 626 275-4507 (For Other Countries)

Working Time: Mon-Fri 8:00am to 5:00pm