MYSWEETY 3020 PLIUS CNC Router Machine User Manual

Contents

MYSWEETY

MYSWEETY 3020 PLIUS CNC Router Machine

Specifications

- **overall Size**: 460 x 390 x 354 mm (18.1 x 15.4 x 13.9 inch)
- **Working Area**: 300 x 200 x 73 mm (11.8 x 7.9 x 2.9 inch)
- **Power Supply**: 48V 10.4A
- **Stepper Motor:** 42 x 48 mm, 0.55N.m
- **Limit Switch:** x_ Y, z (both ends)
- **Precision**: 0.01mm
- **Emergency Stop Switch**: Yes
- **Power Of Spindle Motor:** 500W
- **Speed Of Spindle Motor**: ll000rpm/min
- **Offline Controller:** Yes
- **Support Add-ons**: Laser (not included)
- **Weight**: 10.9KG (24 pounds)
- **System** :Grblcontrol (candle) / Other GRBL
- **Software**: compatible software
- **Windows**: XP/7/8/10

Disclaimer
Please be careful when using your CNC engraving machines.

This machine is electrical equipment with moving parts and dangerous areas.

- The Machines are for Indoor Use Only.
- You must be 18 years or older to operate this machine unless supervised by a knowledgeable adult familiar with the machine .
- Wear the proper Personal Protection Equipment (Safety Glasses etc.).
- Always place the CNC Machine on a stable surface.
- The CNC Machine is supplied with Switchable Power Supply 230VAC or 115VAC. Never use a different power supply; it may cause malfunctions or damage to the machine.
- The CNC 3020 PLUS utilizes a high amp power supply. It is recommended that you do not plug the CNC Router into an extension cord, or power strip as it may damage the machine.
- Ensure the Emergency stop button is easily accessible at all times.
- Never disassemble the Power Supply or Electrical Components. This will VOID the warranty.
- Do not touch the machine spindle, or place any body part near the working area when the machine is operating. Serious injury may occur.
- Do not leave children unsupervised with the CNC Machine even when it's not operating. Injury may occur.
- Do not leave the machine unattended while it's operating.
- Ensure your CNC Machine is in a well-ventilated area. Some Materials may discharge smoke or fumes during operation.

Accessory List

Mechanical Part List

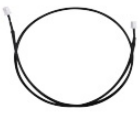
① Base Assembly

② X-Z Axis Gantry

③ Spindle with ER11 Tail (500W/11000RPM)

Electrical Part List

④ 3 x Stepper Motor Cable



⑤ 6 x Limit Switch Cable
(5 x 60cm / 1 x 80cm)

⑥ Spindle Cable

⑦ USB Cable (1.5m)

⑧ USB Flash Dish (2G)

⑨ Controller Board

⑩ Power Supply
(48V/10.4A)

⑪ Offline Controller

Tools / Accessories Parts List

⑫ 4 x Clamp

⑬ Brush

⑭ Allen Wrench (2.5mm)

⑮ Allen Wrench (4mm)

⑯ 2 x Limit Switch Board

⑰ Emergency Stop Button With Cable(60cm)

⑱ Cable Ties

⑲ 2 x Wrench (13mm/17mm)

⑳ Laser Fixing Plate

㉑ 10 x Engraving Bit Kit (Φ3.175mm/20°/0.1mm)

㉒ Screwdriver

㉓ Collet

㉔ Collet Nut

㉕ Z-Probe

㉖ Spindle Connector

㉗ Cable Protector(1m)

㉘ Velcro

㉙ 2 x Power Fixing Plate

Screws / Other Part List

㉚16 x M5*25 Screw

㉛ 4 x M5*10 Screw

㉜ 6 x M5 T Nut

㉝ 4 x M3*8 Screw

㉞ 4 x M4*6 Screw

㉟ 2 x M5*8 Screw

Installation Instructions

Install the X-Z axis Gantry

What you will need?

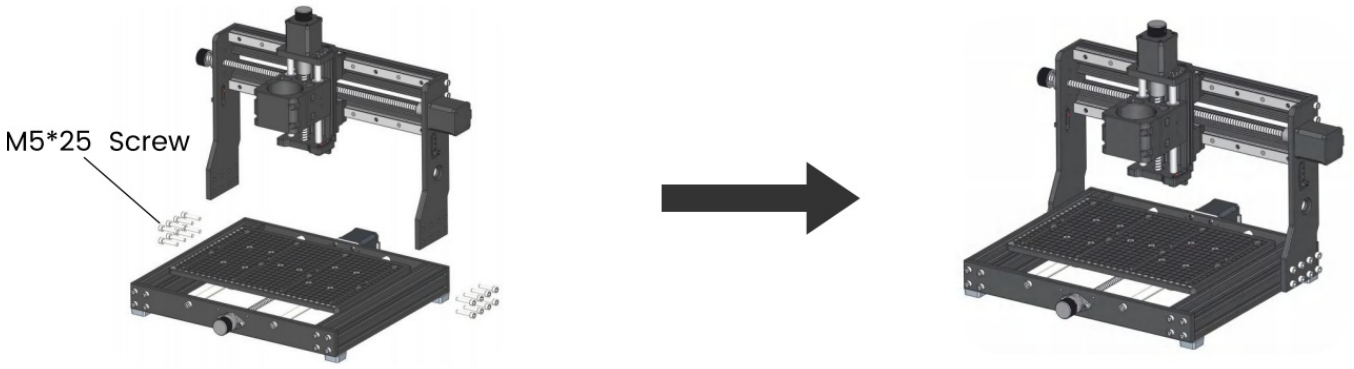
① Base Assembly

② X-Z Axis Gantry

⑮ Allen Wrench (4mm)

㉚16 x M5*25 Screw

As shown in the picture, install the X-Z axis gantry to the base assembly, adjust the hole alignment, and fix the left and right side plates with M5*25 screws.



Install the Y-axis Limit Switch Board

What you will need?

⑭ Allen Wrench (2.5mm)

⑯ 2 x Limit Switch Board

㉝ 4 x M3*8 Screw

As shown in the picture, fix the limit switch board to the front and rear aluminum plate with M3*8 screws.

Note

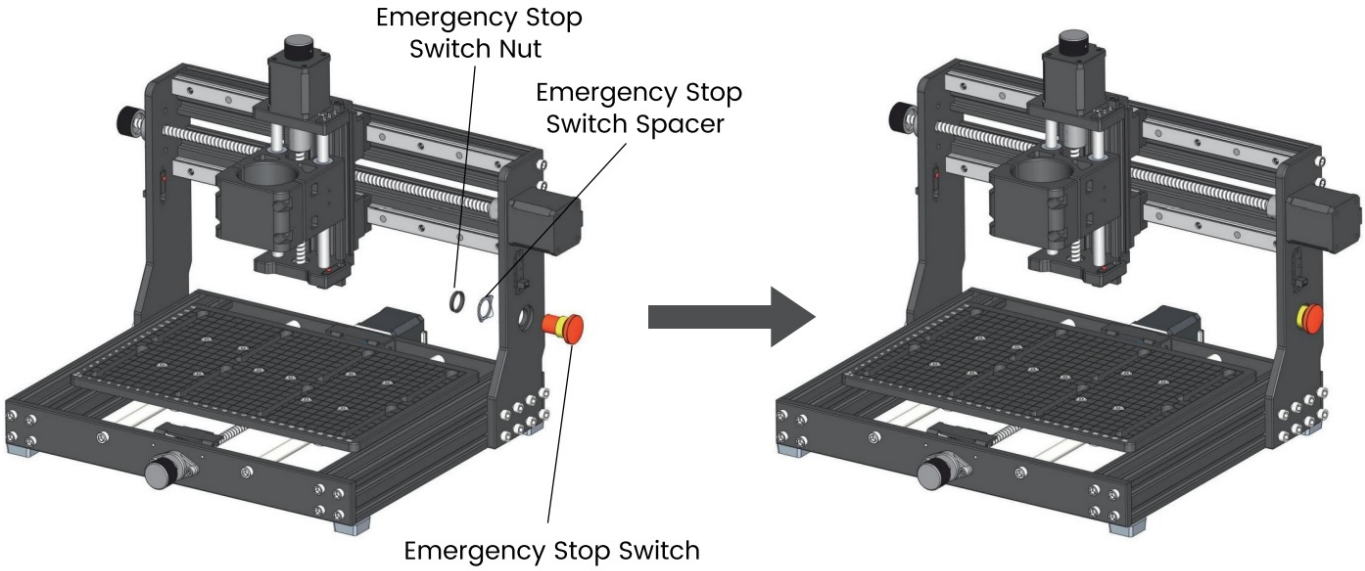
1. Before installing the limit switch board, you need to plug the limit switch wire into the limit switch first.
2. When connecting the limit switch wire of Y-axis as shown in the figure, connect the 80cm limit switch wire to the limit switch of V+.
3.

Install the Emergency Stop Button

What you will need?

⑰ Emergency Stop Button With Cable(60cm)

Disassemble the emergency stop button and mount it on the side panel of the CNC machine as shown in the figure.



Install the Spindle Motor

What you will need?

③ Spindle with ER11 Tail
(500W/11000RPM)

⑲ 2 x Wrench (13mm/17mm)

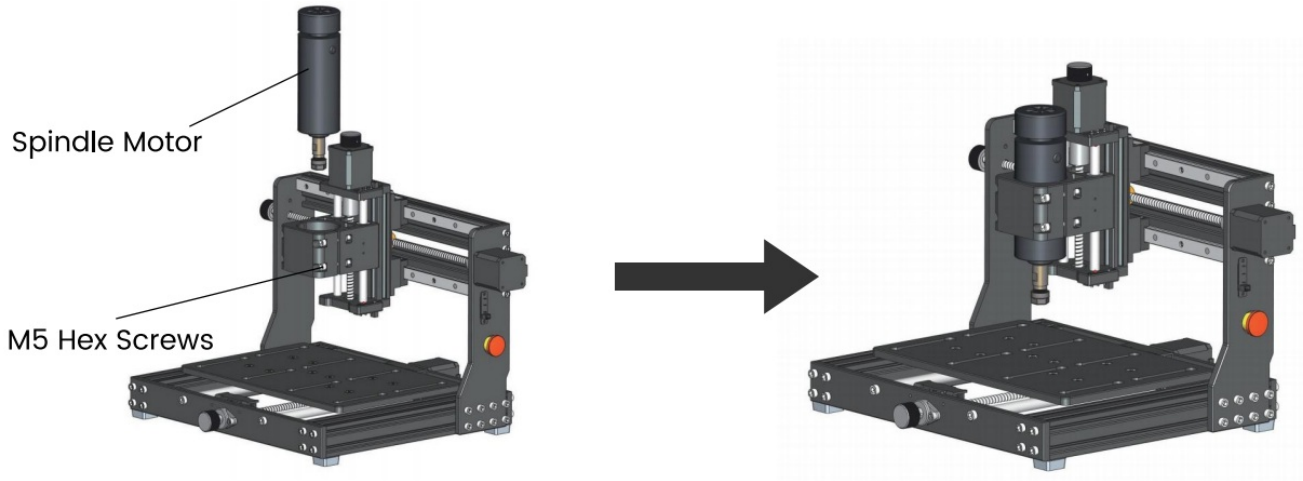
⑮ Allen Wrench
(4mm)

㉑ 1 x Engraving Bit Kit
(Φ3.175mm/20°/0.1mm)

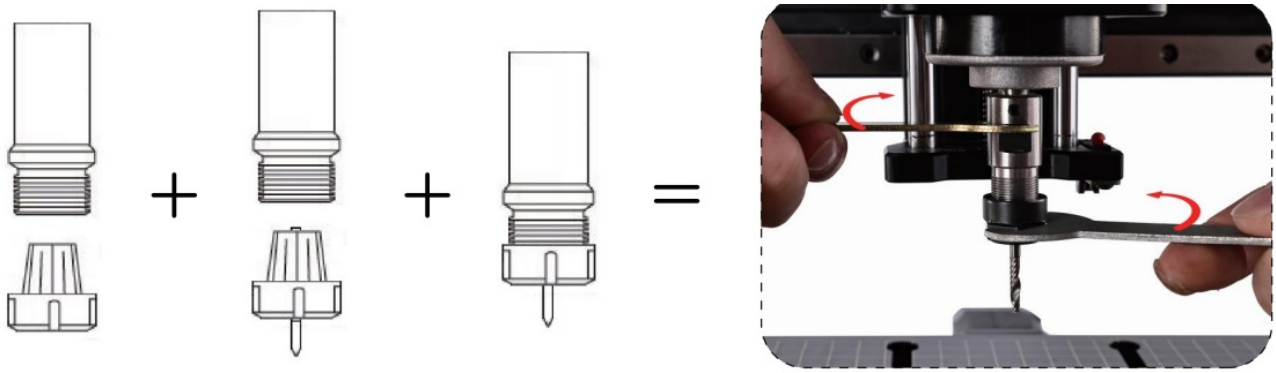
㉓ Collet

㉔ Collet Nut

1. Loosen the screws with the 4mm alien wrench, insert the spindle motor into the U-shaped fixture, and then tighten the screws.



2. Install the collet into the pressure cap, insert the milling cutter into the collet, and then tighten the pressure cap with 13mm and 17mm wrenches.



Install the Control Board

What you will need?

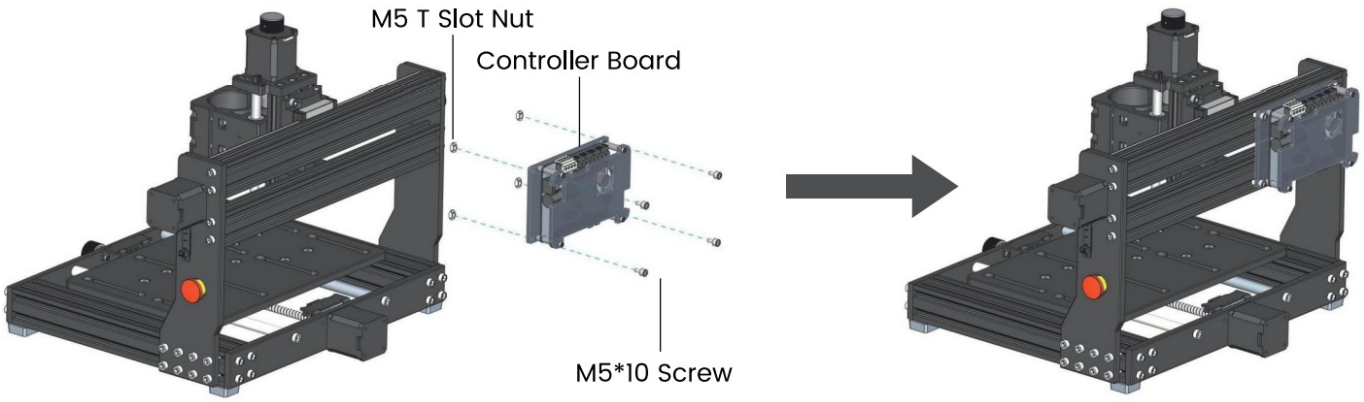
⑨ Controller Board

⑮ Allen Wrench (4mm)

㉛ 4 x M5*10 Screw

㉜ 4 x M5 T Nut

Secure the control board to the back of the CNC machine with M5 screws and M5 T nuts as shown in the figure.



Install the Power Supply

What you will need?

⑩ Power Supply (48V/10.4A)

⑭ Allen Wrench (2.5mm)

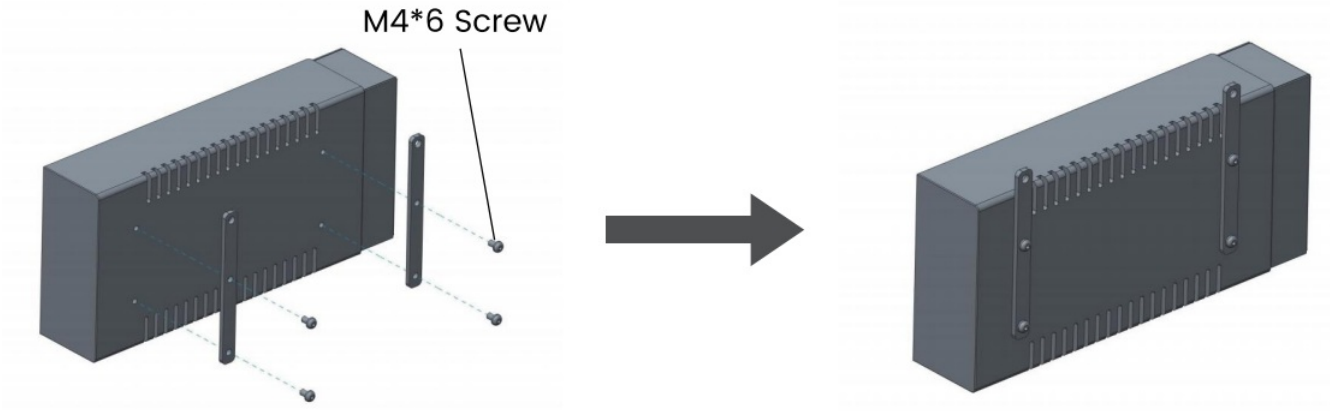
㉙ 2 x Power Fixing Plate

㉜ 2 x M5 T Nut

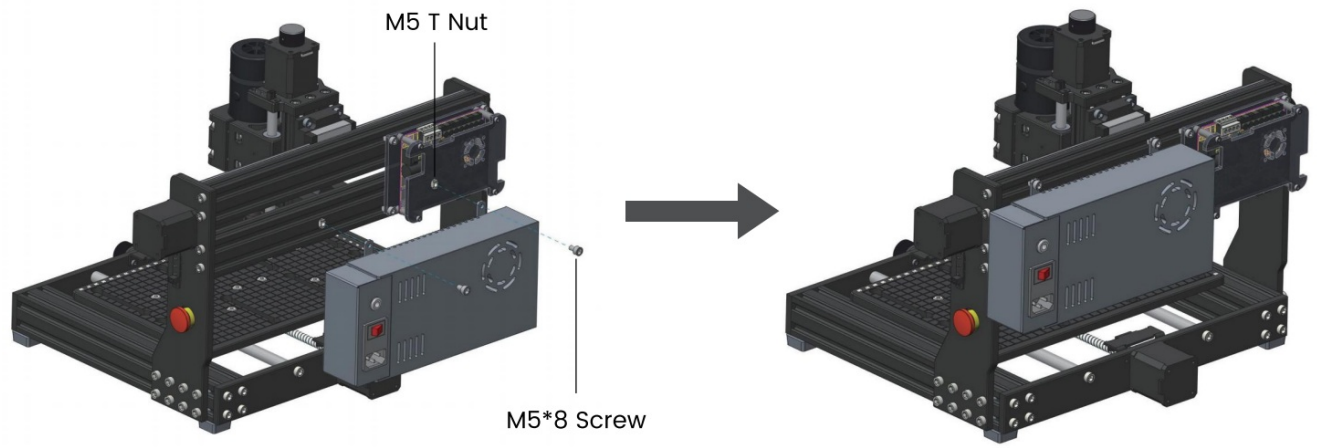
㉞ 4 x M4*6 Screw

㉟ 2 x M5*8 Screw

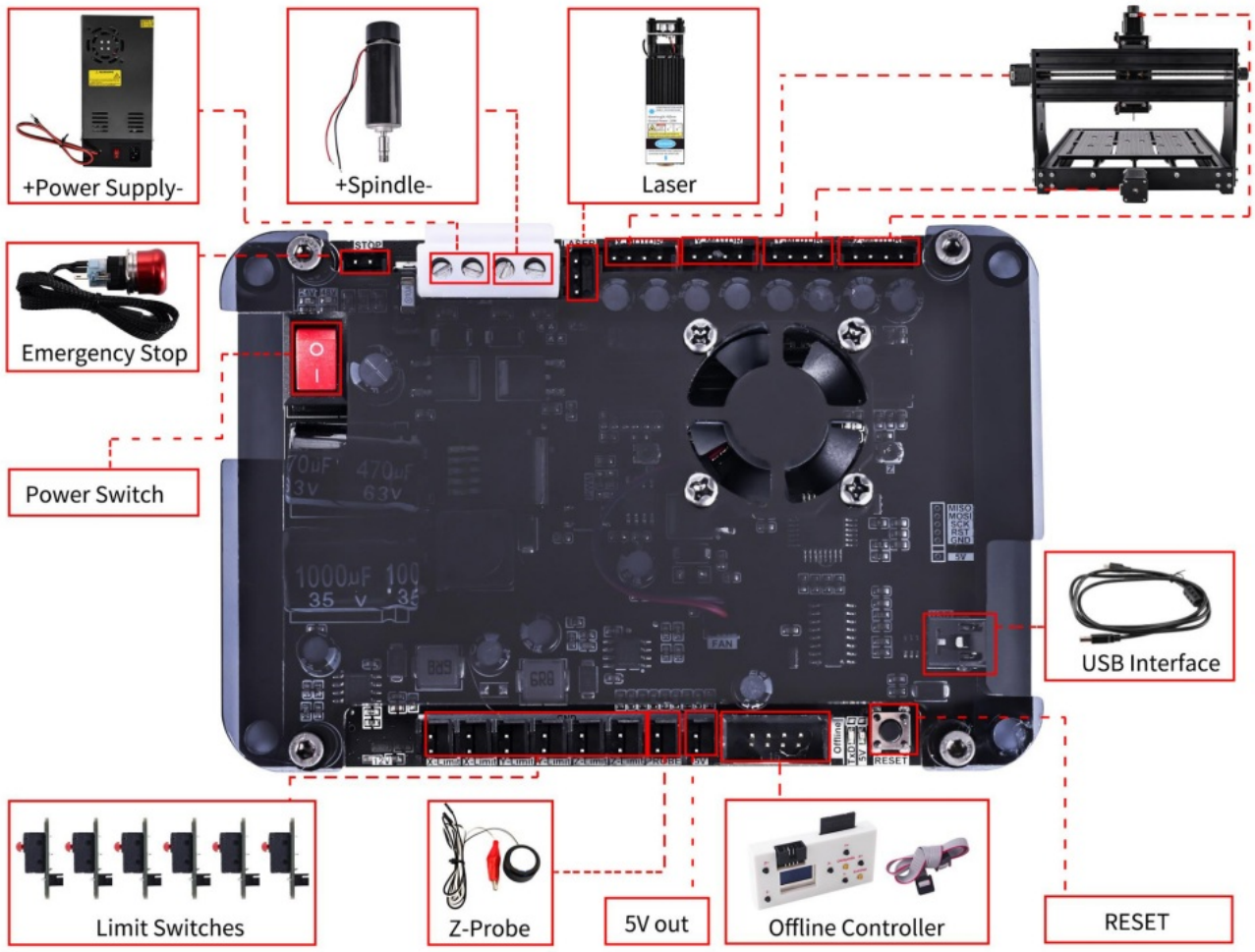
1. As shown in the figure, install the fixed plate on the power supply housing with M4*6 screws.



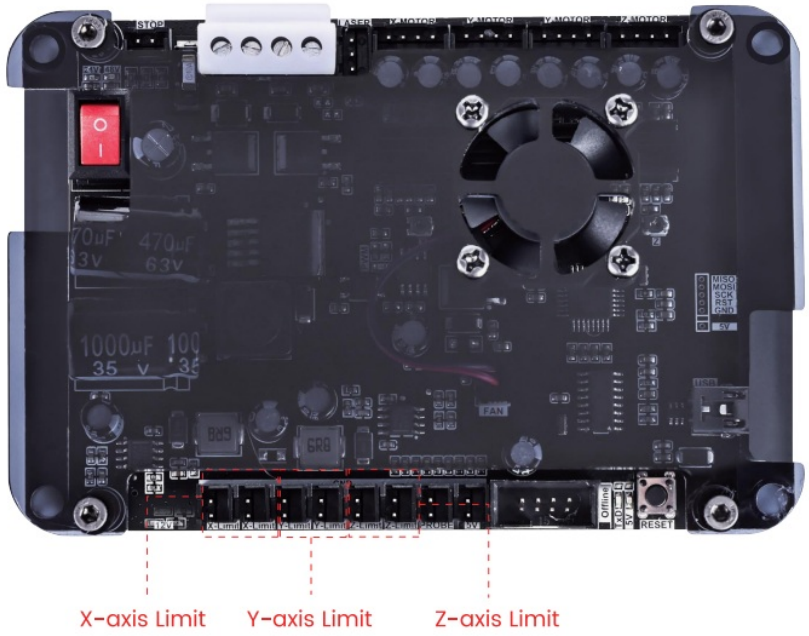
2. Secure the power supply to the back of the CNC machine with M5*8 screws and M5 T nuts as shown in the figure.

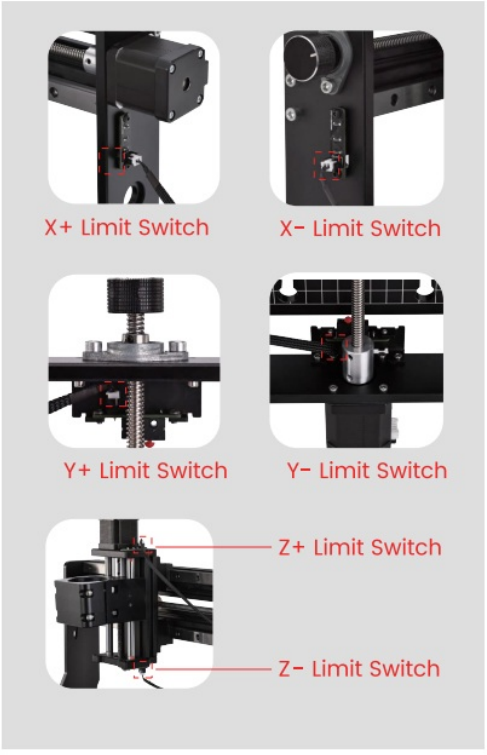


Connecting Wire



Connect the Limit Switches
Plug the X, Y, and z limit switches cable into the X, Y, and z ports of the control board.

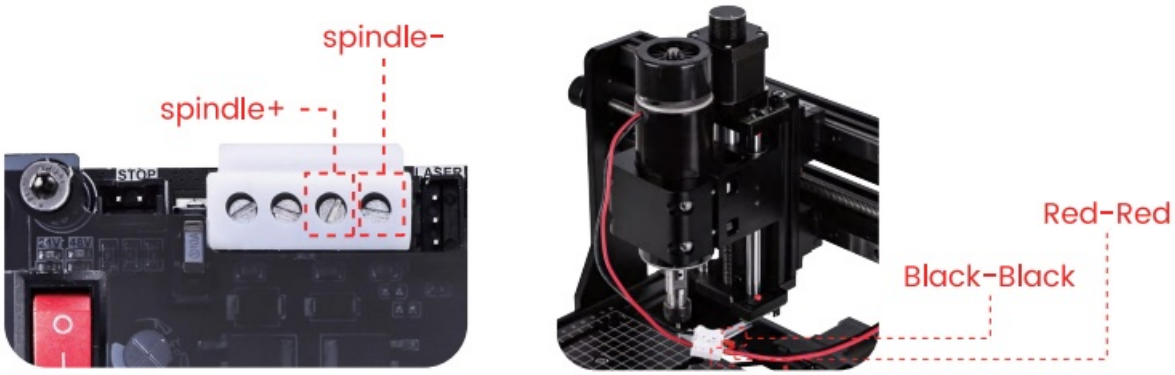




Connect the Stepper Motor
Insert the cable of the X, Y, and z motor into the port of the X motor, Y motor, and z motor. (There are two interfaces to connect the Y-axis motor, you can insert either of them.)

Connect the Spindle Motor

Connect the Spindle motor cable to the extension cable (red to red, black to black), then insert Spindle+ and Spindle- at the other end of the extension cable, and then unscrew the screw with the one-word screw, and finally tighten it.

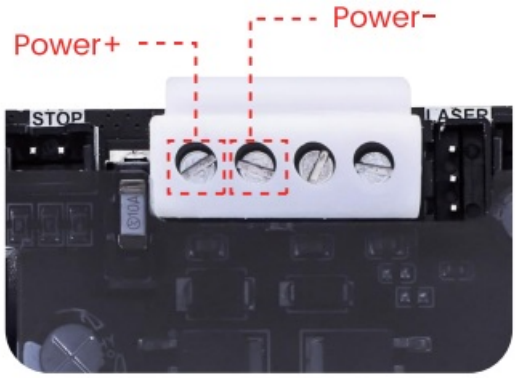


Connect the Emergency Stop Switch

Insert the emergency switch cable into the stop port of the motherboard and check whether the emergency stop switch is in a disconnected state. (Note: Pushing the button will trigger an emergency stop. The button will stay engaged once pushed. The button can only be released when twisted clockwise. This prevents double pushing the button from releasing the trigger.)

Connect the Power Supply

Connect the power red cable to the Power+ port and the black cable to the Power- port.Then lock the screws with a screwdriver.(Note:You can check whether the switching power supply is in the connect voltage range by checking the small window on the side of the power supply.We have adjusted your PSU to match your country's corresponding voltage range by default at the factory.However.we suggest you have a second check.If that is not the correct voltage range.you could use tweezers or s small screwdriver to adjust the paddle left and right.)

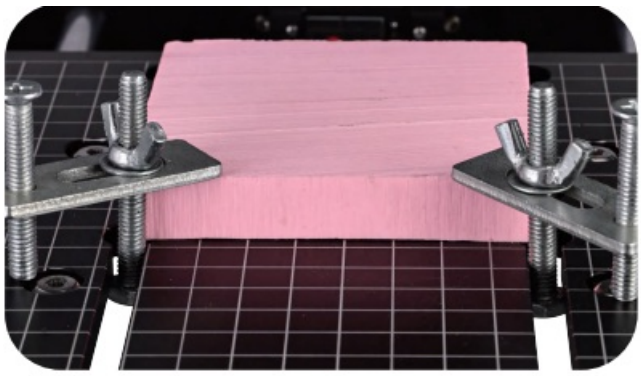


Use Velcro

After all wiring is completed, use Velcro to wrap all cables and excess parts together.

Tips

1. Clamps Installation View

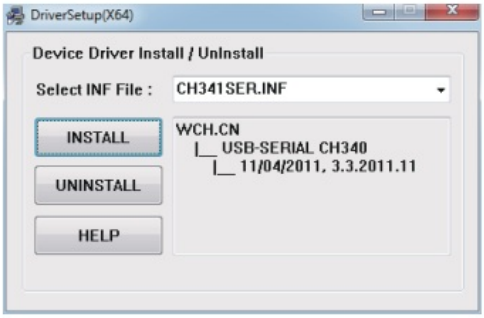


2. Cable Protector Installation View

Software Setup

Driver Installation

Install the driver (software Driver CH340SER.exe)

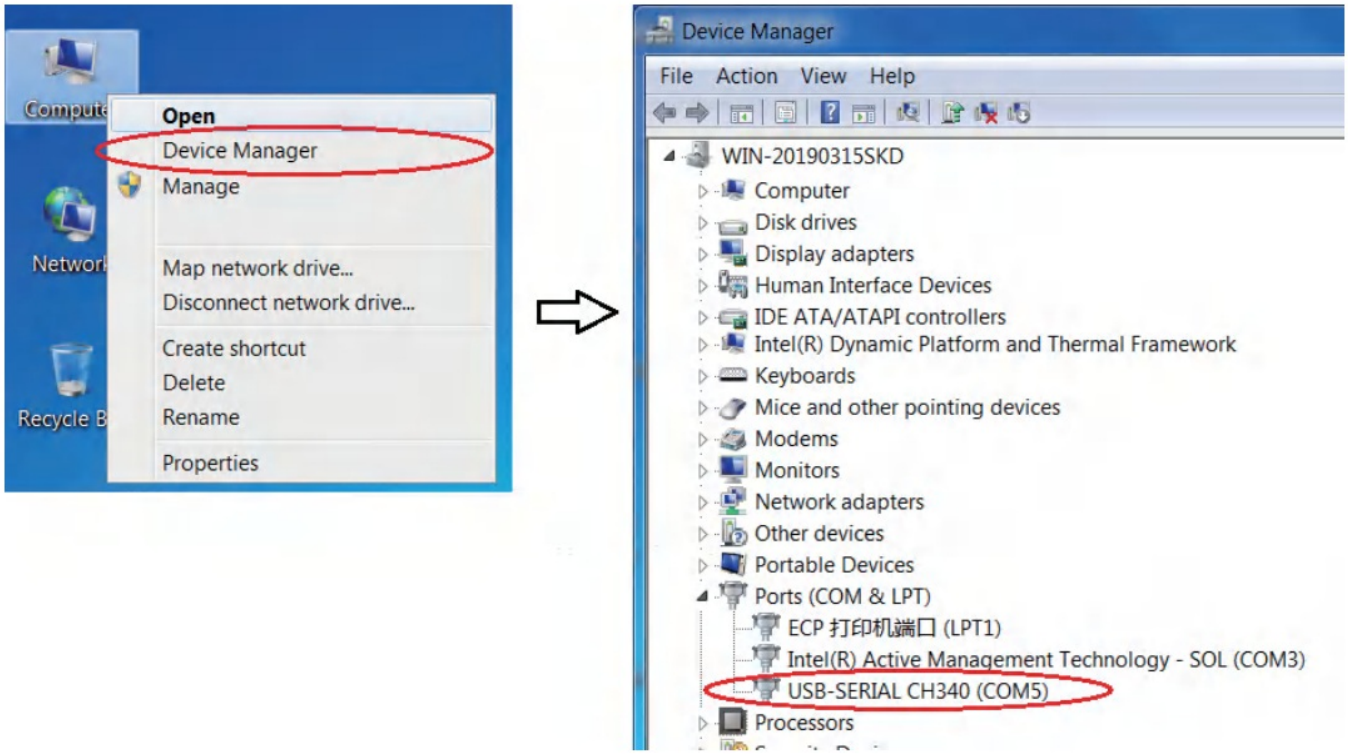


Note: You need to exit the anti-virus software before installing the driver

Determine the COM Port

- **Windows XP**: Right click on “My Computer”, select “Properties”, select “Device Manager”.
- **Windows 7**: Click “Start”-> Right click “Computer”-> Select “Device Manager”-> “Ports (COM&. LPT)”
- Your machine will be the USB Serial Port (COMX), where the “X” represents the COM number, for example COM5.
- If there are multiple USB serial ports, right click each one and check the manufacturer, the machine will be “CH340”.

Note: You need to connect the control board and the computer to get the port number.

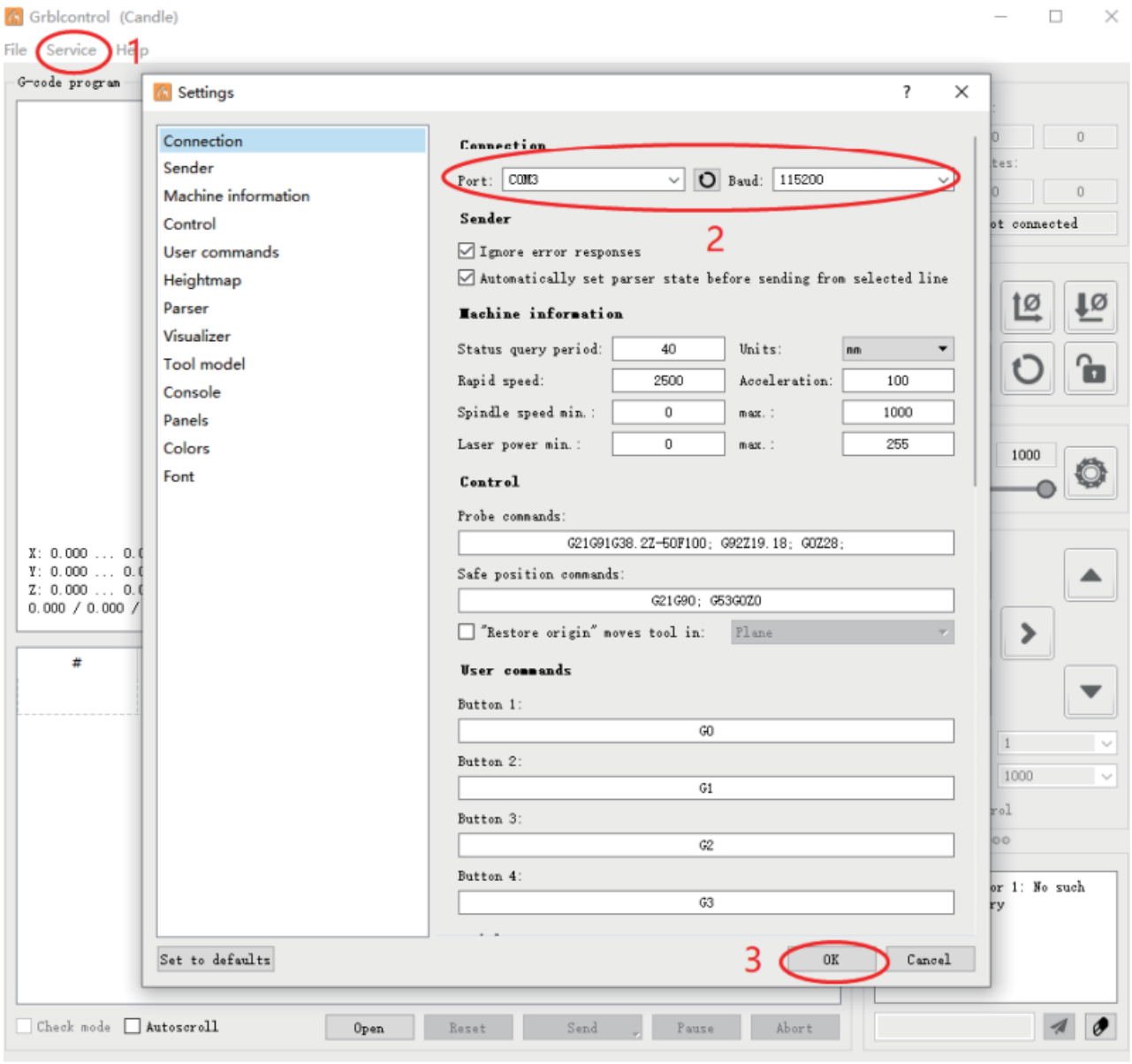


Open the Software

Click the icon of Grblcontrol to open the software (Software Grblcontrol Grblcontrol (Candle) .exe). Note: You can copy the entire Grblcontrol folder to your local computer for daily use.

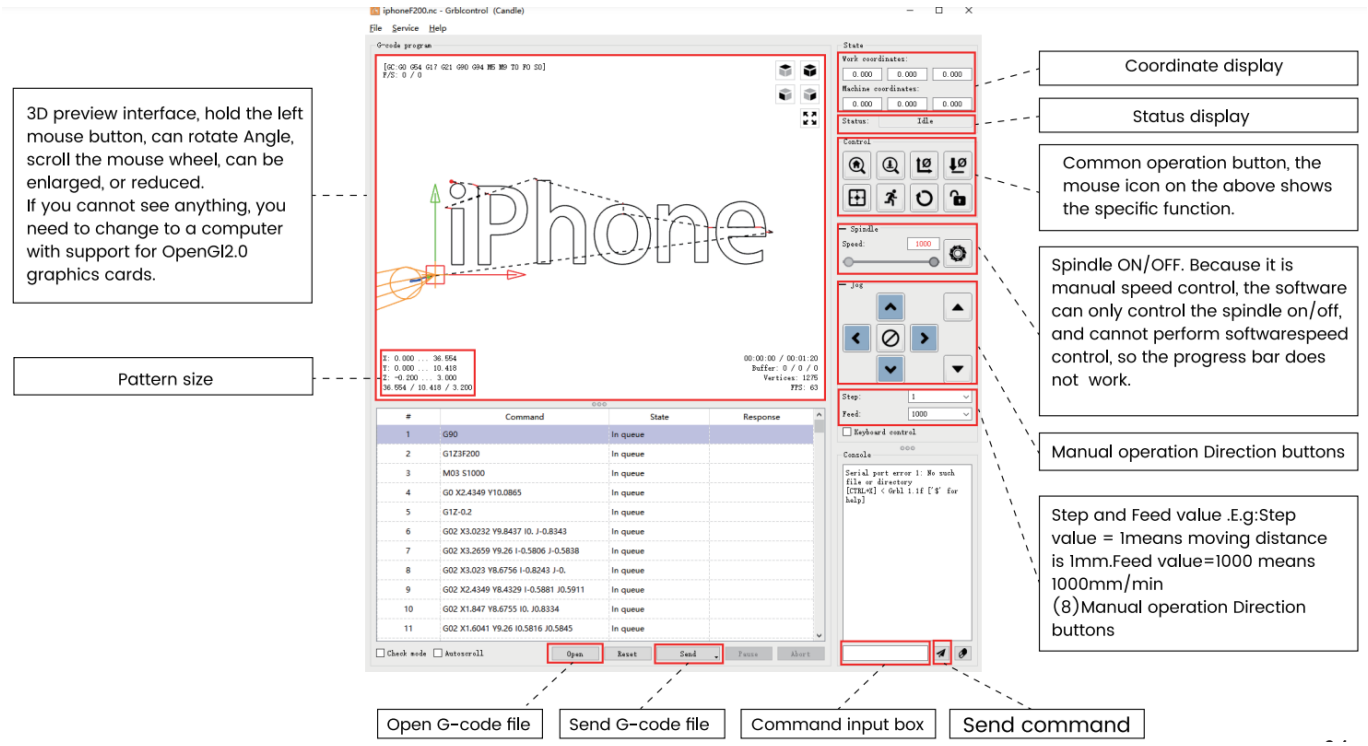
Software Connection

1. Click “Service”➔”Settings” in the menu bar to enter the “Settings” dialog box.
2. Select the correct COM Port and Baud Rate
    - C**OM Port**: the port corresponding to CH340 driver
    - **Baud Rate**: 115200
3. Click “OK” to save.



Test Project

1. Grblcontrol (Candle)



Run G-code for processing

1. Click “Open”, select the G code to run.
2. Click on the manual operation panel.move the spindle to the starting. Point of the engraving, so that the tool and the workpiece just touch.
3. Click “Zero XV”- “Zero z· Clear the xvz axis coordinate.
4. Click “Send” running G code.

About firmware parameters

The parameters of the control board have been configured according to CNC 3020 Plus.

Z Probe Setup

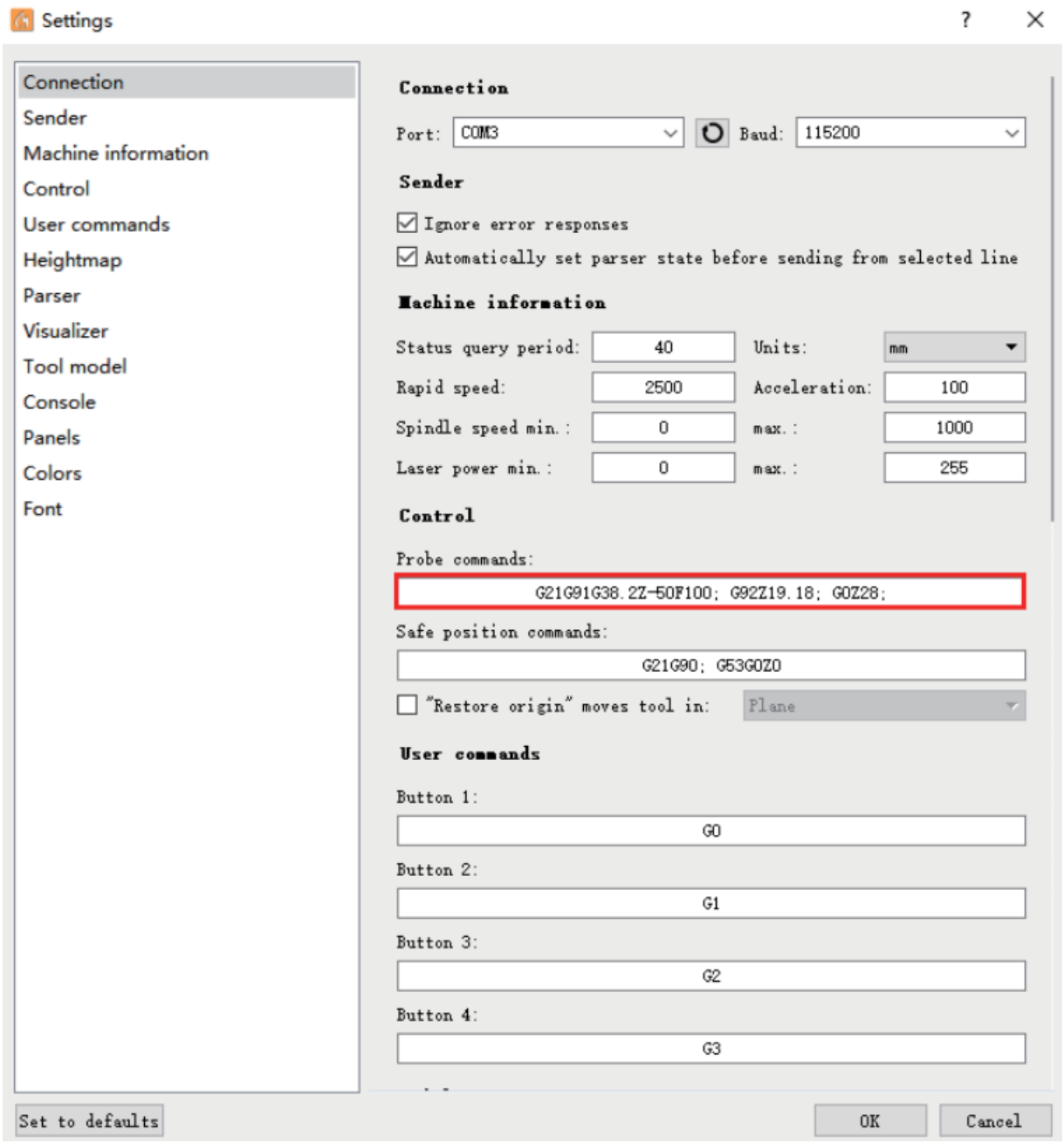
Probe function introduction

1. **Probe commands editing**

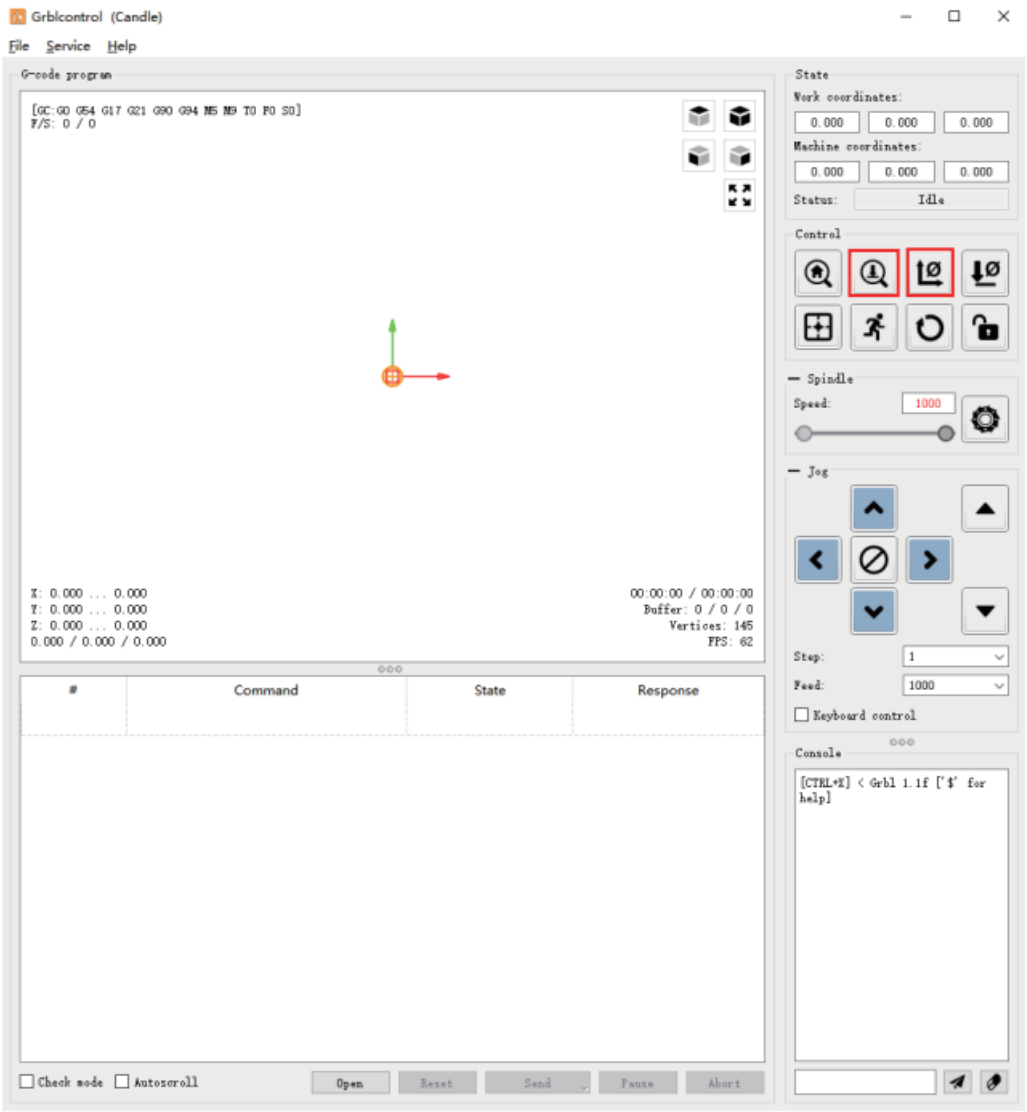
   Zl4 is the height of the tool setting block, which requires actual measurement, and Z25 is the height of the tool lifting, which can be configured as required.

Probe G code	After editing	Probe toll height
G90G21G38.2Z-50F100	G90G21G38.2Z-50F100	
G92 Z21	G92 Z19.18	
G0 Z25	G0 Z28	

2. Probe commands filled in Grblcontrol (Candle)



3. Connect the probe tool to the controller probe interface.
4. Click the “Zero XV” button
5. Click the “Z-probe” button, z-axis automatic tool to zero.

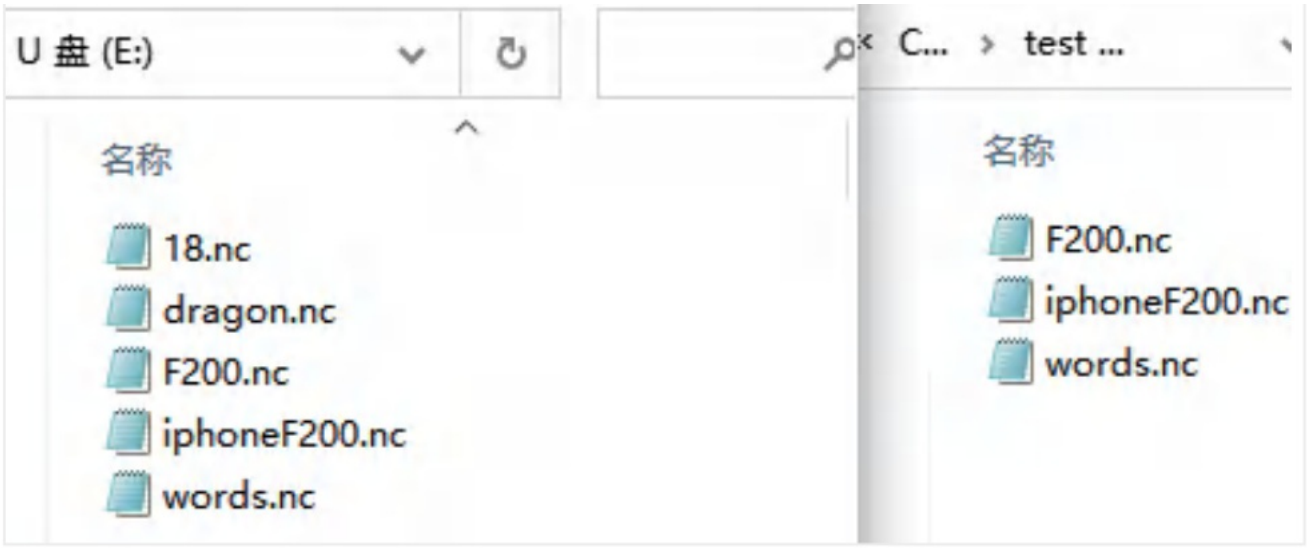


Off-Line Operation

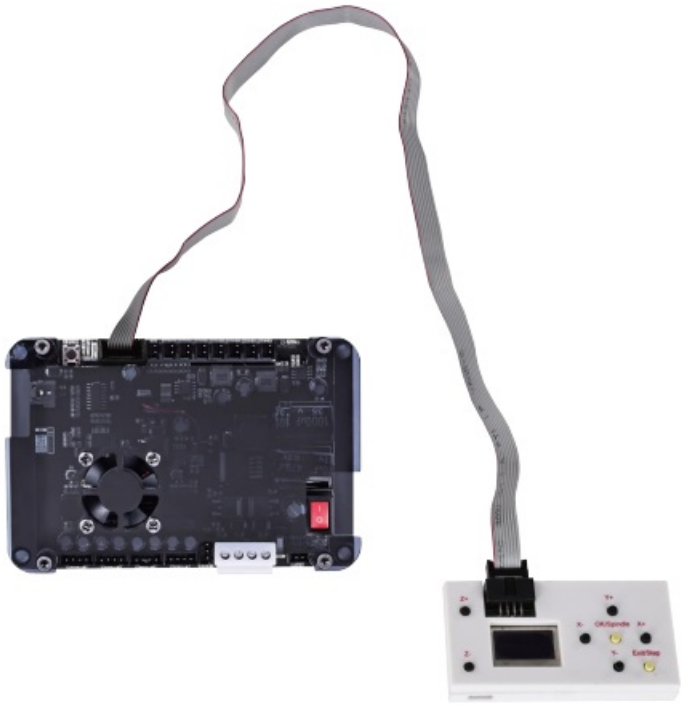
1. Connect the offline controller to the computer via USB cable.

Note: Use a USB cable to transfer files instead of inserting the SD card into the card reader, which may cause a crash.

2. Copy the NC file to the offline controller.



3. Connect the offline controller to the control board.

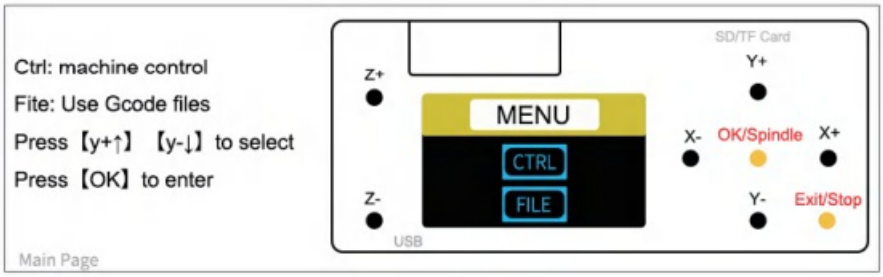


Note: When using the offline controller, you need to unplug the USB cable from the computer, for offline and the computer cannot be used together.

4. Press the [x+/x-/v+/v-/z+/z-] key to move the spindle to the machine origin (Tool setting method: The cutter just touches the object, press the [Exit] key), select the engraving file, and click [ok] Key to start carving.

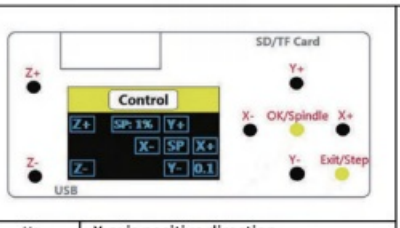
Interface introduction

A. Menu Page



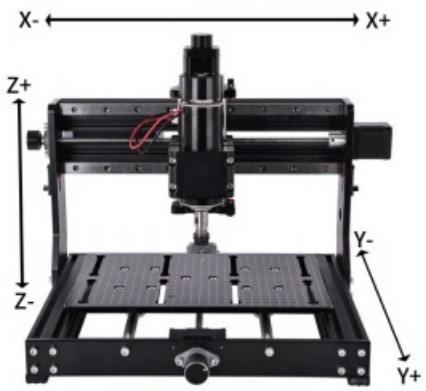
B. Ctrl Page

Control Page

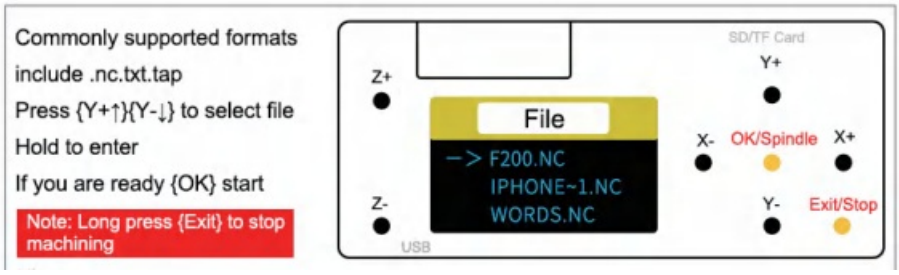


X+	X-axis positive direction
X-	X-axis negative direction
Y+	Y-axis positive direction
Y-	Y-axis negative direction
Z+	Z-axis positive direction
Z-	Z-axis negative direction
OK/Spindle(SP)	SP On/Off
Exit/Step	Long press to exit,short press to change step(0.1/1/5/10mm)
SP:1%	Power to spindle (Press[OK]+[Z+]=add, Press [OK]+[Z-]=educe)

Reference direction



C. File Page



For more efficient online after-sales service, please contact us by scanning the QR code on the right.

Documents / Resources

	MYSWEETY 3020 PLIUS CNC Router Machine [pdf] User Manual 3020 PLIUS CNC Router Machine, 3020 PLIUS, CNC Router Machine, Router Machine, Machine

References

- User Manual

Manuals+, Privacy Policy