Contents [hide]

TWO TREES

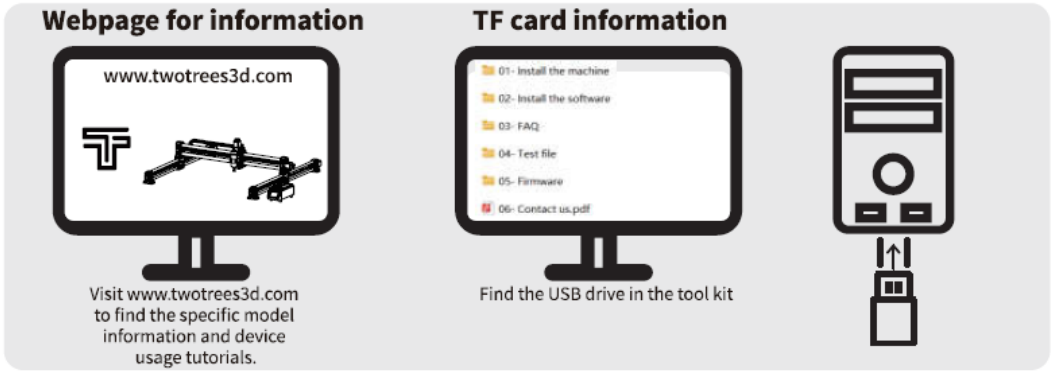
TwoTrees TTC-H40 CNC Router Machine

Note: The picture is for reference only. The actual product is the standard

To our customers

Dear Customer: To ensure a smooth assembly and usage experience, we have prepared this assembly and user guide manual. Please read the following content carefully and follow the instructions to ensure safety and convenience when using the product. If you encounter any issues during use, you can scan the QR code, access our company's website, and read USB drive information to access relevant instructional videos. In case of machine malfunction, please refer to the names of the corresponding parts inside the machine and inform us of the issue and the machine's condition via the after-sales email provided on this page.

- **After-sales Email**:service@twotrees3d.com
- **Wikipedia**:wiki.twotrees3d.com
- **InquiryEmai1:**info@twotrees3d.com



TWOTREES-WIKI

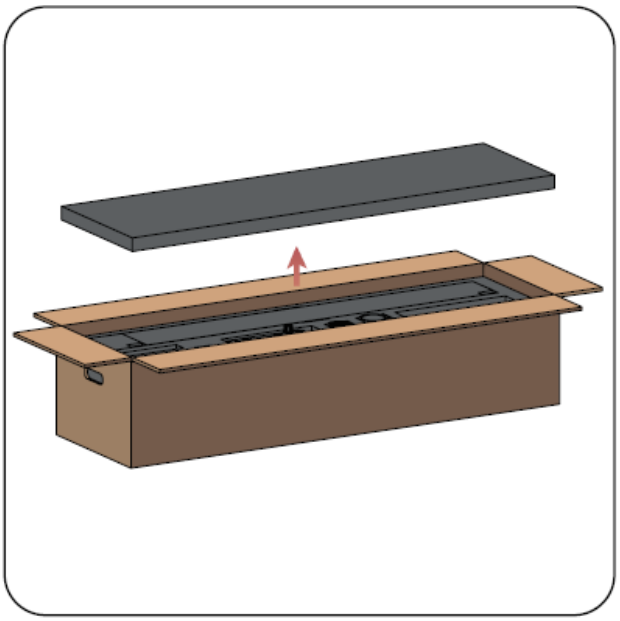
Safety Warning

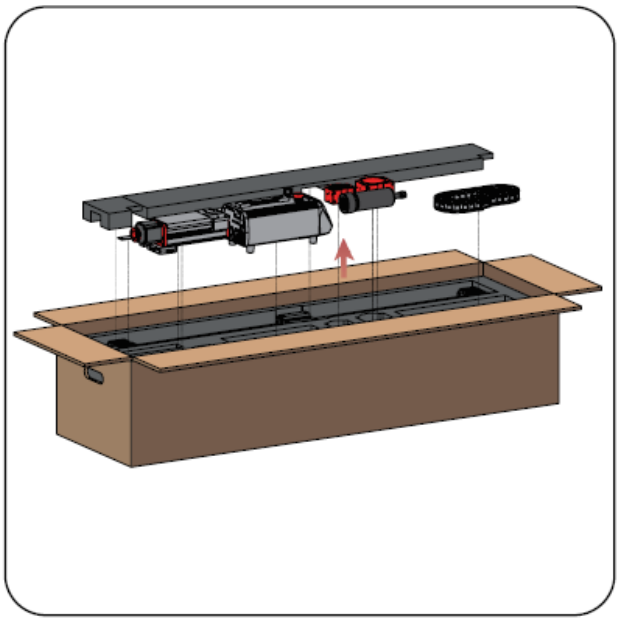
1. Please make sure that the machine installation is firm, when first using the machine.
2. Please press the emergency stop button quickly when danger occurs.
3. Please wear safety goggles when operating machinery.
4. Please use a brush to remove debris, do not blow with your mouth.
5. Please be careful of the sharp parts when using milling tools or grinding workpieces.

6. Please ensure they are securely fastened when installing milling tools.
7. Please ensure that the machine is stopped before loading/unloading, adjusting tools, measuring, and cleaning.
8. Never wear cotton gloves during operation.
9. Never place measuring tools or other clutter within the working area.
10. Please ensure the workpiece is securely fastened when clamping it. Never start engraving if it is loose or not properly clamped.
11. This engraving machine is intended for using in indoor settings.
12. Considering the size and weight of the machine, you need to carry more than one person in order to protect the operator as well as the safety of the equipment.

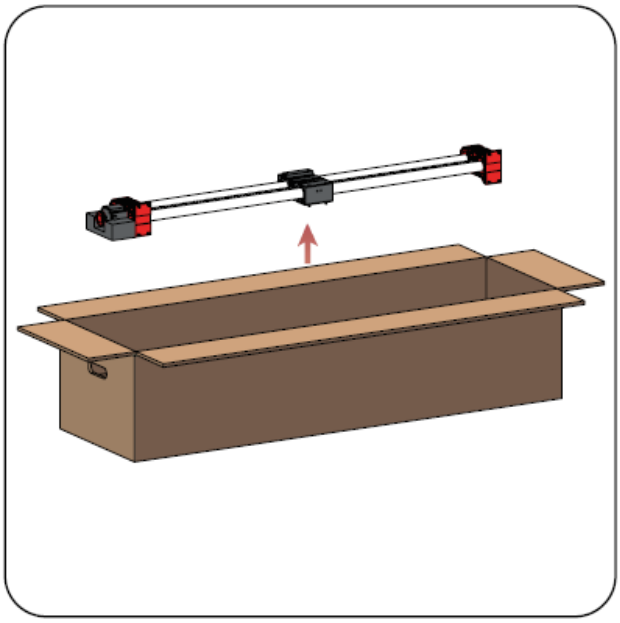
Unboxing operation

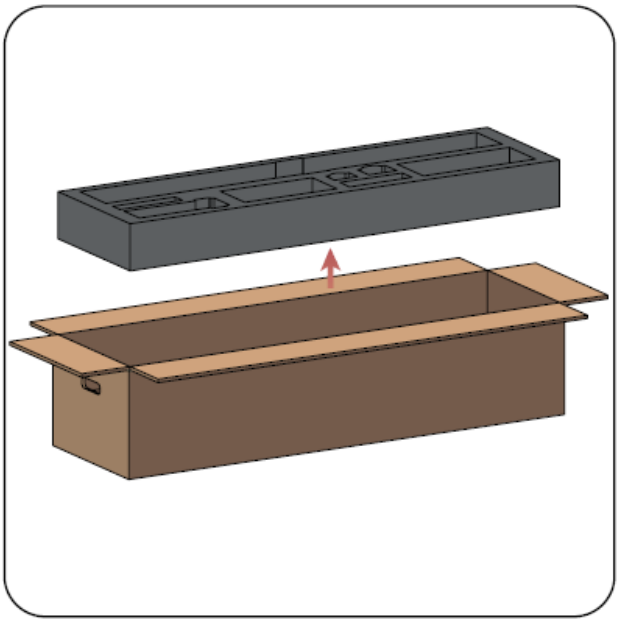
- After unboxing, remove the top cover wrapped in pearl cotton.
- Then, take out the following items in order: cable chain and wires, spindle, spindle mounting bracket, edge trimming machine mounting bracket, Z-axis module, head-mounted ear muffs, tool kit, and a bag of screws.



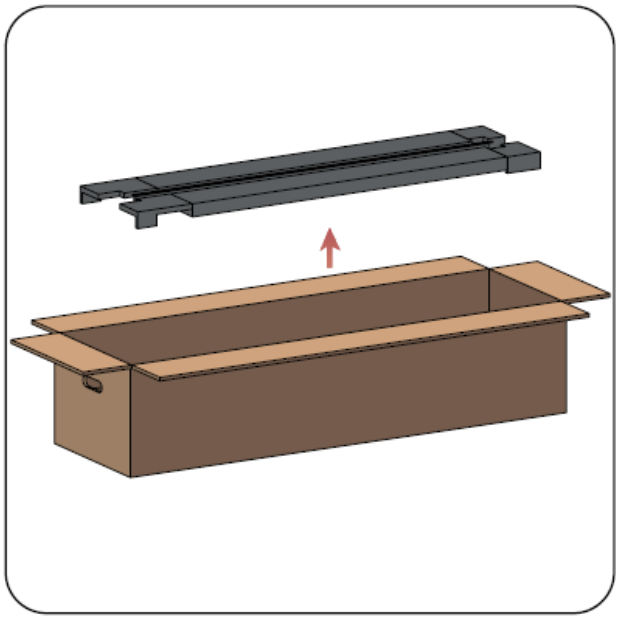


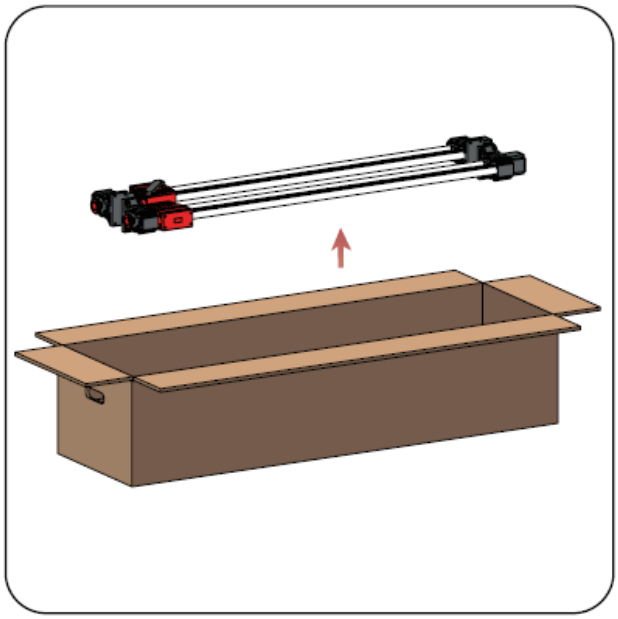
- Take out the X-axis module.
- Take out the pearl cotton.



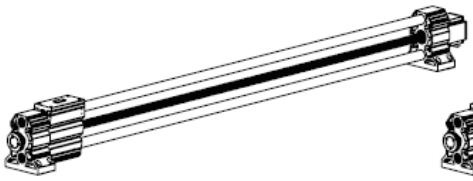


- Take out the interlayer cotton, cable chain support bracket, and positioning strip in order.
- Take out the Y1 and Y2 modules in sequence.



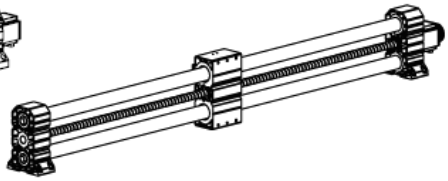


Part list

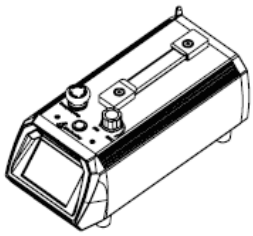


Left Y2 module x1

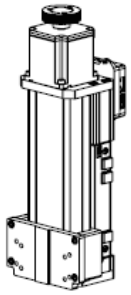
Right Y1 module x1



X-axis module x1

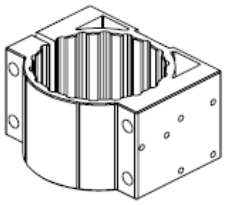


Control box
x1

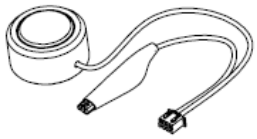


Z-axis module
x1

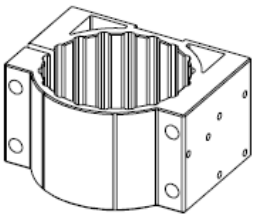
Spindle motor
x1



Spindle Mounting Seat
x1

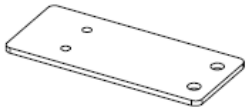


tool setting probe
x1

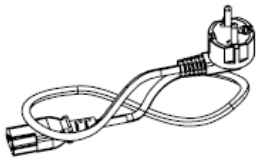


Trimming Machine
Mounting Seat x1

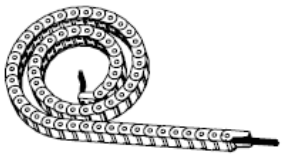
Adapter Sleeve x1



Fixed Cable Carrier
Sheet Metal x1



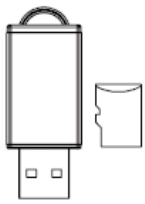
Power cable x1



Drag Chains
and Cables x1

Drag chain
support bracket x1

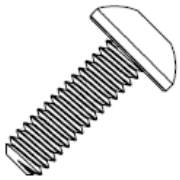
positioning
strip x1



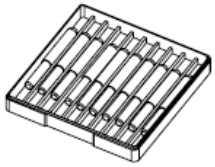
memory card x1

Phillips screwdriver x1

dowel pin x2



M3*8 semi-circular head screws x2

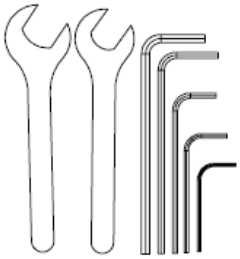


Cutter box x1

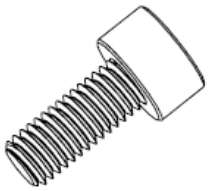
Antenna x1

M3.5*35 selftapping Screw x30

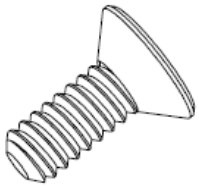
M5*55 cup head screw x4



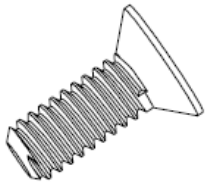
tool kit x1



M5*12 cup head screw x8



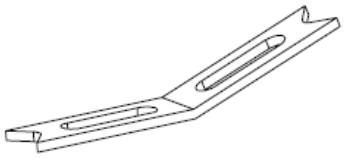
M3*6 countersunk screw x4



M4*8 countersunk screw x4

M5*45 cup head screw x4

M5*65 cup head screw x4



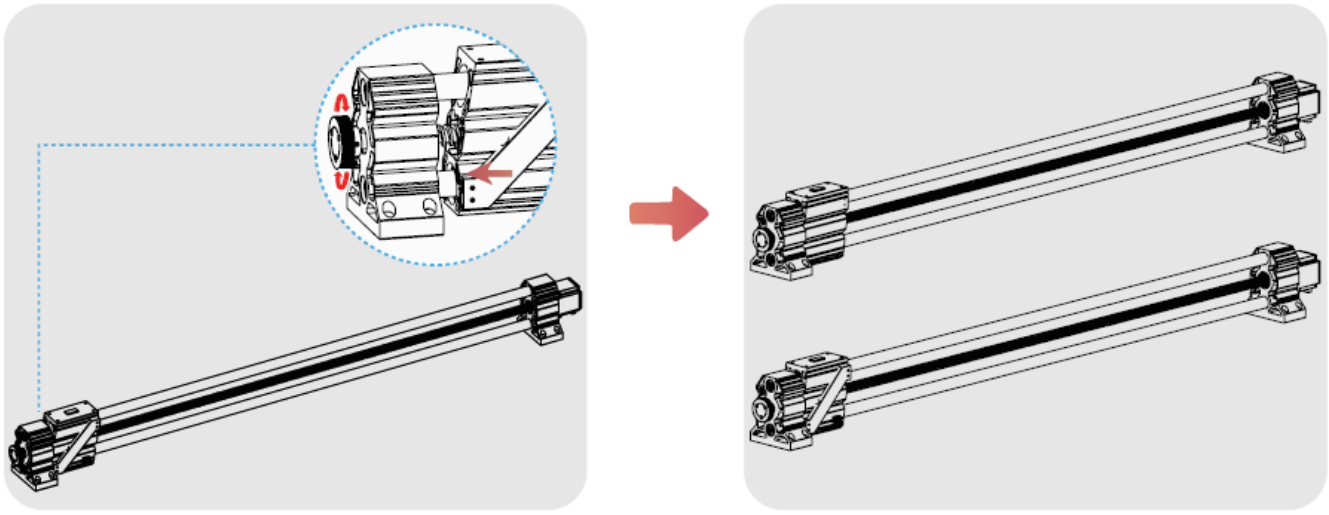
Workpiece clamping plate x6

Machine assembly

1. Move the right side of Yl module and the left side of Y2 module to the front, and make sure they are flush against the base.

   use:

   - Right Yl module xl
   - LeftY2 modulexl
2. Make sure that the moving blocks of the modules on the right side of Yl and the left side of Y2 are already in tight contact with the base.

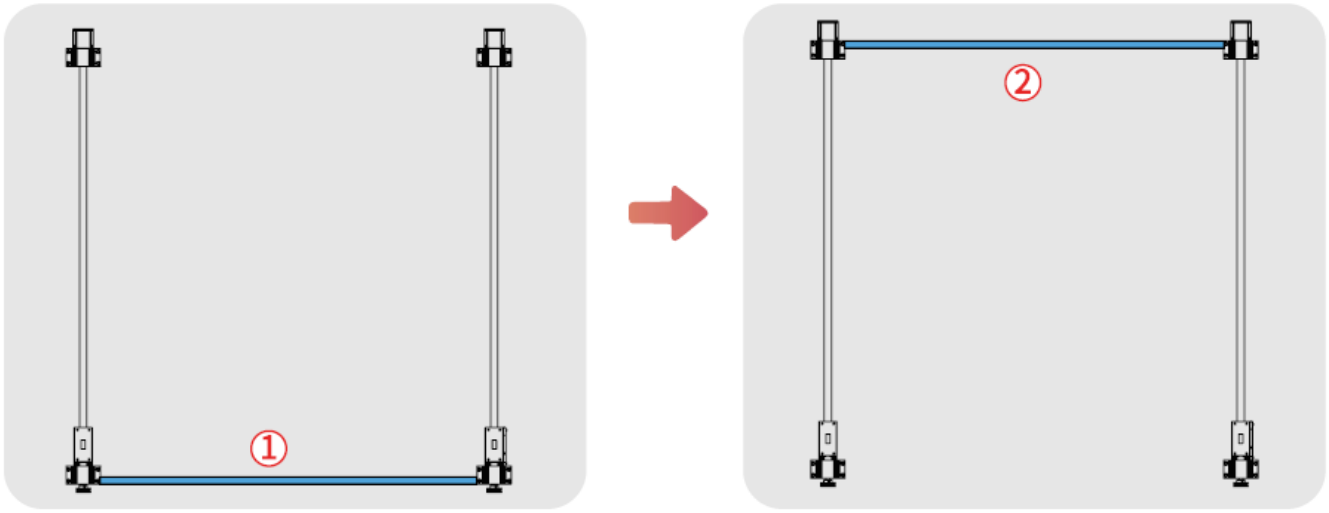


3. Place the Y2 module on the left side and the Yl module on its right, and make sure that the positioning strip is at the front of the base.

   use:

   - positioning strip x1
   - Right Y1 module x1
   - LeftY2 module x1

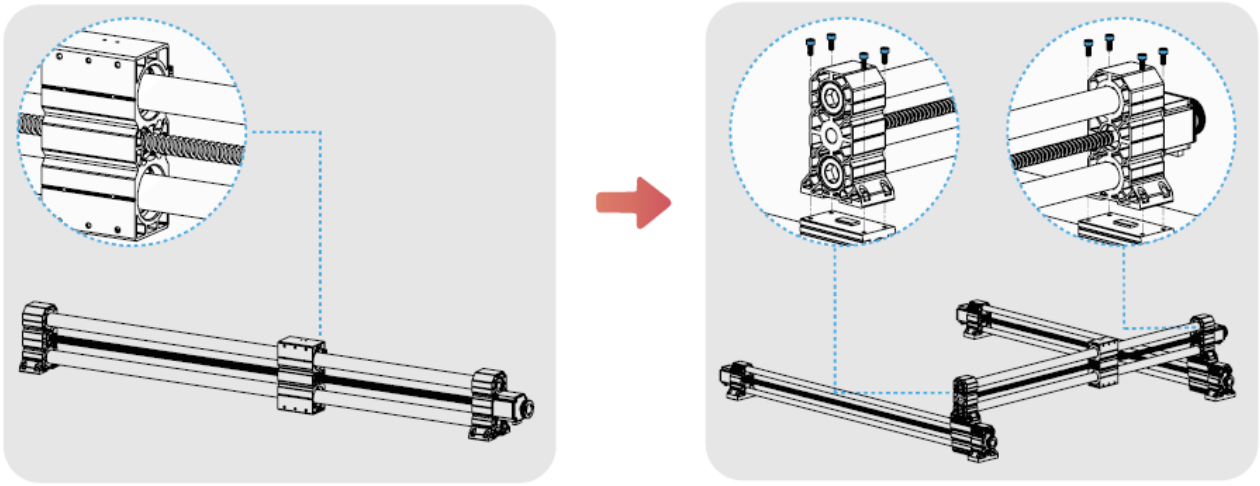
4. Place the positioning strip between the bases of the Yl and Y2 motors and make sure that both modules are aligned.



5. Ensure that the side of the moving block with multiple holes faces the front when installing the X-axis module.
6. Place the X-axis module onto the surface of the Yl and Y2 modules, and secure it with M5*12 cup head screws.

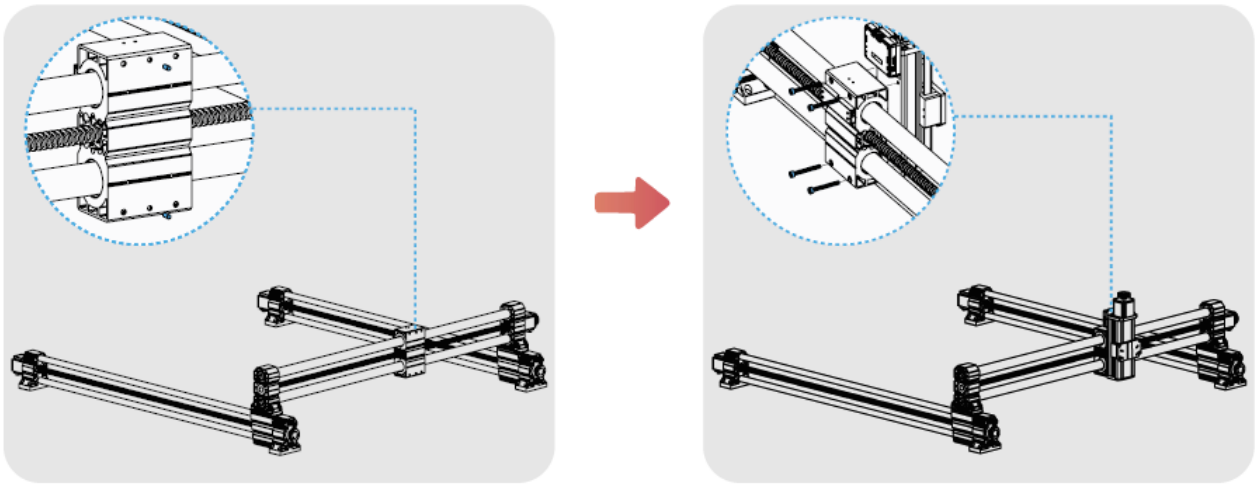
   use:

   - X-axis module xl
   - M5*12 cup head screw x8



7. Install a pin in each of the upper and lower pin holes of the X-axis carriage block.
    - **use:**
        - dowel pinx2
8. Align the back side of the Z-axis module with the front side of the X-axis module, and secure them with M5*45 cup head screws.

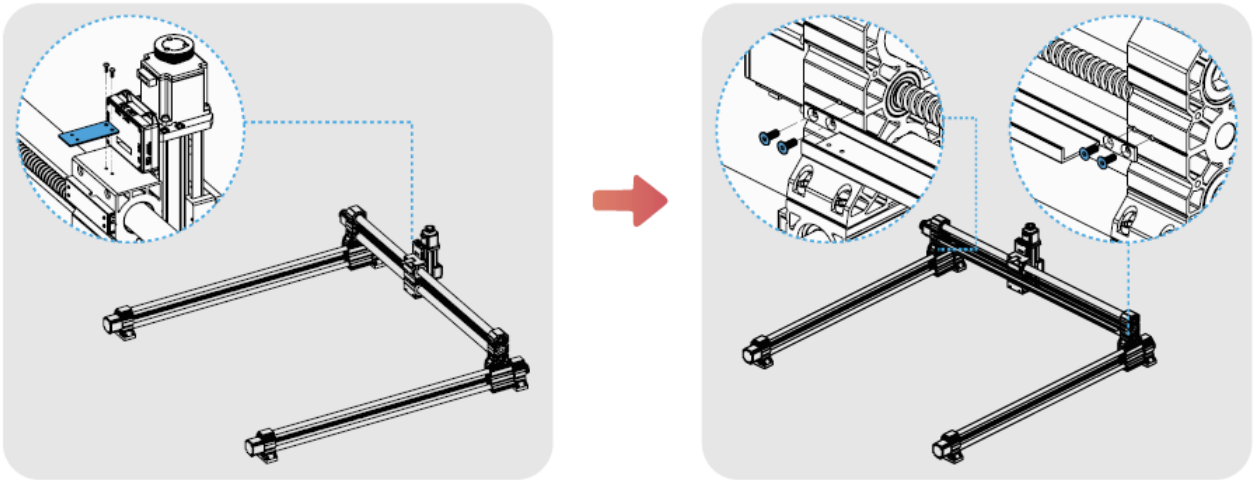
    use:
    - Z-axis module xl
    - M5*45 cup head screw x4



9. Install the cable chain bracket onto the plane of the X-axis module and secure it with M3*8 flat head countersunk screws.

    use:
    - Fixed Cable Carrier Sheet Metal xl
    - M3*8 semi-circular head screws x2
10. Install the cable chain support bracket on the backside of the X-axis module and secure it with M4*8 flat head countersunk screws.

    use:
    - Drag chain support bracket xl
    - M4*8 countersunk screw x4



11. Position the cable chain and wires onto the support bracket, and fix the ends of the cable chain with M3*6 countersunk screws.

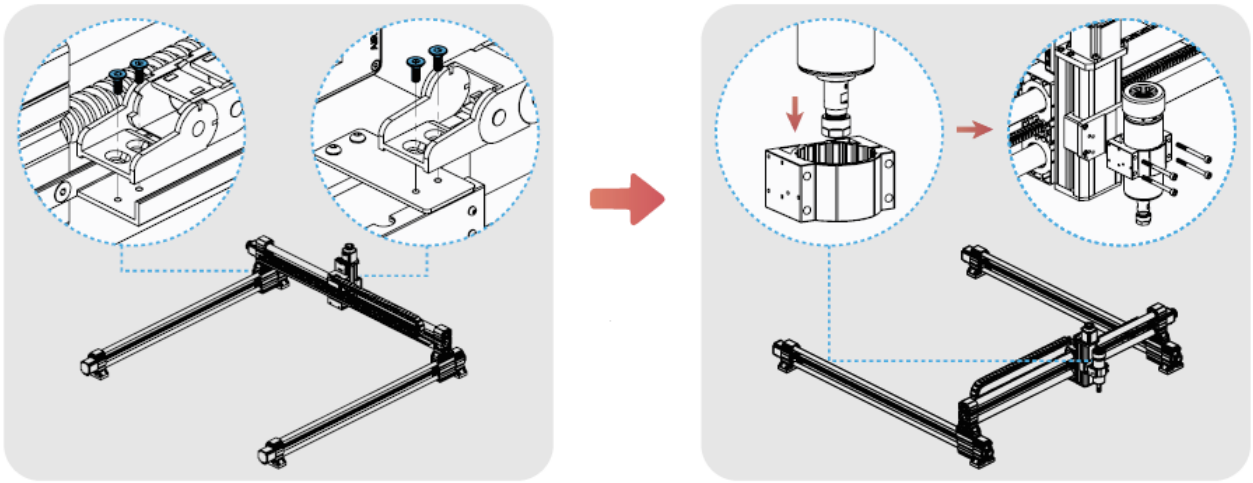
    use:

    - Drag Chains and Cables x1
    - M3*6 countersunk screw x4

12. First, insert the MS*SS cup head screws into the spindle mounting bracket and align it with the hole of the Z-axis carriage module. Then, place the spindle motor in position, and tighten the screws.

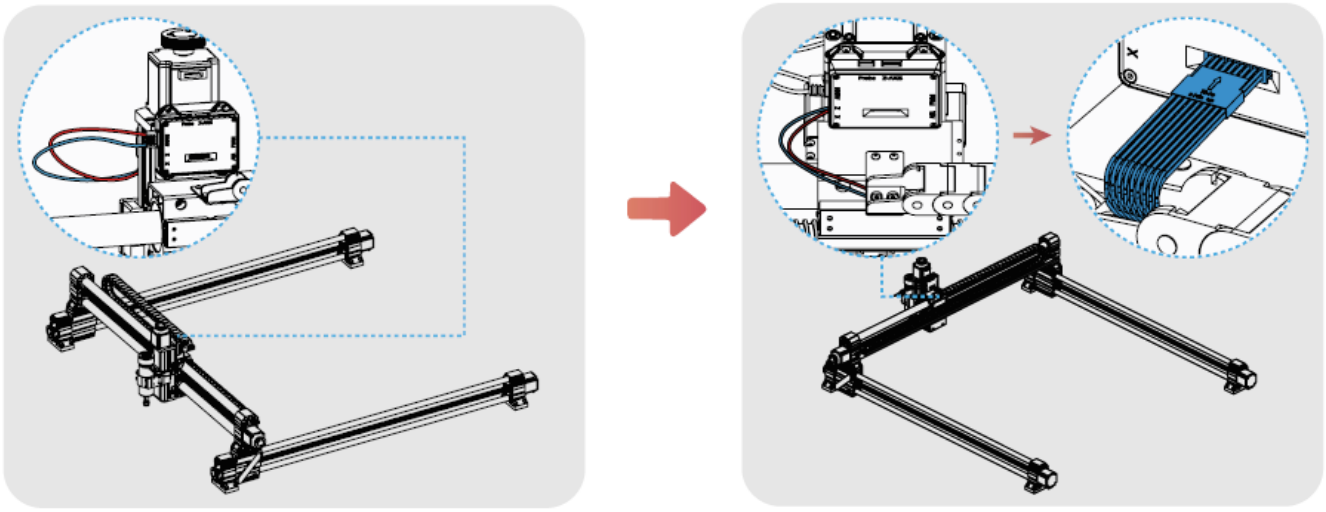
    use:

    - Spindle motor x1
    - Spindle Mounting Seat xl M5*55 cup head screw x4

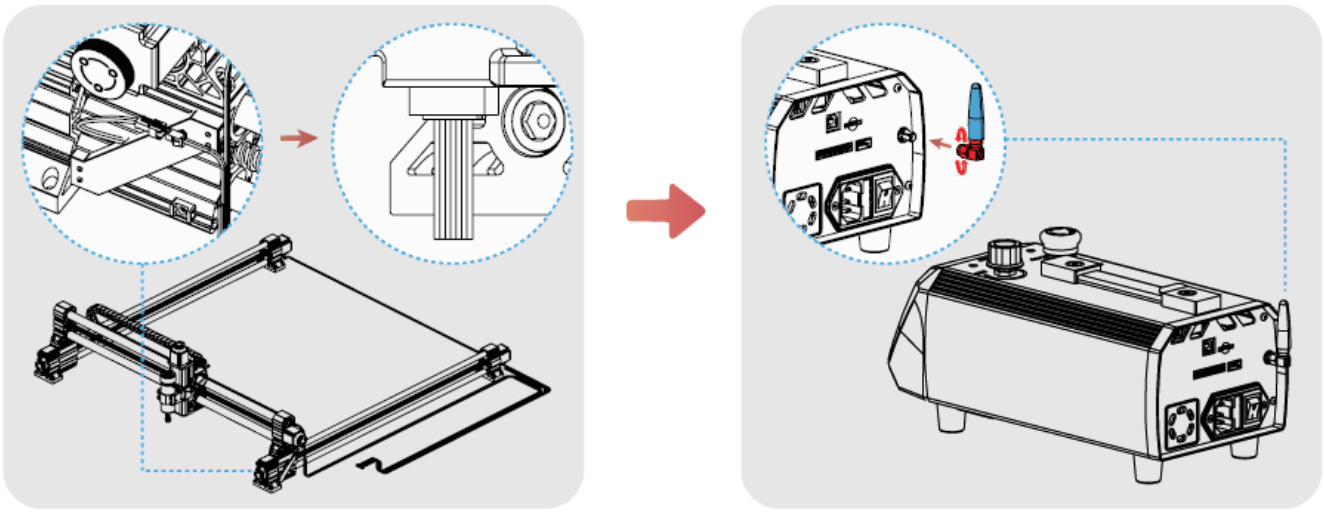


Machine wiring

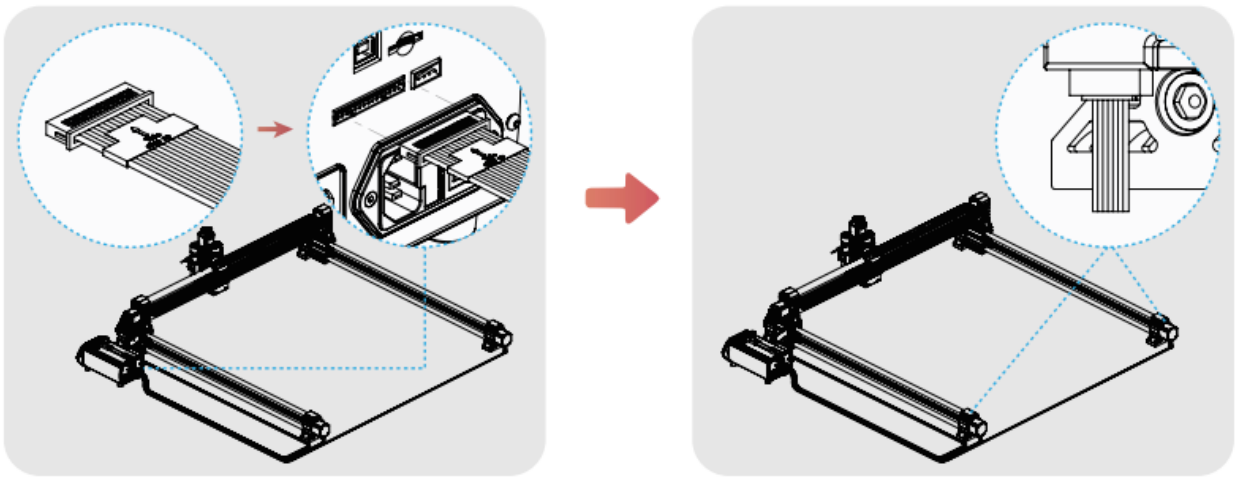
1. Please insert the spindle motor cable into the corresponding port on the interface board at the back of the Z-axis module.
2. Plug the X-axis limit switch cable and the main control cable into their corresponding ports on the adapter board.



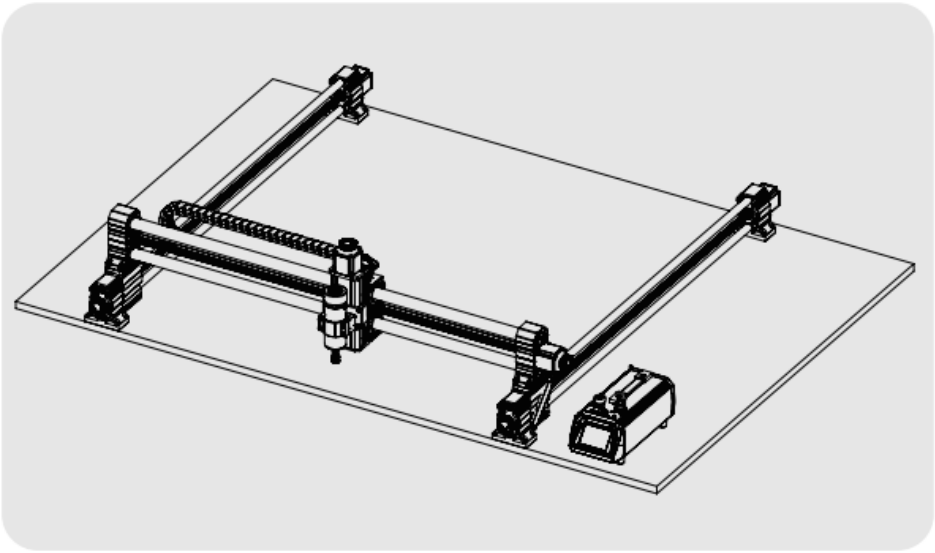
3. First, connect the limit switch cable to the limit terminal on the Y-axis. Then, insert the X-axis terminal into the corresponding port of the X-axis motor.
4. Align the antenna with the hole, and then tighten the nut clockwise.



5. Check the direction of the terminals to ensure correct installation and avoid short circuits when inserting the control box.
6. Ensure that the Y1 and Y2 terminals are correctly connected to the corresponding ports of the motors.



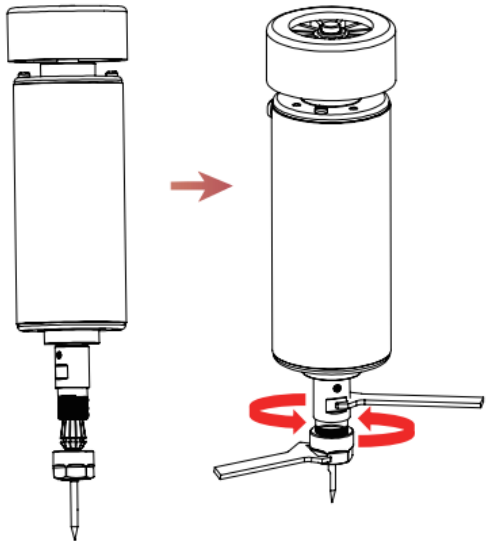
7. It is recommended to place a wooden board larger than 1.3xl.3 mat the bottom of the machine to enhance its stability.



0peration manual

Tool installation

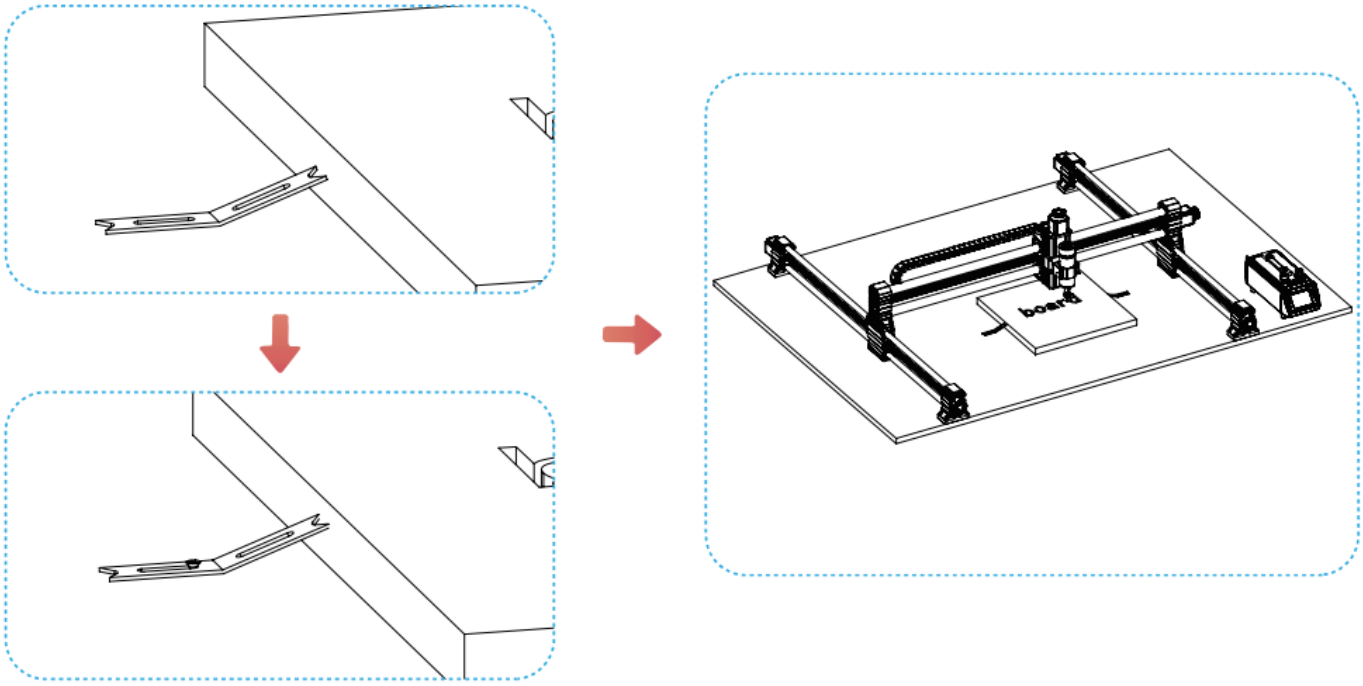
Note: The grip length of the tool should be about 1/2 or 1/3 of the tool's total length.



	Cutting length	Ovreall length	count Flute	Explanatory note
 Straight Cut 0.125 inches (3.175mm)	20mm	38mm	2	Straight cut can be used for Roughing,Area Clearance,Cutouts, Inlays and Profiling
 MillCutter 0.125 inches (3.175mm)	9mm	37mm	6	Corn Cob End Mills – specifically designed for precision PCB machining, featuring high rigidity, low burr, and superior wear resistance.
 30 degree carving cutter0.125Inch (3.175MM diameter, 0.1 end)	15mm	27mm	1	Use for fine detail engraving

Jig setup

Press the workholding plate tightly against the surface of the wooden board and secure it with M3.Sx35 selftapping screws

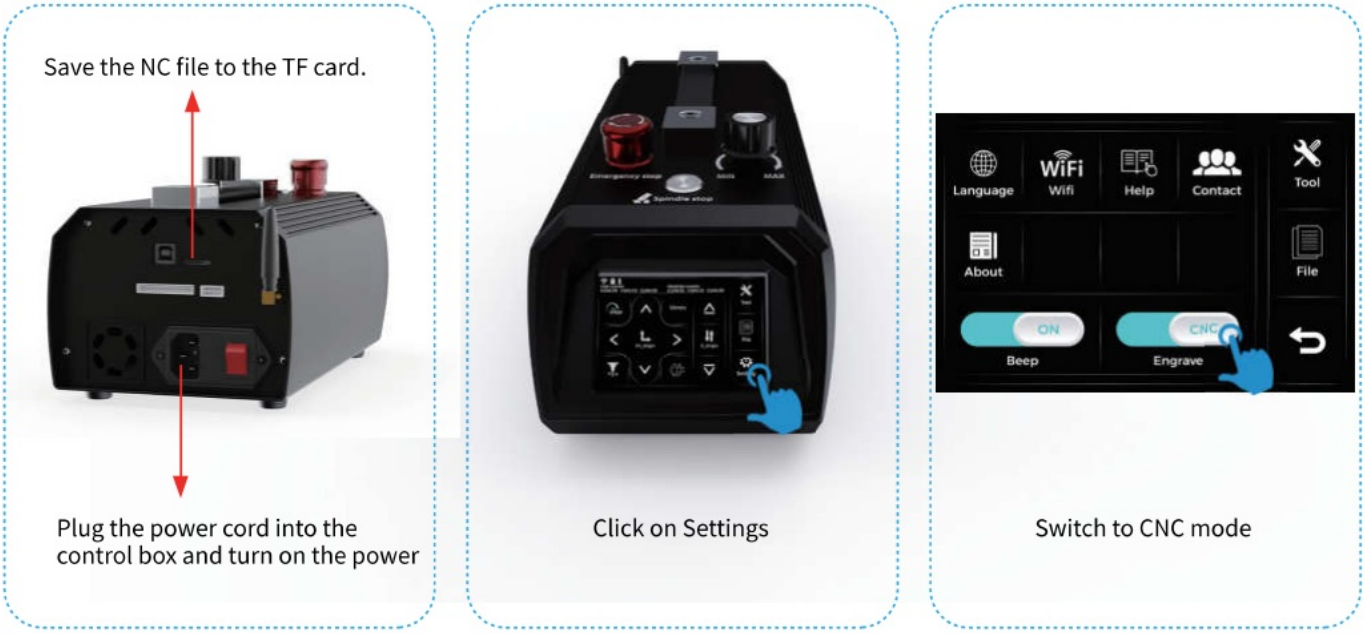


Electrical wiring

1. Data cable interface
2. Power supply interface
3. TF card interface
4. A-axis motor interface
5. Power cable interface
6. Tool setting interface
7. Z-axis motor interface
8. S00W spindle interface
9. Z-axis limit interface
10. X-axis limit interface
11. 24V external power supply interface,
12. Laser head PWM signalinterface

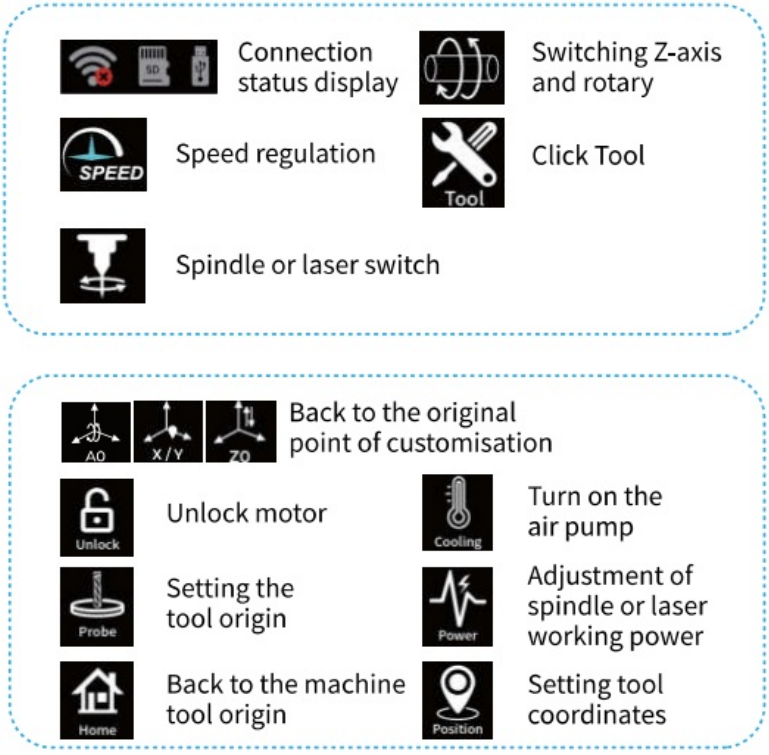
Turn on

Operate the machine via the screen



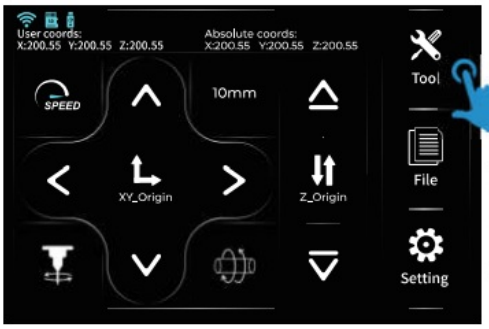
Get familiar with the operation interface

Operate the machine via the screen



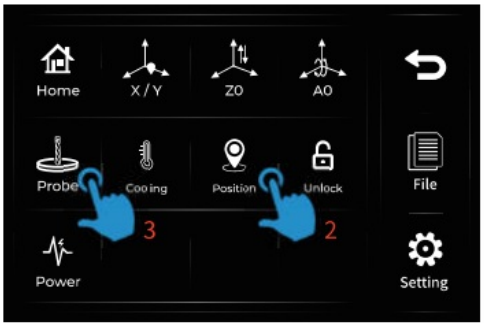
Set the origin of coordinates

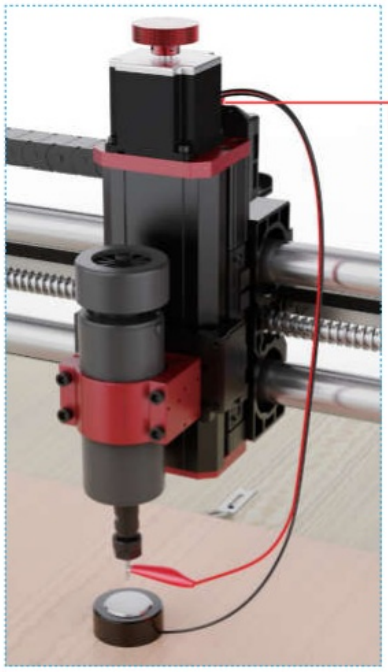
Operate the machine via the screen



After successful tool alignment, it will display:

X:0 Y:0 Z:0

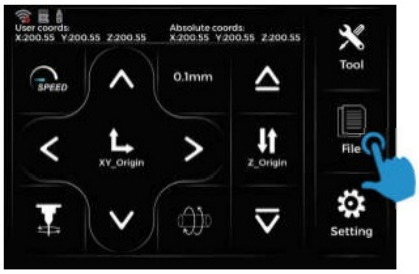


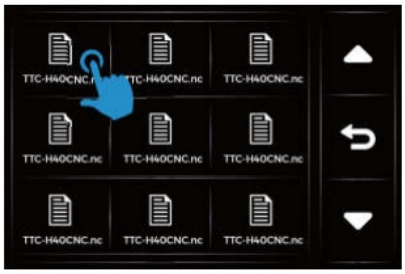


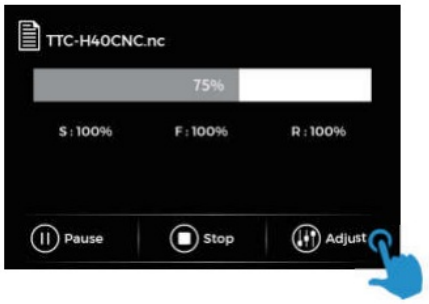
Note: Only one positioning is needed before engraving.

Select the engraving file

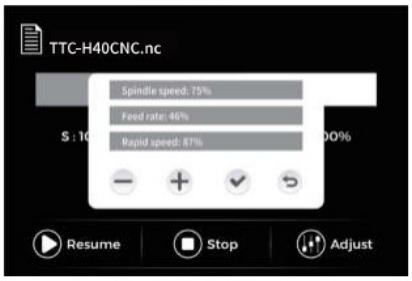
Select the file and proceed with engraving.







Note: Set the appropriate feed rate based on the hardness of the material and the tool.



Clicking the adjustment button allows you to change the rate and speed.

Options to start or stop the program.

Pause and Continue.

Stop Carving.

Motherboard

- Please confirm that the motherboard wiring is correct, as shown in Figure
- Ensure that the wiring is not loose after installed correctly.

Power supply

- Please check if the cables are loose and then reconnect them.
- Check if there is voltage at the power socket interface and if there is current at the

power input.

If there is voltage but no current, it indicates that there is a problem with the power source.

- Check if the power socket is loose and if the power indicator light is on. Please check if the power indicator light on the casing is lit. If the light is on but the machine does not work properly, check if the indicator light on the motherboard is lit. If the indicator light is not on, the output cable may be loose, or there may be an issue with the motherboard.

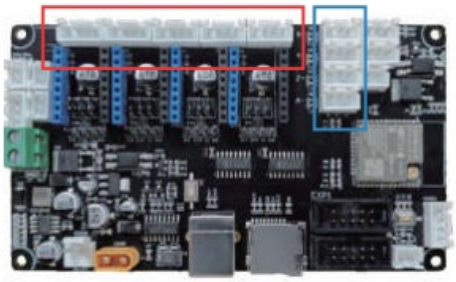


Figure 1

Figure 2

Screen

- As shown in Figure 2, please check if the screen cable is loose and retighten it, or change the order of the wires and restart.
- Loose Screen Cable: During transportation, the machine may experience vibrations, which can cause internal connectors to become loose, leading to poor contact or no contact at all. At this point, the machine's screen may turn white and fail to function properly. Please first check if there are any issues with the cables.
- Motherboard or Screen Issue: If the screen cable is functioning properly, then the issue may lie with the motherboard or the screen itself. If you have multiple machines, you can replace the "faulty" screen with one that displays normally. If the good screen works properly, then the original screen is at fault. If not, the issue is with the motherboard. If you encounter this problem, please contact after-sales customer service.

Figure 1

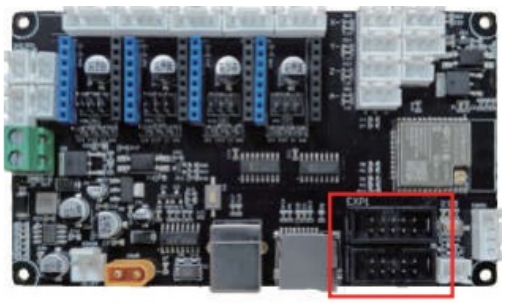
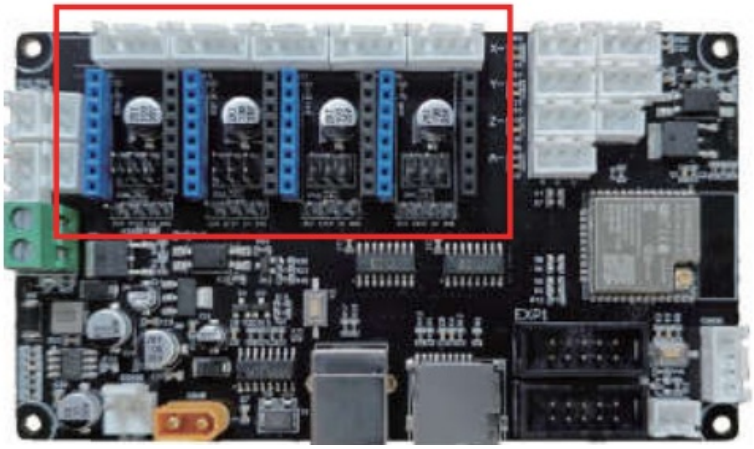


Figure 2

Motor

- First, check if the motor wires are securely connected to the motor terminals and the motherboard port. If there is any looseness or poor contact, reinsert the power supply and then test the power.
- Swap the position of the motor. If there is still no response after reinserting it, you can test by replacing
  the faulty motor with a working one at the motherboard port. After the test, determine the cause of the motor failure (A. Motor wiring issue B. Driver issue C. Motor issue).
- Motor Wire Issue: After confirming that the motor is not faulty, please swap the problematic motor wire on the motherboard with a working motor wire, and then perform the test. If it works without issues, then the problem is with the motor wire. If it still does not work, please check the driver.
- **Note:** Adjust the motor wiring on the motherboard. As shown in Figure 1, if there is a Y-axis vibration, you can swap the faulty motor wire with the good motor wire (the Y/XZ/E-axis motor wires are good) at the port. At the same time, ensure that the motor wire matches the corresponding motor. After powering on, test by moving the axis to check its functionality.
- Driver Issue: After confirming that the motor and motor wires are not faulty, recheck the motor driver. The driver may be problematic and may need to be replaced with a new one.



TF card issue

- TF card Issue: How to determine if there is a problem with the TF card? First, check if the card can be used normally on a computer. if the TF card works without malfunction on the computer, save the files to the computer and format the card. Place the card

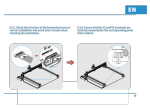
into the machine for testing. If it is not recognized after powering on, it indicates that there is a problem with the TF card and it needs to be replaced.

- Check if the card slot is loose. Long-term use of the card slot may cause the card holder to wobble, leading to poor card reading. To solve this issue, you may need to replace the card holder with a new one. Sometimes the card may be inserted into the slot briefly and then suddenly stop responding. You can quickly insert and remove the card several times, then try inserting it after turning off the power. After that, clean the card with some alcohol, insert it into the slot, and insert it several times to see if it can be used normally after cleaning.
- Oxidation of the TF card chip. You can try applying a small amount of alcohol to the SD card, then insert the card into the slot and insert it several times. After cleaning, check if it can be used normally.

Machine parameters

- **Model**: TTC-H40
- **Color**: red and black color scheme
- **Main body material**: Aluminum+ Trapezoidal lead screw +Linear bearing
- **Compatible carving materials**: Plywood//MDF/ Solid wood board/ Acrylic/ Carbon fiber/ Aluminum/ Copper/ Stainless steel
- **Machine weight:** 36 kg
- **Working area**: 1000mm X 1000mm X 100mm (39.3in*39.3in*3.9in)
- **Touch screen**: 3.5-inch resistive touchscreen (480*320 resolution)
- **Laser/CNC function switch**: Supported
- **Speed control**: Supported
- **Tool setting control**: Supported
- **Spindle motor**: Standard 500-watt spindle
- **Support system**: MacOS\Windows\Linux
- **Total power consumption:** 150W
- **Motion structure type**: XYZ

Documents / Resources

	TwoTrees TTC-H40 CNC Router Machine [pdf] User Manual 2A7F8-TTC-H40, 2A7F8TTCH40, TTC-H40 CNC Router Machine, TTC-H 40, CNC Router Machine, Router Machine, Machine

References

- User Manual

TwoTrees

2A7F8-TTC-H40, 2A7F8TTCH40, CNC Router Machine, Machine, Router Machine, TTC-H40, TTC-H40 CNC Router Machine, TwoTrees

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