

Attention: please wear protective glasses when using laser

**Warning**

Laser focus will produce high temperature and high brightness, which will cause damage to human body, animals and objects. Please follow the instructions. Weare not responsible for the problems caused by improper use.



It is forbidden to irradiate eyes (including animals), otherwise it will cause permanent blindness



It is forbidden to irradiate any biological surface or limb, otherwise it will burn and cause damage



The laser module can penetrate the surface of the object. Please increase the base plate appropriately



It is forbidden to use in places with combustible objects and gases to avoid fire and explosion



It is forbidden to use it for minors, children, the elderly or people who have no operation ability



It is forbidden to disassemble the laser without instruction to avoid damage



It is forbidden to use on smooth material surface, such as metal, lens, etc. the reflection will cause damage to the surrounding objects



Do not stare at the laser focus for a long time. It will affect your eyesight. Please wear protective glasses



When not in use, please power off to avoid unpredictable situation

LEKN(C1) Laser Function Manual V2.2

Powered by LEKN

1. Laser installation and wiring

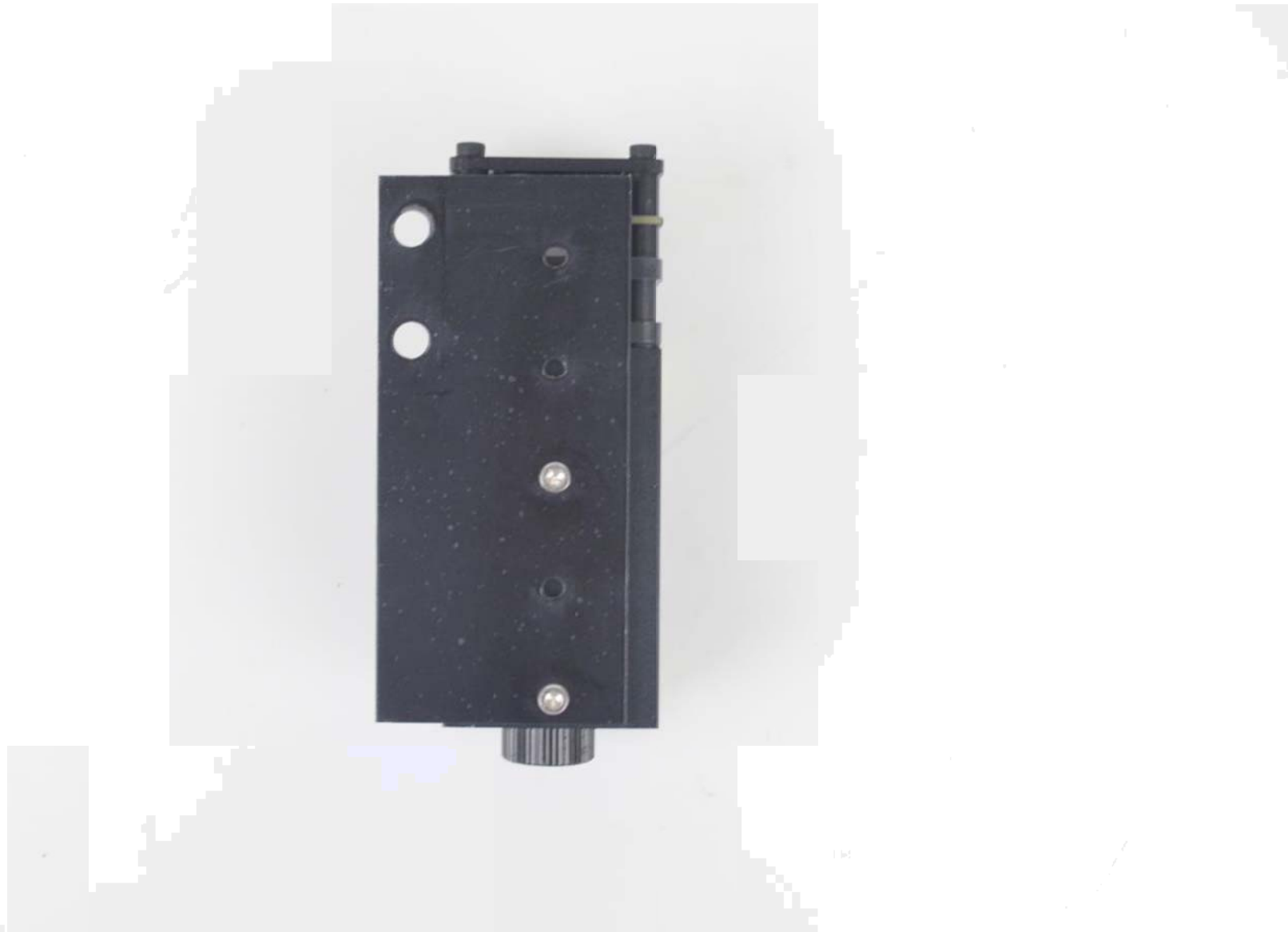
[step 1] fix the laser module to the hanging board with m3-8 screw.



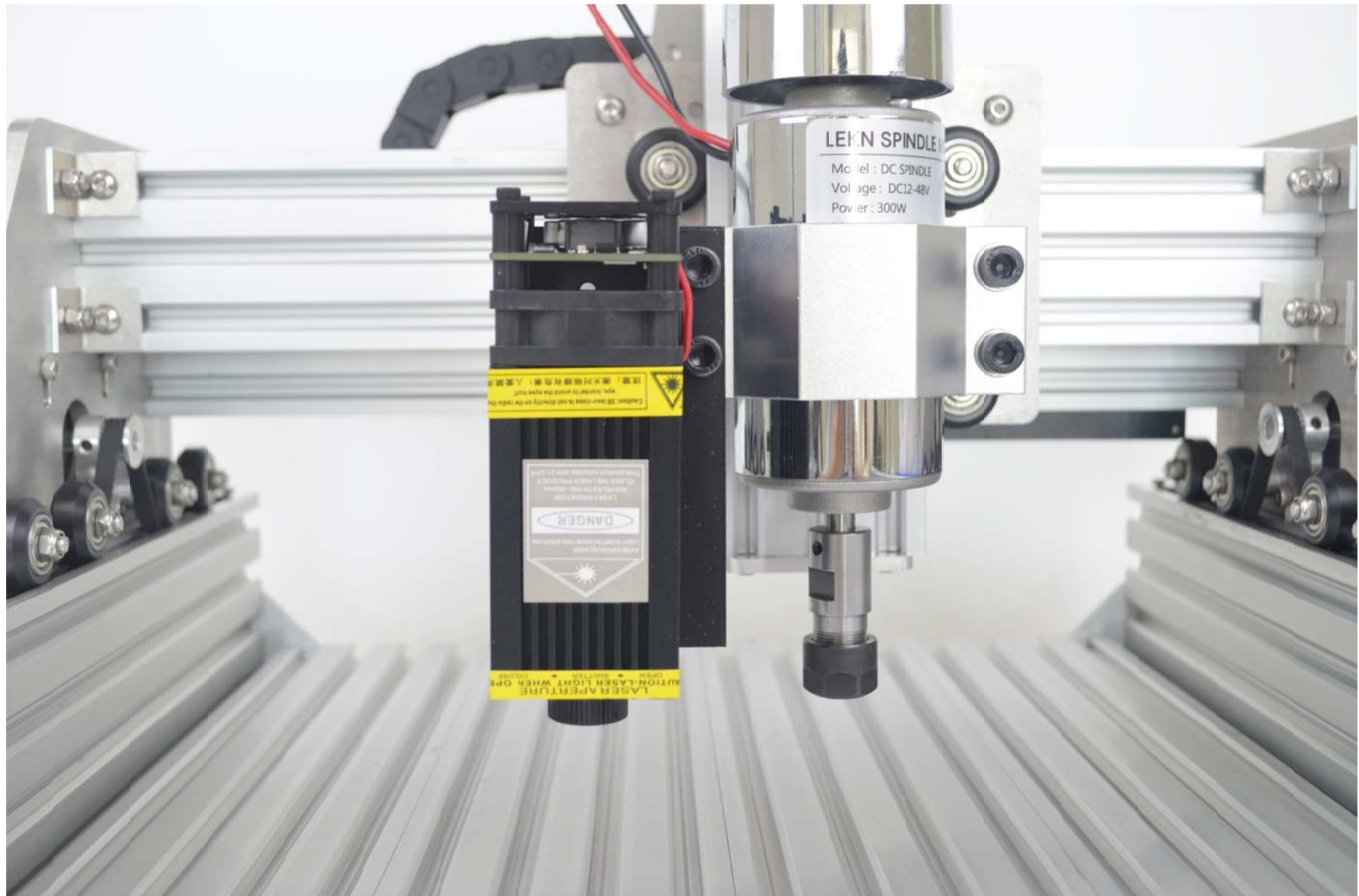
Front view:



Rear view:



Install the machine to the spindle holder. As shown in the figure:



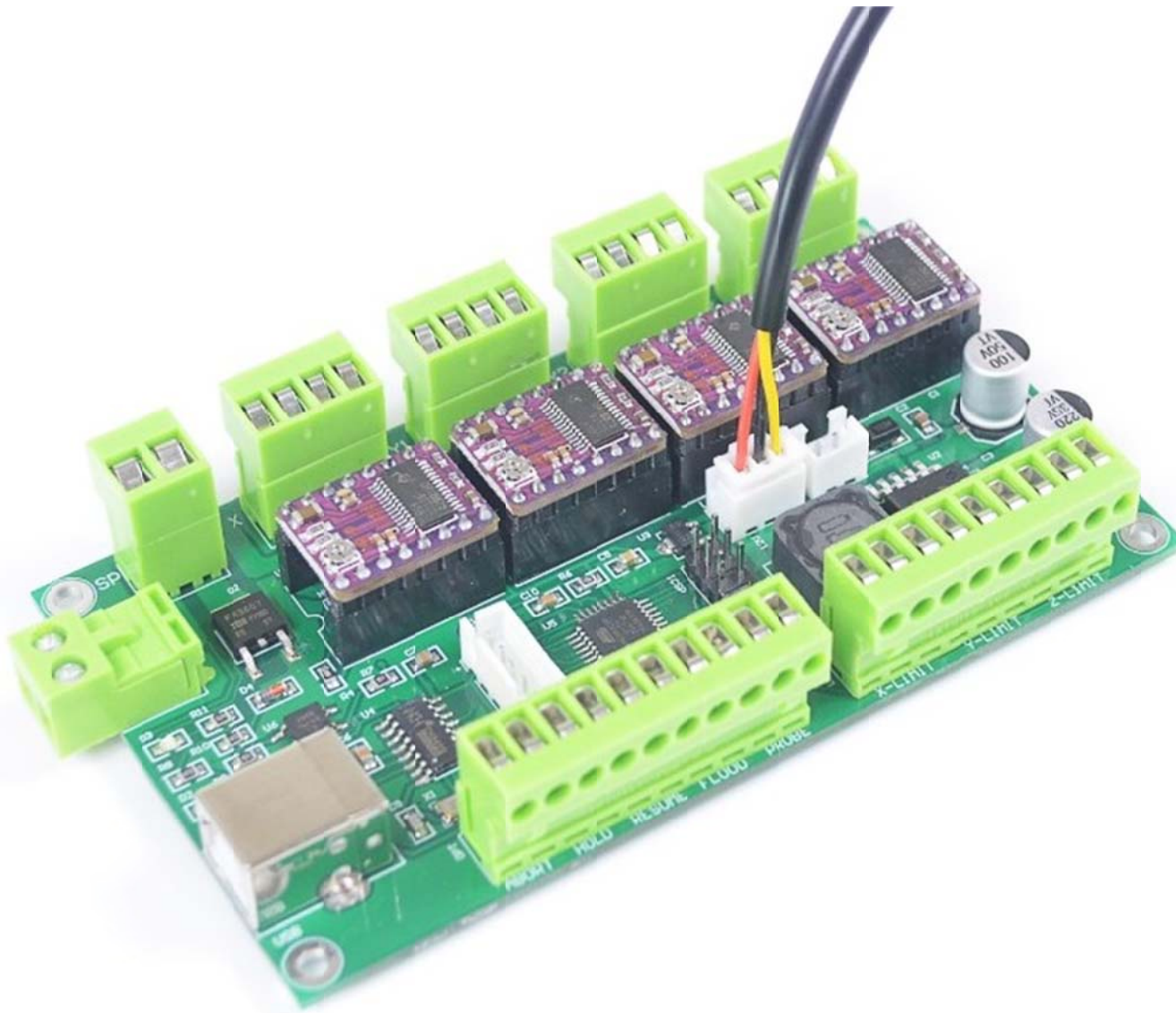
[step 2] laser wiring.

1) First, plug the 3P plug into the laser

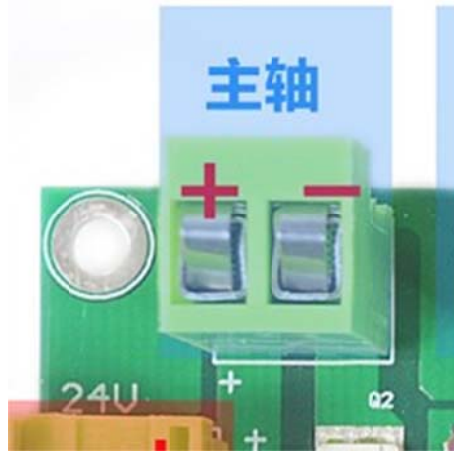




2) The other end is plugged into the motherboard laser interface, as shown in the figure

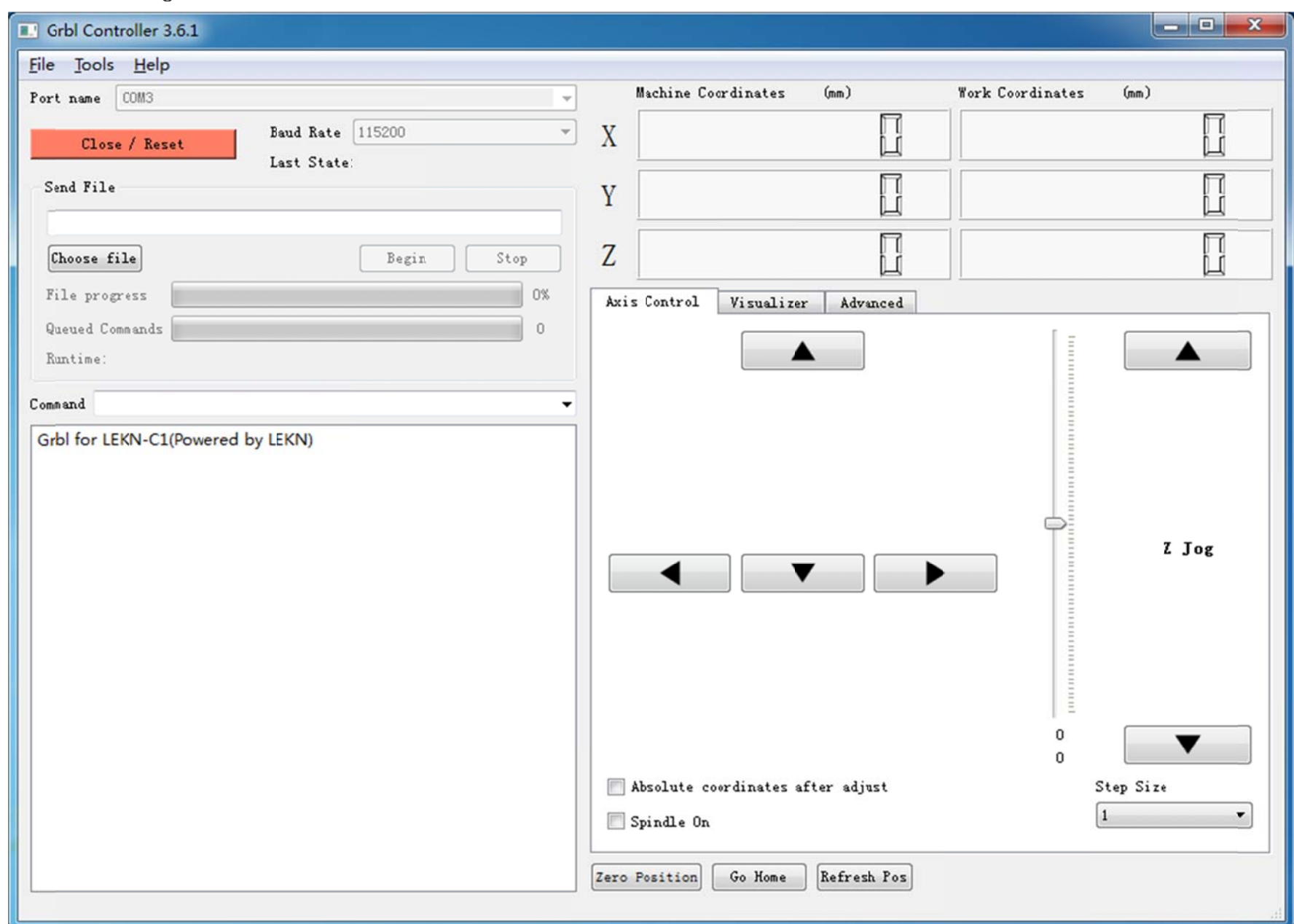


3) Unplug the terminal wire at the main board end of the spindle motor (otherwise, the spindle motor will work when the laser is turned on)

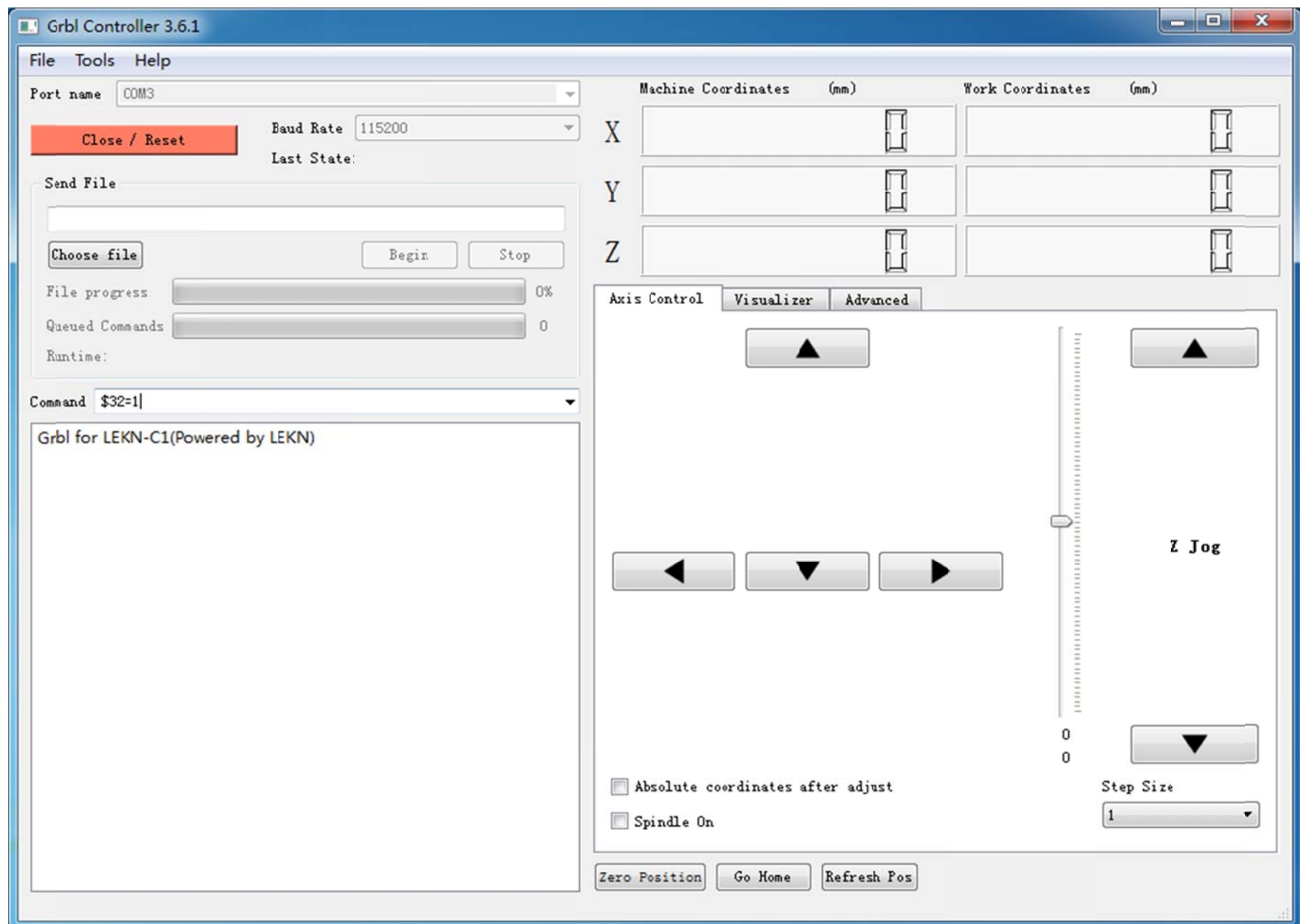


2. Use of laser

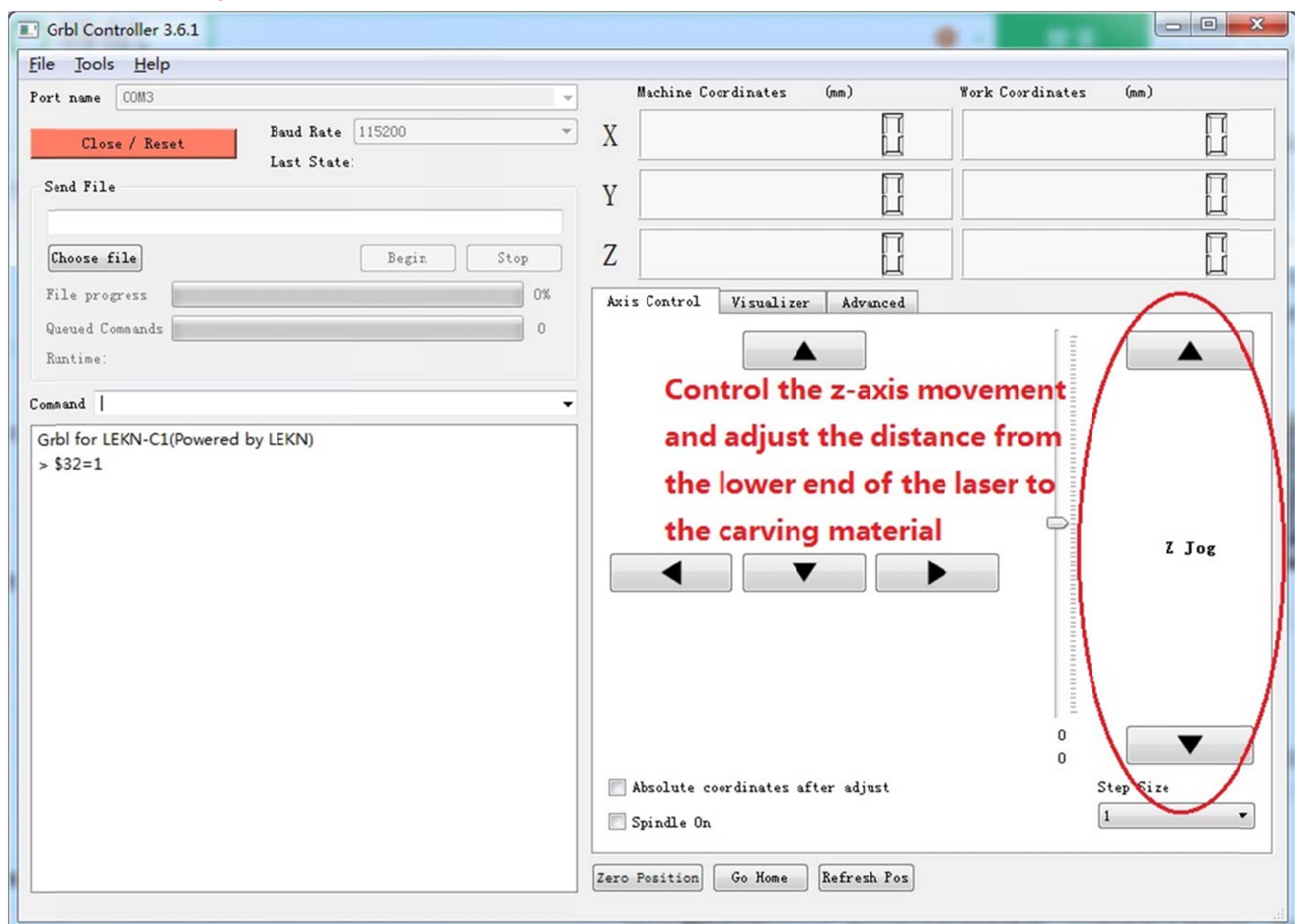
[step 1] open the main control software grbl controller of the engraving machine and connect the engraving machine. As shown in the figure:



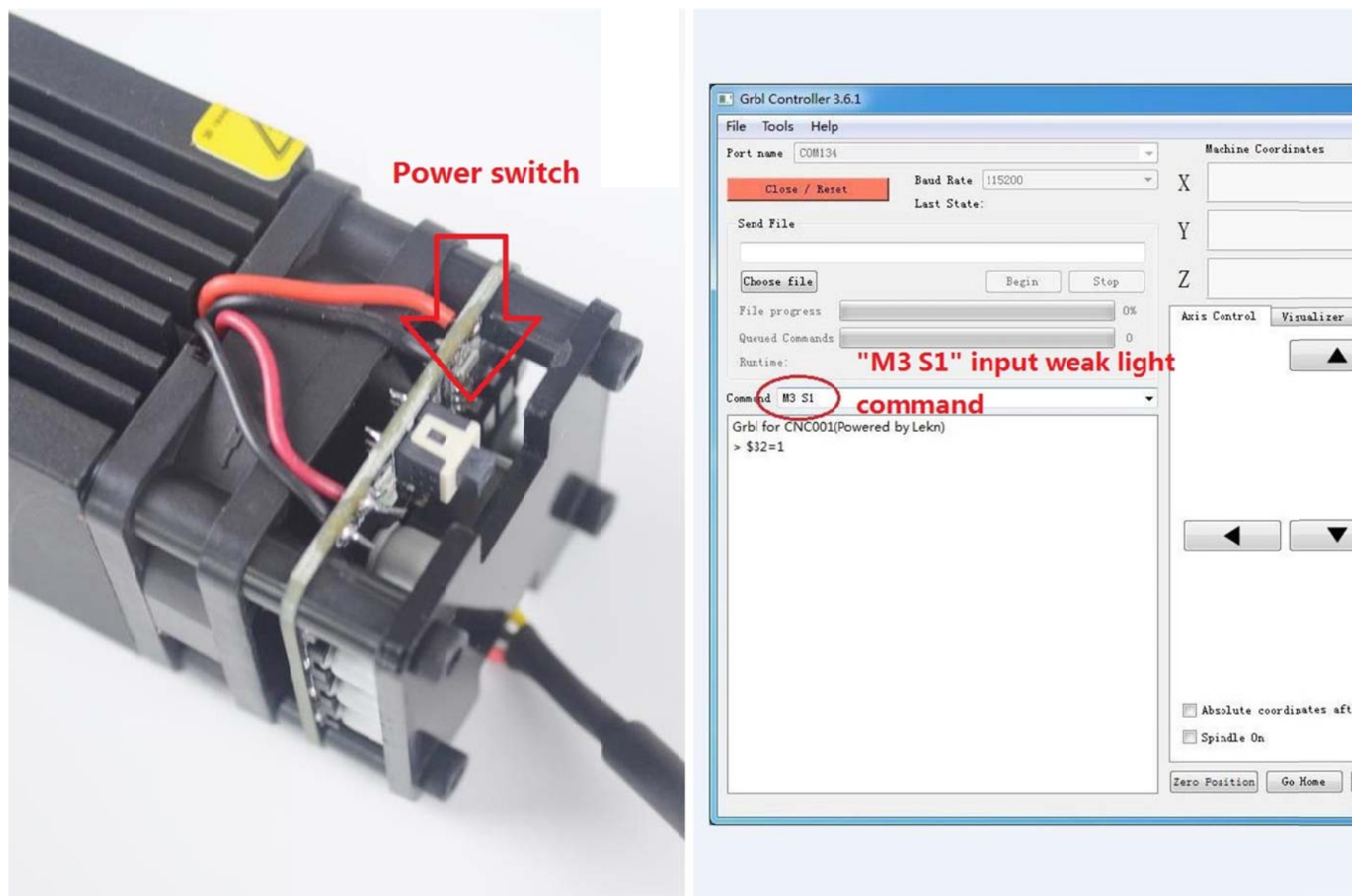
[step 2] switch the laser engraving mode. In the software command input box, enter the command "\$32 = 1" enter key. As shown in the figure:



[step 3] the z-axis motion is controlled by the software, so that the distance between the lower end of the laser and the surface of the carving material is about 5-6cm. (the focal length of 2.5W laser is about 5-6cm; the focal length of 5.5W laser is about 3.5cm; the focal length of 10W / 15W laser is 1.8cm.)



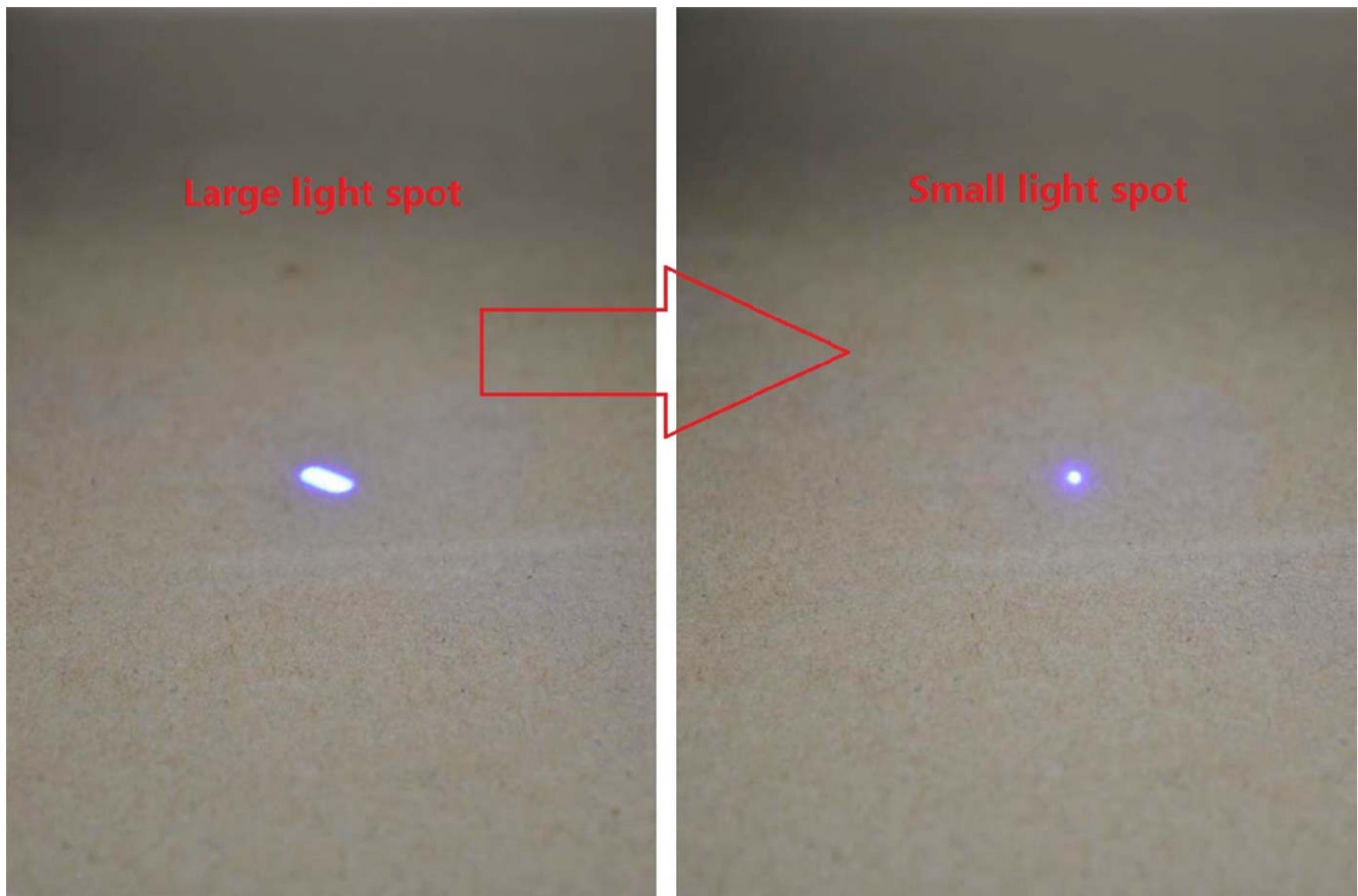
[step 4] first press the power switch of the laser, and then input the command "M3 S1" in the control command box to turn on the weak light of the laser. M3: turn on the laser command, Sxx: power value of the laser, minimum 1, maximum 1000. (If the laser is not turned on, first send G1 F1000 speed command, then send M3 S1 weak light command)



[step 5] rotate the bottom lens of the laser to fine tune the focal length. Adjust the spot to the minimum (10W / 15W fixed focus does not need to be adjusted). As shown in the figure:

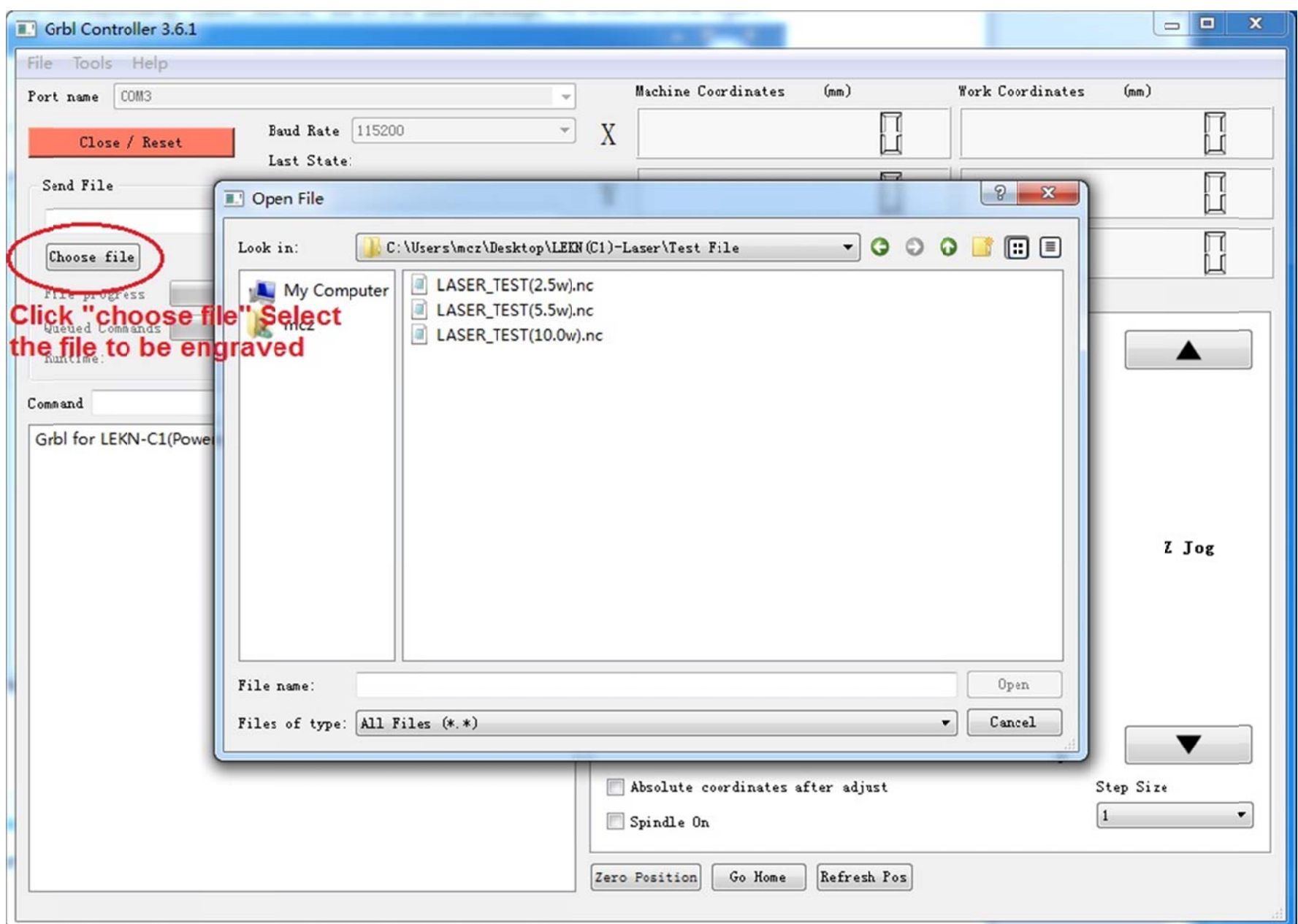


Observe the laser spot size and adjust it to the minimum. As shown in the figure:

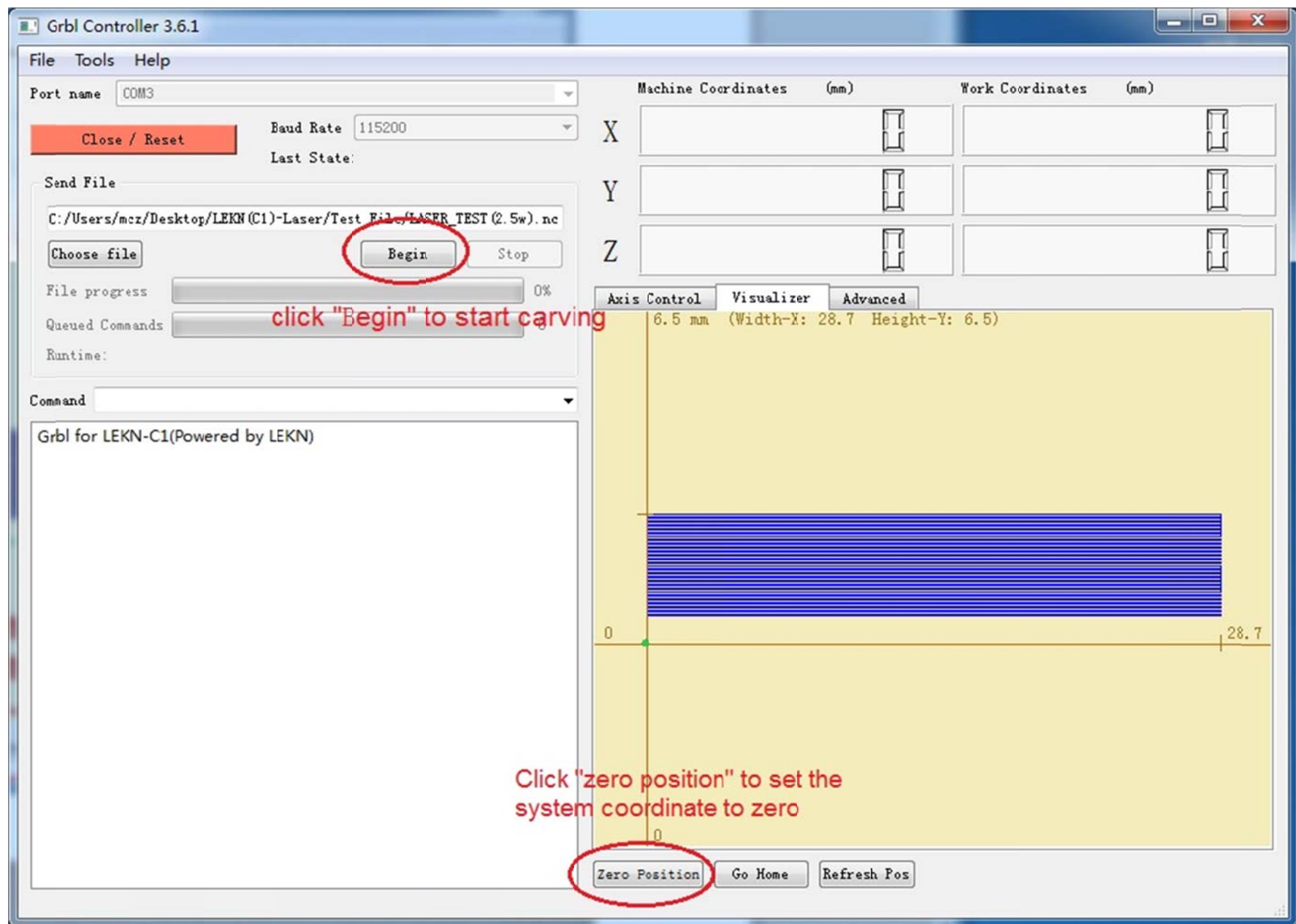


3. Laser engraving test (just use cardboard to test here)

[step 1] Click "choose file" to select the corresponding "Laser_test.nc" file in the data package. As shown in the figure:



[step 2] Click "zero position" to set the system coordinate to zero, and then click "begin" to start carving. As shown in the figure:



[step 3] the test file carving is completed. As shown in the figure:

