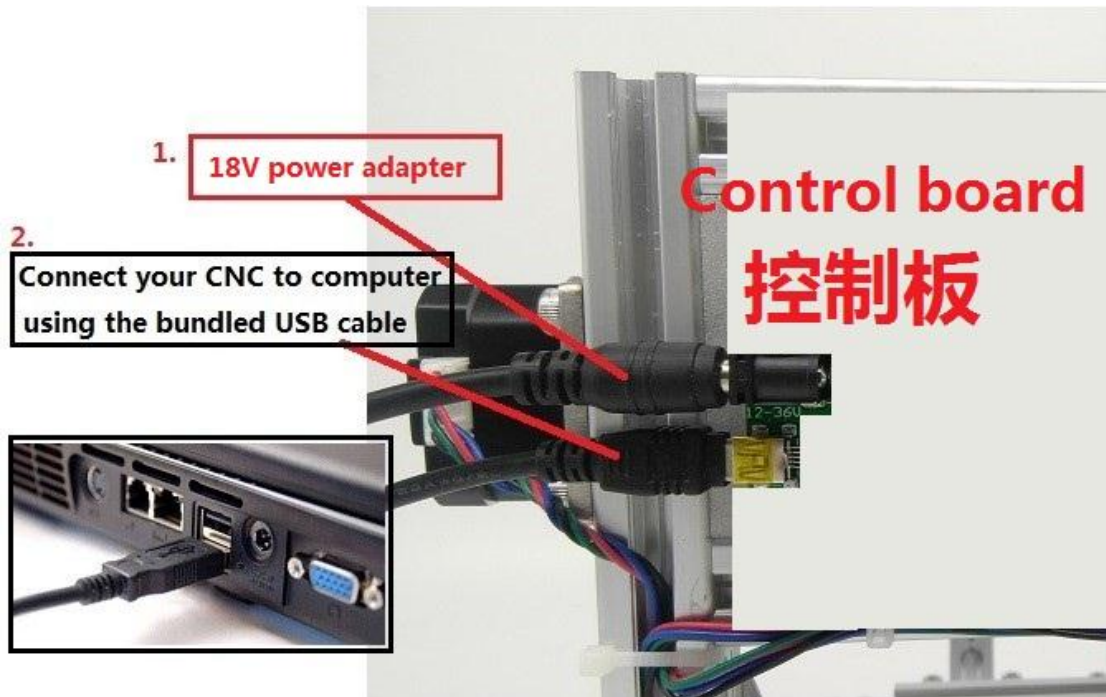
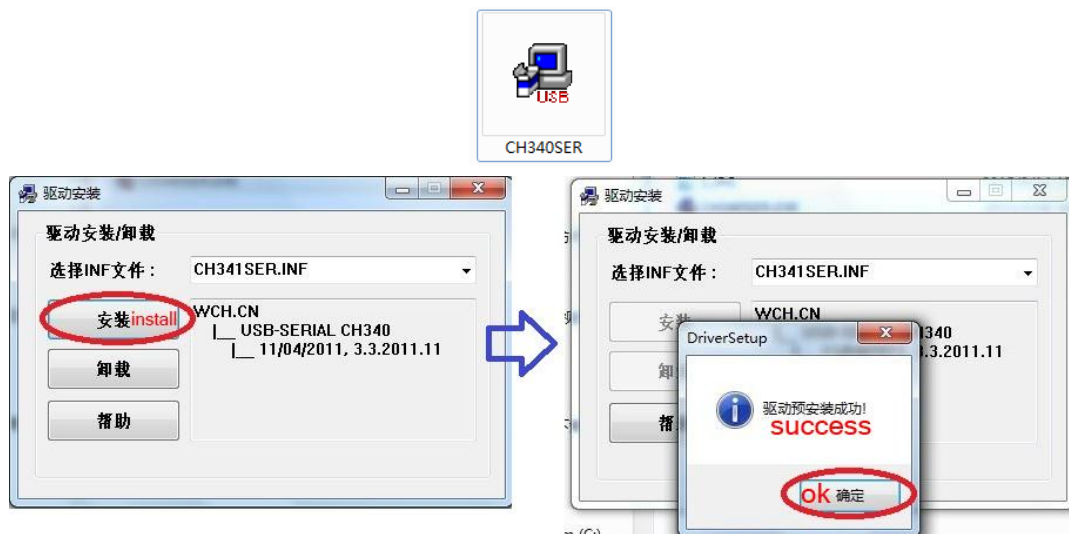


## 1. Connect the power supply and connect the USB:



## 2. Install the driver ( software --> Driver --> CH340SER.exe ) :

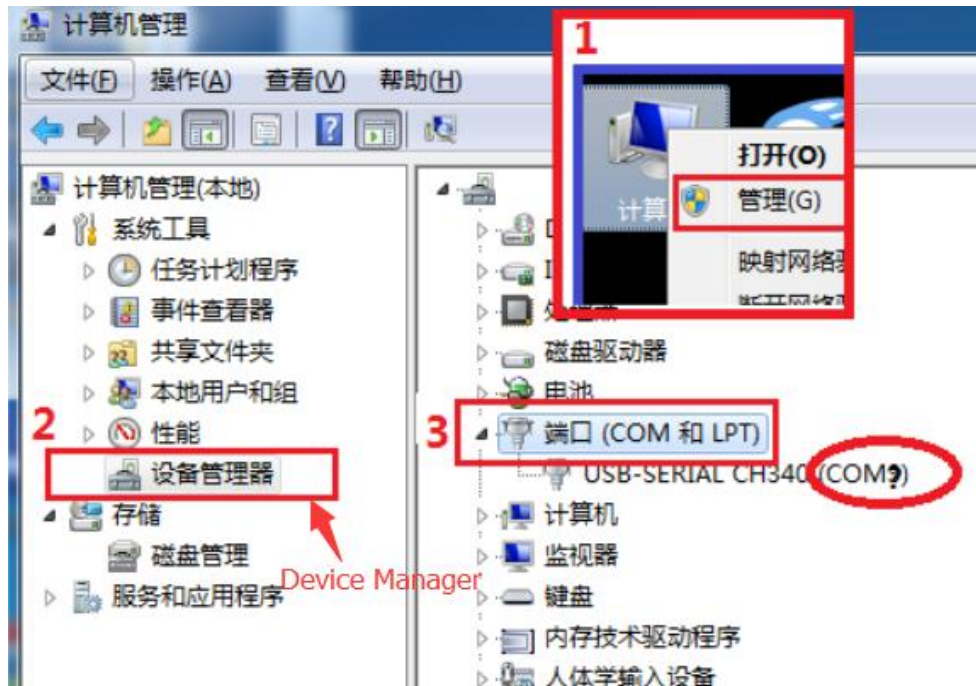


## 3. To Determine your Machine's COM port:

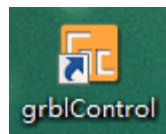
Windows XP: Right click on "My Computer", select "Properties", select "Device Manager".

Windows 7: Click "Start" -> Right click "Computer" -> Select "Manage" -> Select "Device Manager" from left pane  
In the tree, expand "Ports (COM & LPT)"

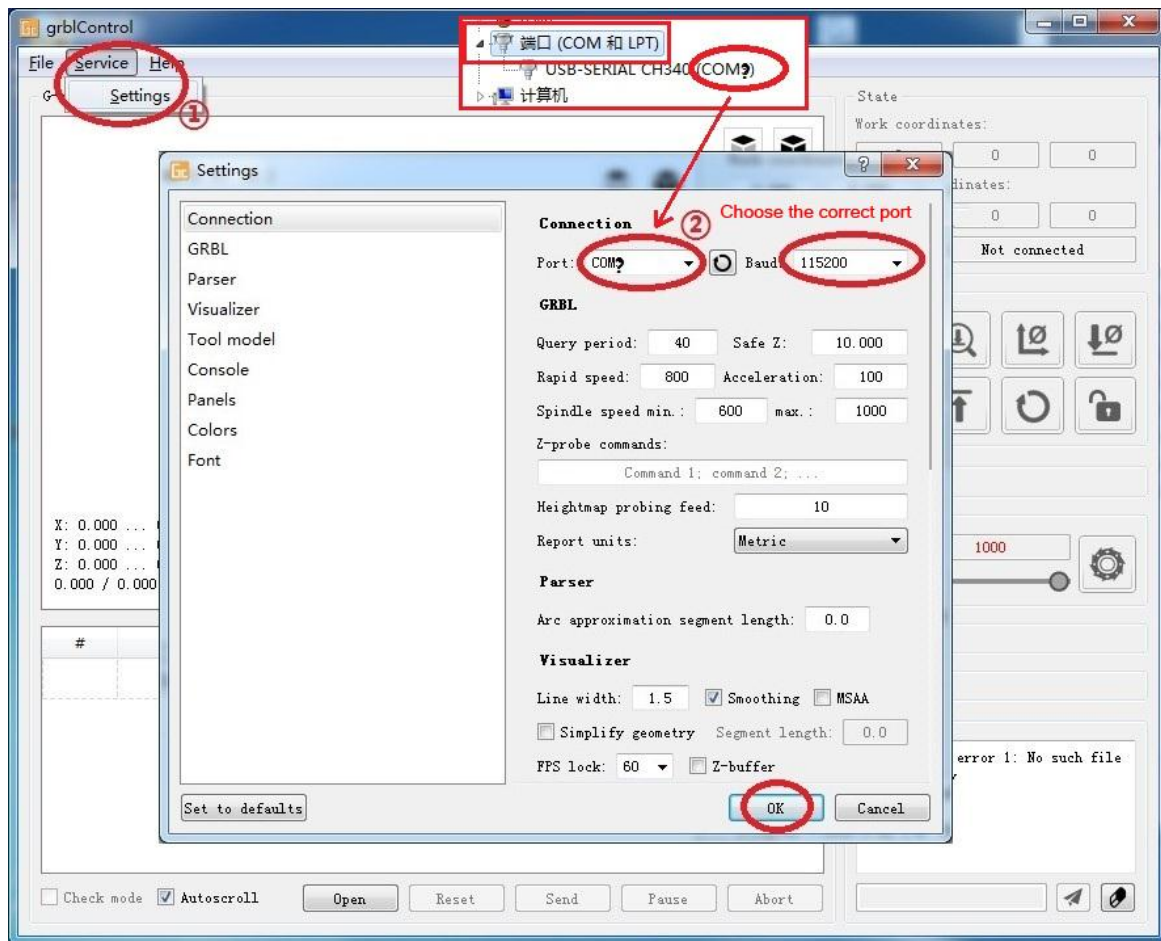
Your machine will be the USB Serial Port (COMX), where the "X" represents the COM number, for example COM6.  
If there are multiple USB serial ports, right click each one and check the manufacturer, the machine will be "CH340".



Open grblControl software(software -> Grblcontrol -> grblControl.exe)

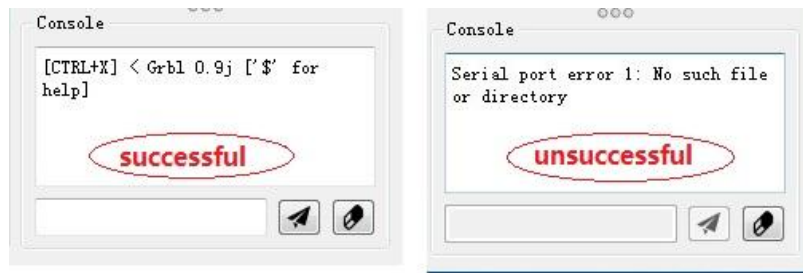


Open the control software grbl Control, click the "Service -> Settings" to set: "COM? , 115200" and then click OK:



Console window print " [CTRL+X] < Grbl 0.9j ['\$' for help]" If the connection is successful.

Console window print " Serial port error 1: No such file or directory " indicate that the connection is failed.



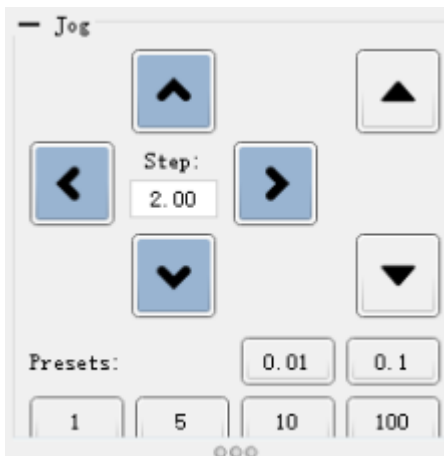
## Grblcontrol Use

1. Test whether the X, Y, Z axis movement is normal or not by clicking the control panel on the right side.

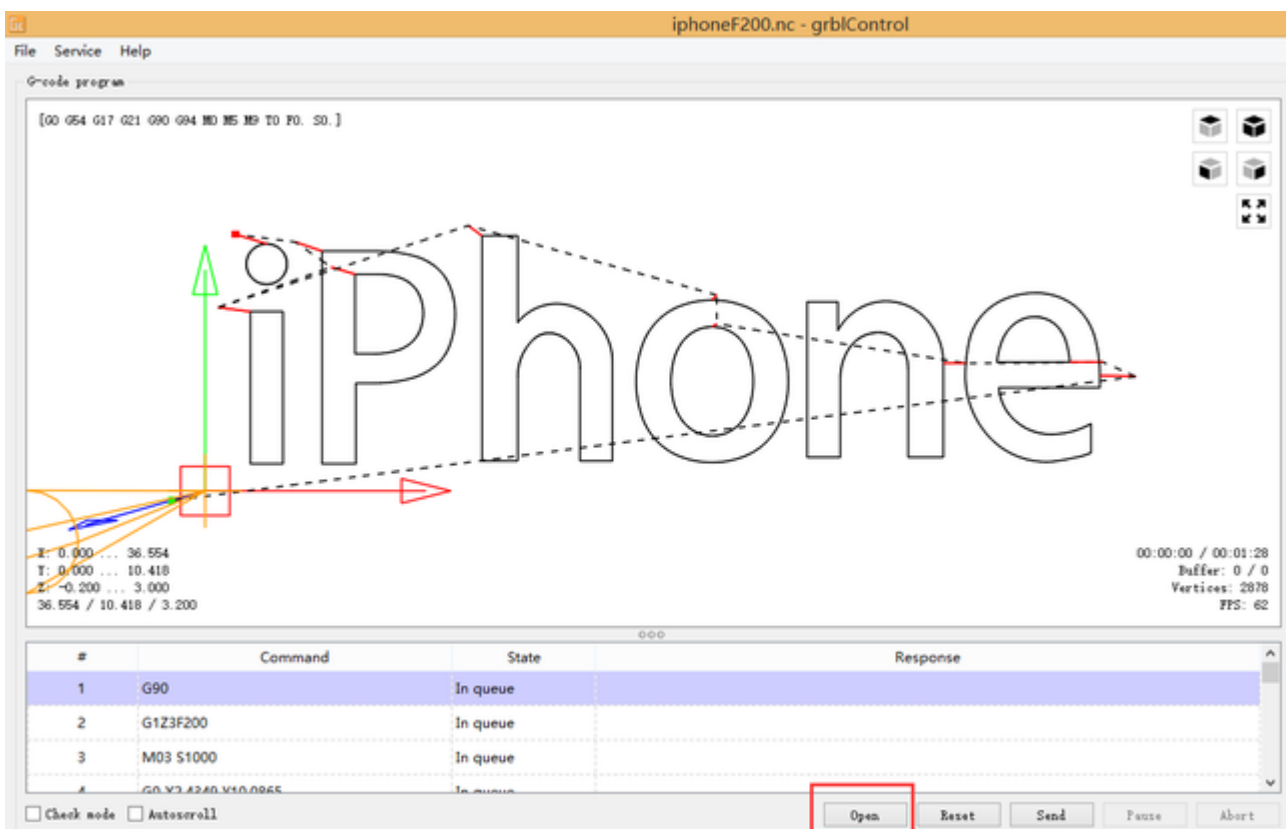
**Note:** (1) Please don't set the "step" too high, otherwise it will be over travel.

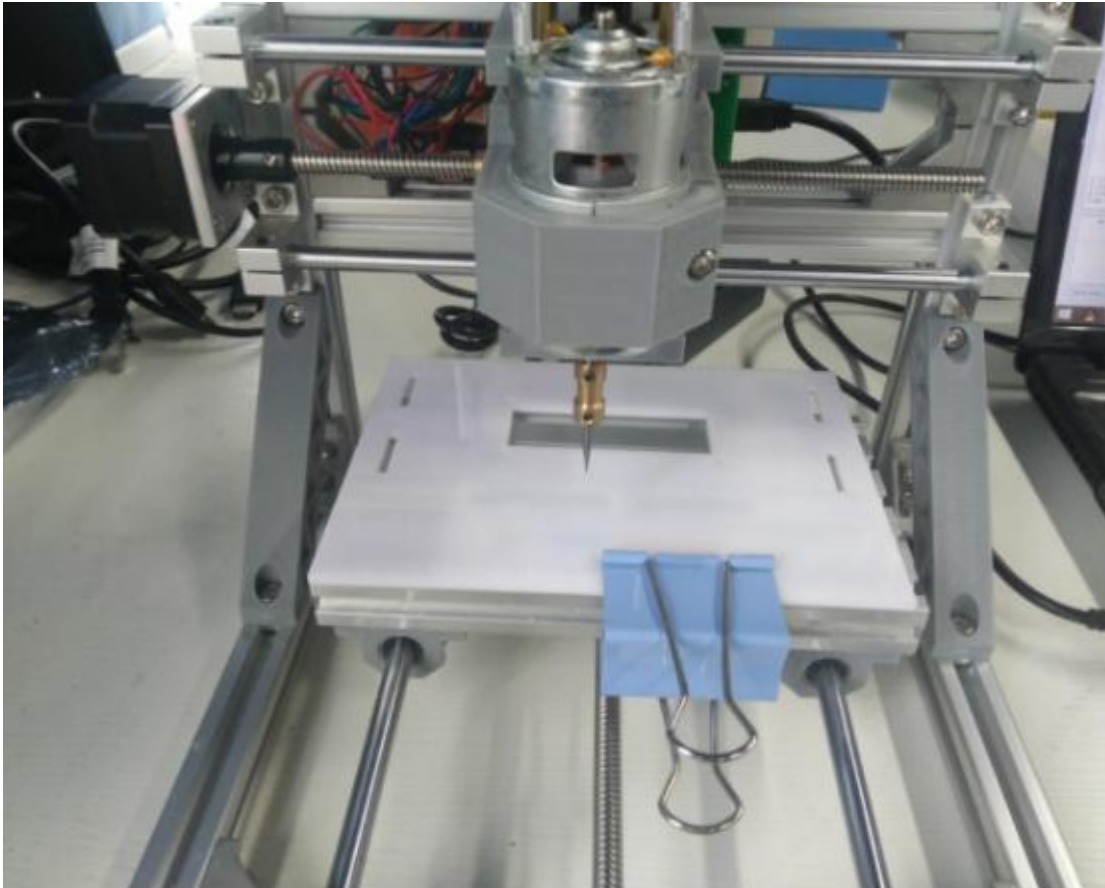
(2) Please run the program in the machine without engraving knife to get familiar with the operation procedures before installing it. Don't install the engraving knife at first.

**The engraving knife installation will be explained in following instruction.**



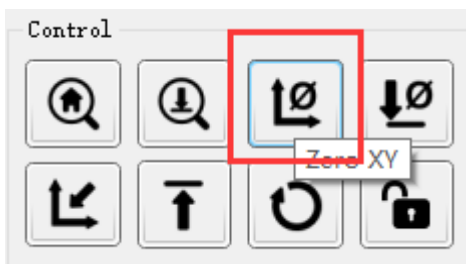
2. Open one engraving file for test, and place an acrylic plate on the CNC platform for engraving, which should be fixed well.



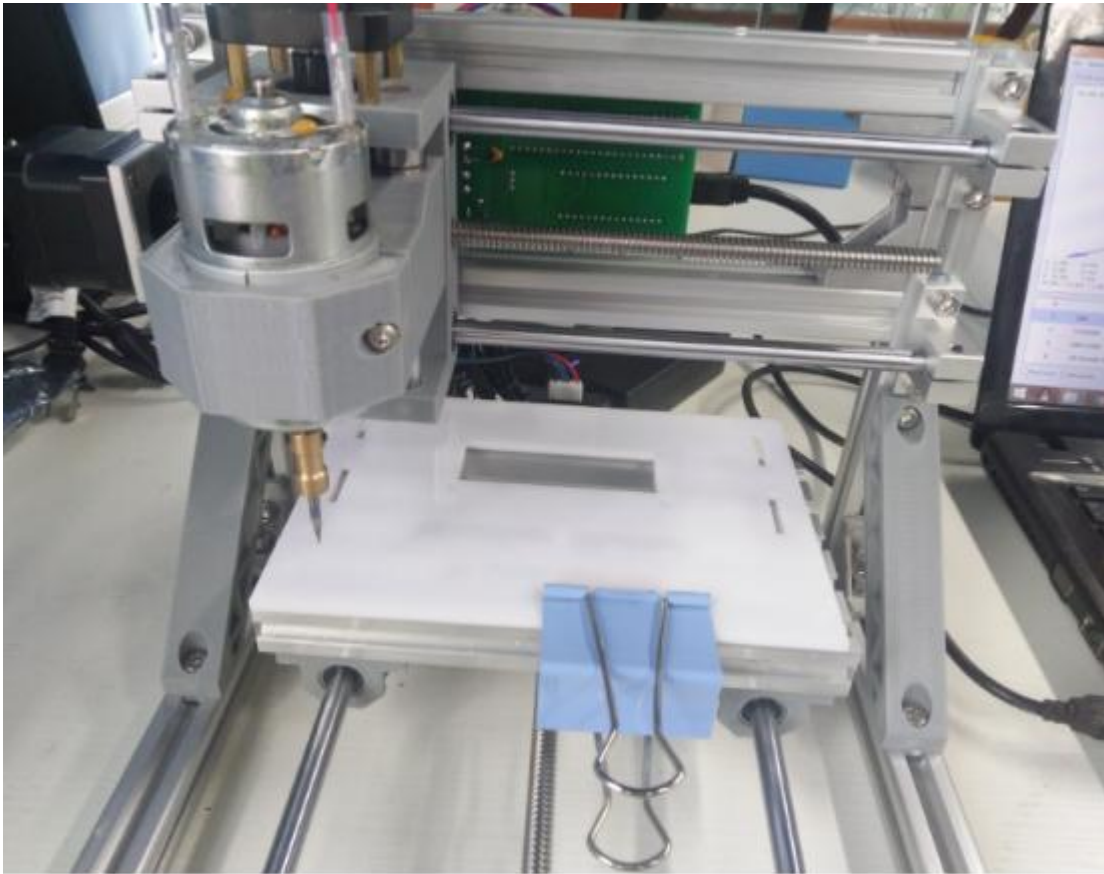


3. Move X, Y axis to set the original coordinates point by control panel (Z-axis does not move at present) , click the control panel on the right side , set the X, Y axis as zero:

Click “Zero XY” to set the X, Y axis to be zero.

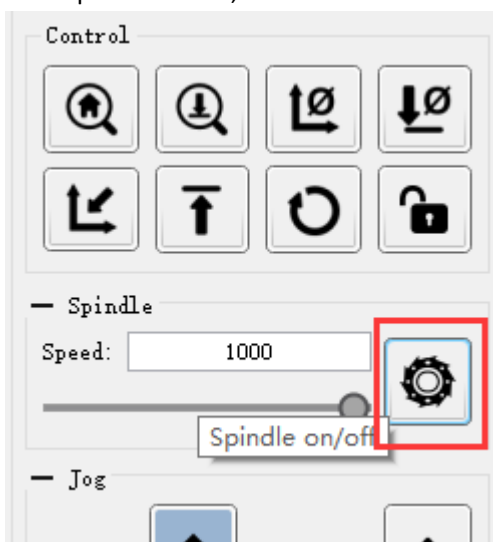


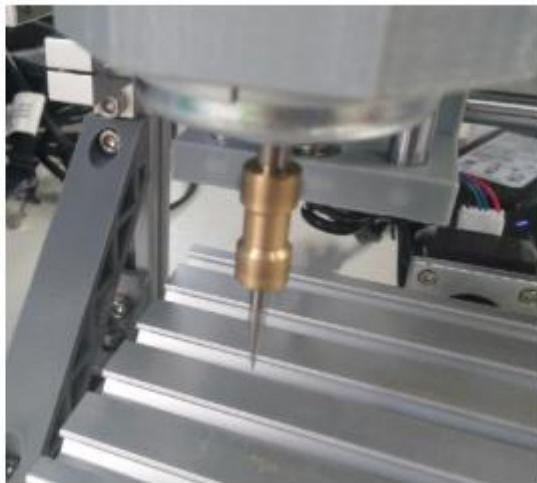
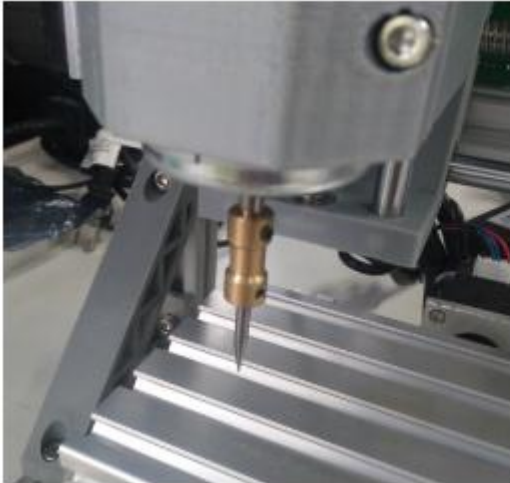




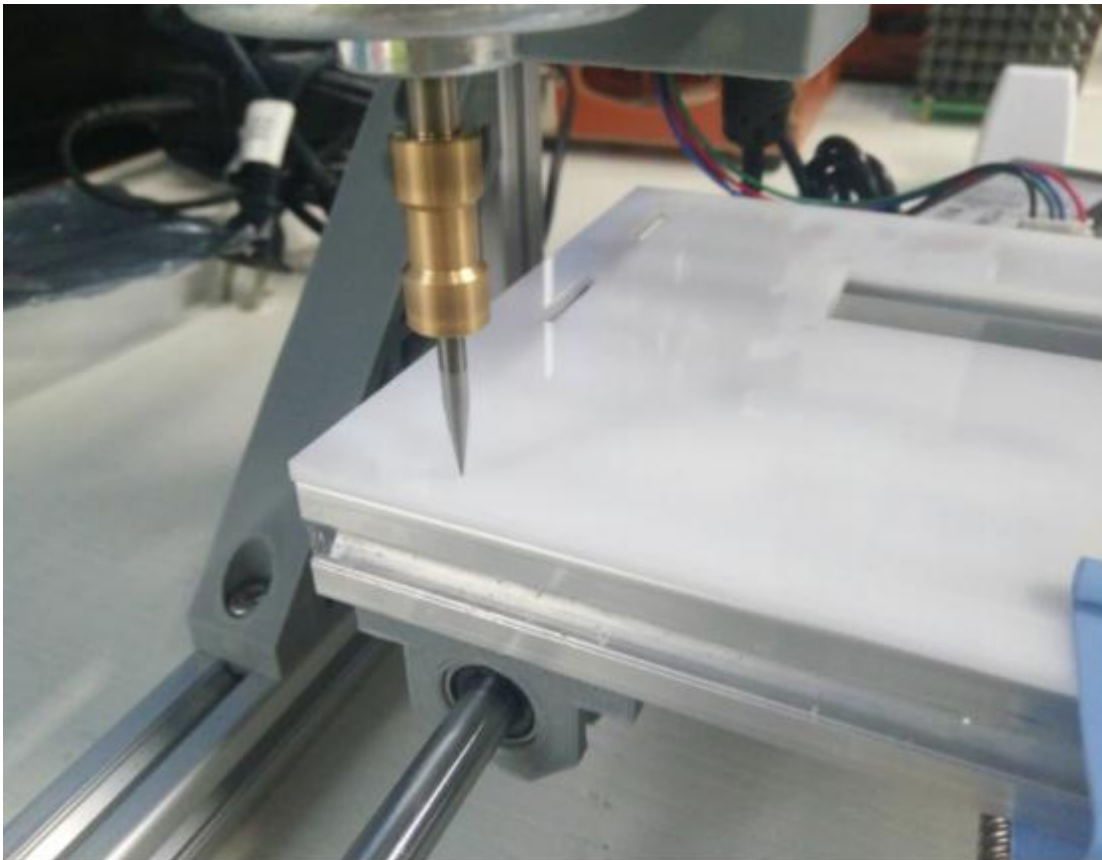
4.Start the Spindle of motor, adjust Z axis down, the Step value could be a little higher at the moment. When the engraving knife is going to touch the engraving object, must decrease “step” ( $\text{Step} \leq 0.1$ ) , when engraving knife just touch the object surface, set Z axis to be 0.

**Note:** The Spindle must be started before the knife down, otherwise the engraving knife is easily to be broken.  
Click Spindle button, the motor start to turn.

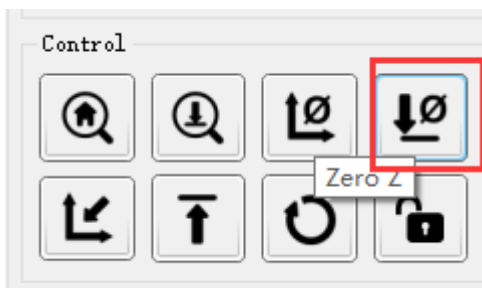




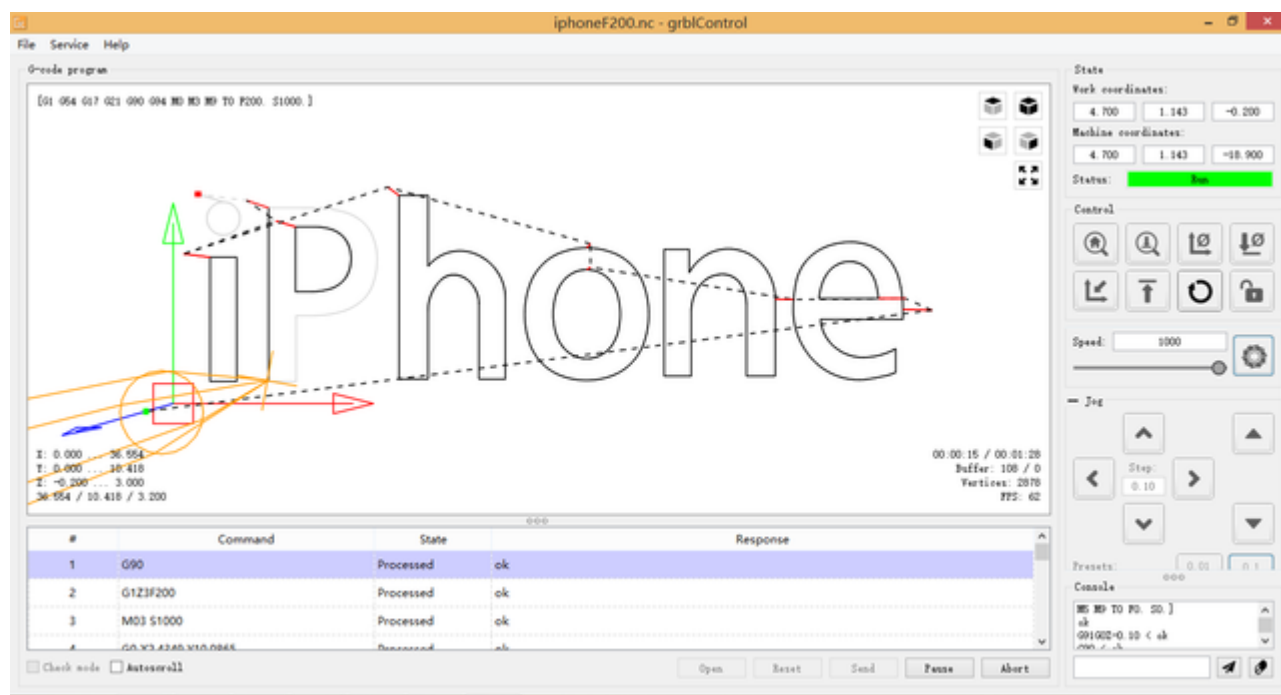
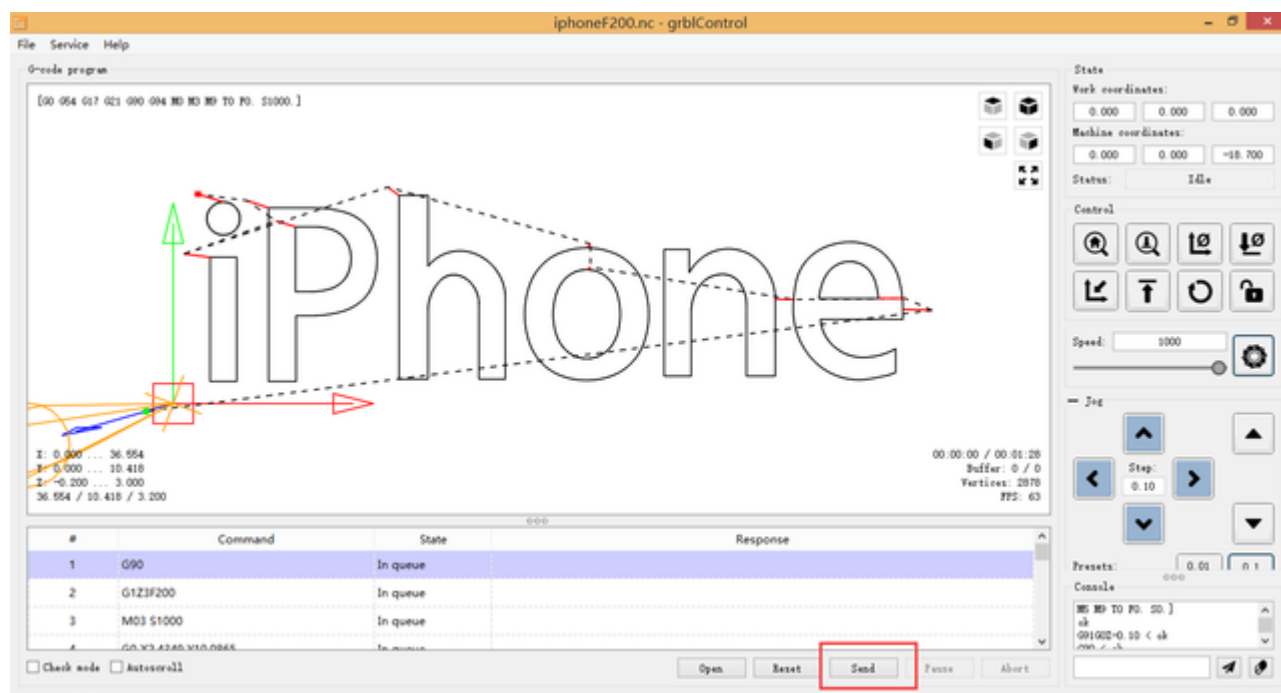
At the moment just touch the surface of acrylic, Stop the knife.



Click "Zero Z" to set the Z axis to be 0.

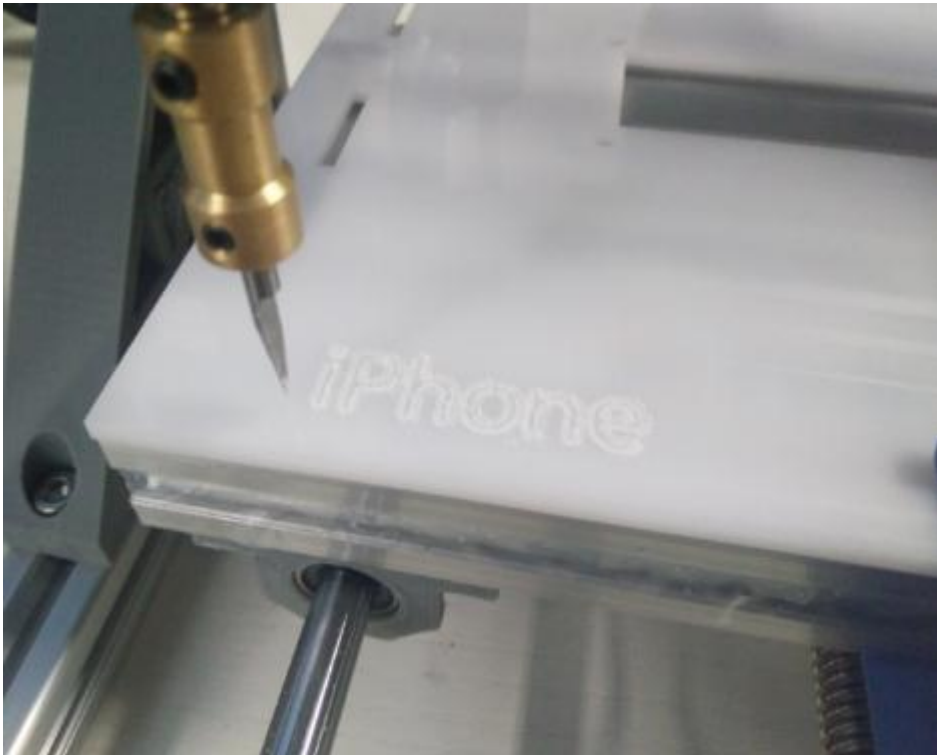


5.The work about knife is almost finished.  
Next, click “send” button, start the engraving.



The engraving is finished.





The effect after color is added.

