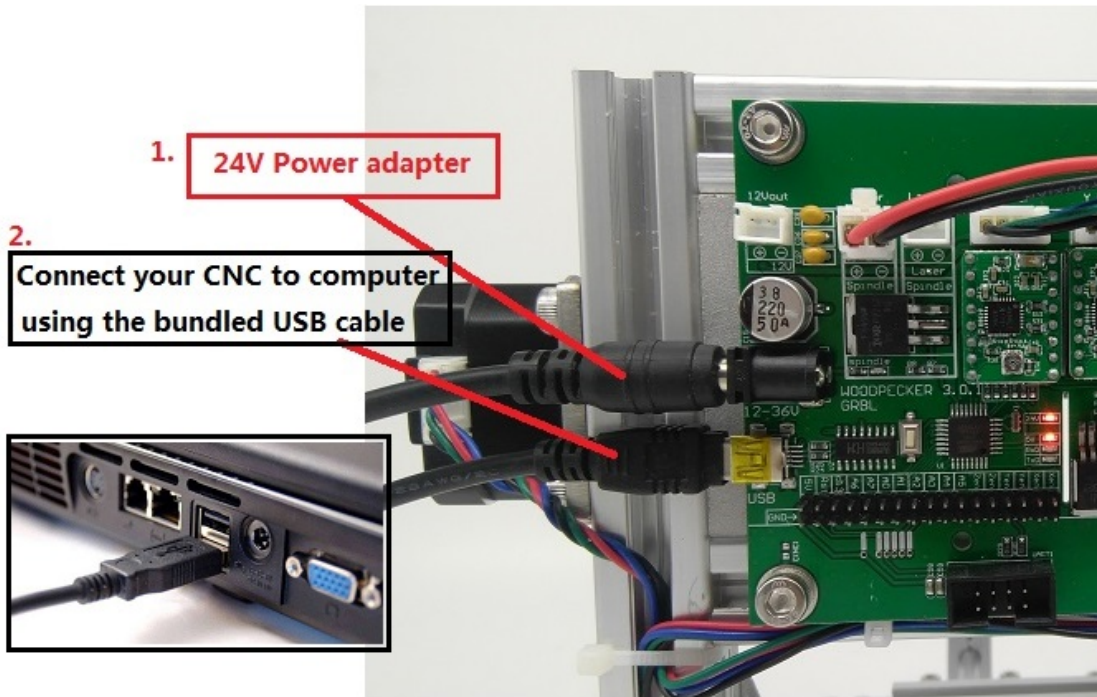
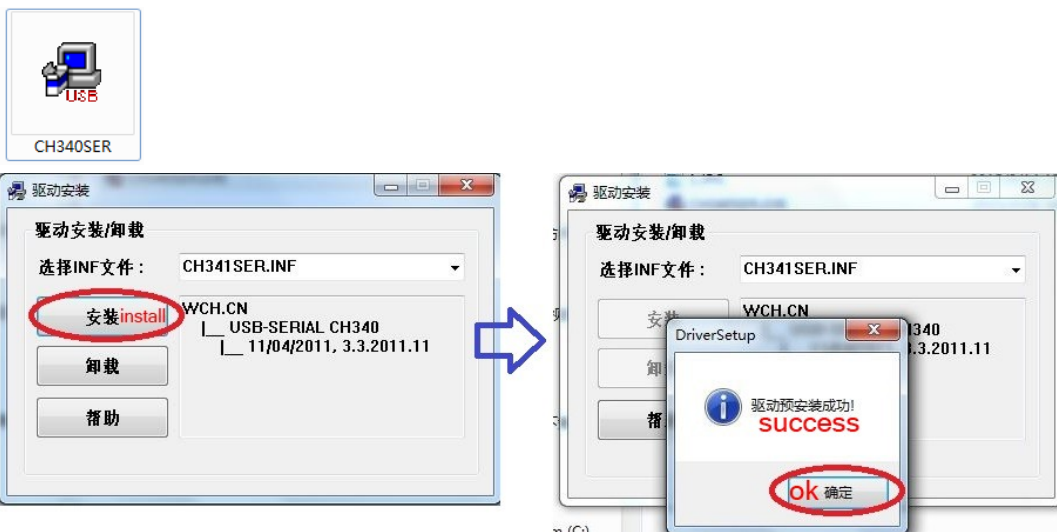


1. Connect the power supply and connect the USB :



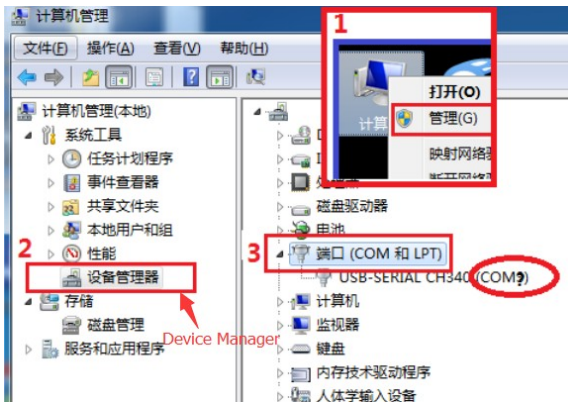
2. Install the driver (software --> Driver --> CH340SER.exe) :



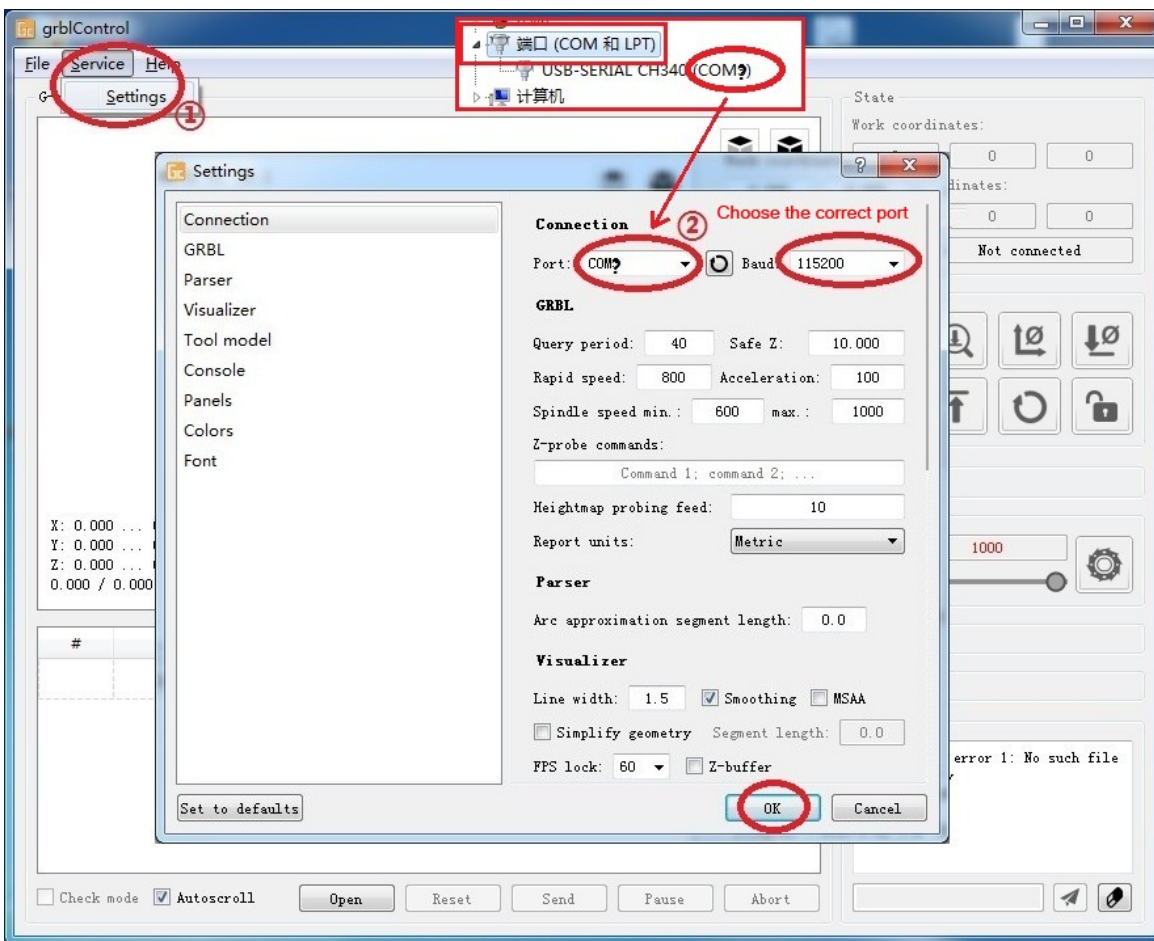
3. To Determine your Machine's COM port:

- 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

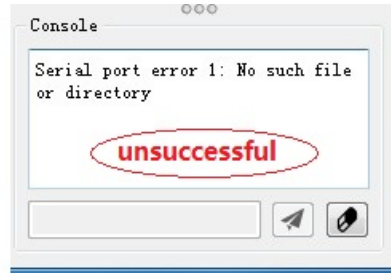
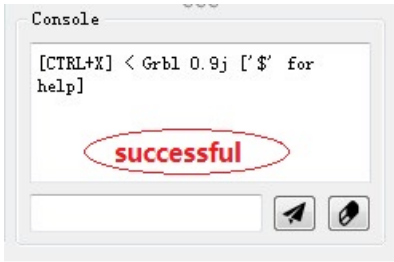
machine will be "CH340".



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



- 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

The screenshot shows the grblControl application window. The main area displays G-code: [G0 G54 G17 G21 G90 G94 M0 M5 M9 T0 F0. S0.]. Below this is a status area with coordinates (X: 0.000, Y: 0.000, Z: 0.000) and machine status (Idle). The interface includes a console at the bottom, a G-code program editor, and various control panels for Spindle and Jog.

Spindle Control Panel:

- Spindle speed slider set to 1000.
- Annotations: "The spindle speed :", "!!! It does not represent the actual speed, and it represents the ratio And this percentage is not linear.", "100 = 100/1000 -> 10%", "1000 = 1000/1000 -> 100% max", "And this percentage is not linear.".
- Buttons: "↑ 0%", "↑ max 100%".
- Control: "spindle on/off" button.

Jog Control Panel:

- Annotation: "The X Y Z axis jog".
- Buttons: "←", "→", "↑", "↓", "Step: 1.00".
- Presets: 0.01, 0.1, 1, 5, 10, 100.

Bottom Panel:

- Buttons: "Open", "Reset", "Send", "Pause", "Abort".
- Annotation: "Open the G-code file" pointing to "Open", "start working !" pointing to "Send".
- Checkbox: "End".

Tool setting

File Service Help

G-code program

```
[G0 G54 G17 G21 G90 G94 M0 M5 M9 T0 F0. S0. ...]
```

X: 0.000 ... 36.554
Y: 0.000 ... 10.418
Z: -0.200 ... 3.000
36.554 / 10.418 / 3.200

00:00:00 / 00:01:28
Buffer: 0 / 0
Vertices: 2878
FPS: 62

#	Command	State	Response
1	G90	In queue	
2	G1Z3F200	In queue	
3	M03 S1000	In queue	
4	G0 X2.4349 Y10.0866	In queue	

Open a G-code file

Open Reset Send Pause Abort

spindle should be on when moving the bits

zeroXY zero Z

Use the jog to move the milling cutter. Then click button zeroXY and zeroZ.

Step: 0.10

Presets: 0.01 0.1

1 5 10 100

Keyboard control

Console