

Getting started with CNCjs and the Vertigo CNC

CNCjs is an open source program and is downloadable for free here

<https://github.com/cncjs/cncjs/releases>

Download the .exe for windows or the .dmg for Mac

A Quick CNCjs Overview

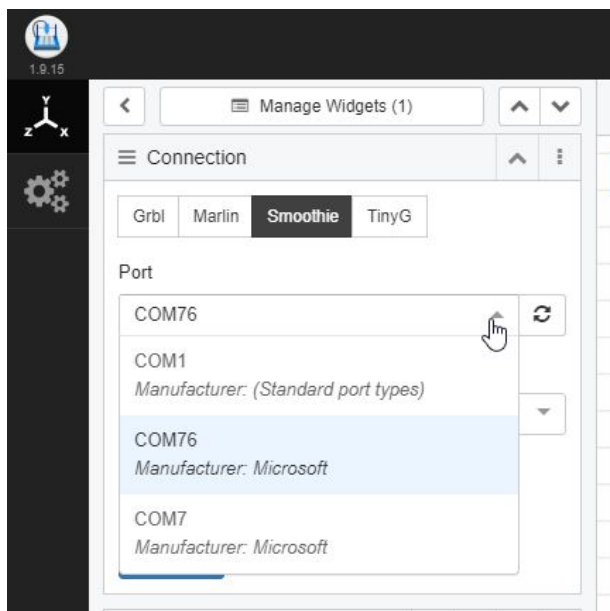


1. Connection (use this when connecting your machine to CNCjs)
2. Console (this will give you a running log of what your machine is doing)
3. Main View (this is where your program will show)
4. Homing, Sleep, Unlock & Reset buttons

5. Axes (this will show you the position of each axis and it also the place where you zero the machine)

Connecting the Vertigo CNC to CNCjs

- Once you have downloaded CNCjs and opened it up, connect your machine via the USB to your computer
- Once you have plugged the USB in you should have to option to select a port (pictured)
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Helpful Tips

- Make sure the control box and the machine is plugged into different wall sockets and turned on
- Make sure the controller is turned on (switch located at the back)
- Make sure the E-stop is in the up position
- Check to see if "smoothie" is selected in the connection panel if not make sure to select it
- For windows: Typically 3 Com ports will show in the port drop down, it will **NOT** be Com1
- **You will need to "Home" the machine before you can jog it** (Home button is located at the top right hand side of cncjs)

- *All Neptune line Vertigo CNC have soft limits installed, if the machine hits one of the soft limits it will need to be Homed before you can jog the machine again (you will know it has hit a soft-limit by the error in the console)*

Loading a program

- Click the upload G Code button at the top of the Main View window
- Select the program you would like to run it (will have a .nc file format)
- Once you have uploaded the G-code, it will show the tool paths in the main view

Helpful tip

- *Make sure you are using the correct postprocessor when posting out of your CAD/CAM software: **Fusion 360** - Generic Smoothie **Others** - GRBL*

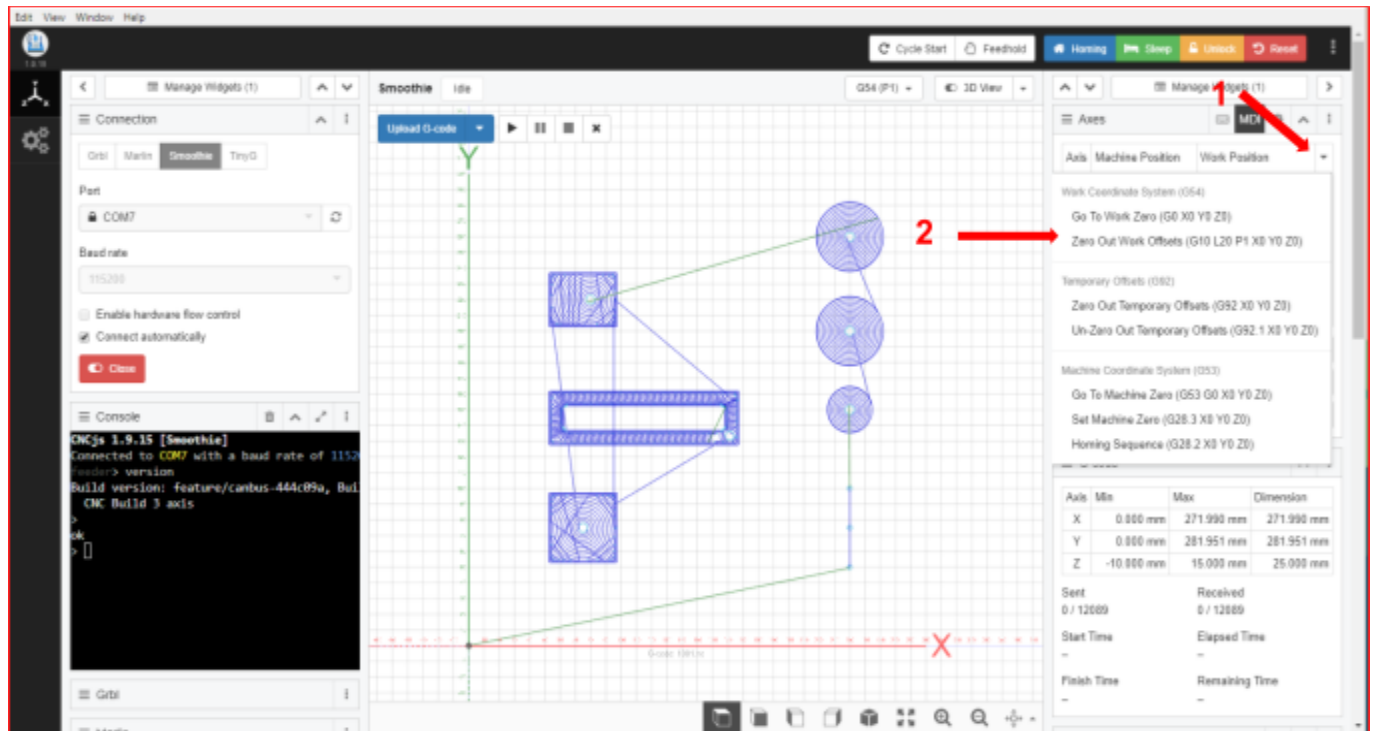
Zeroing

To zero your machine in CNCjs jog the router to the zero point of your material (you would have set this in your CAD/CAM program)

Once you have it to approximately the correct X and Y position jog the Z-Axis until the bit is almost touching the workpiece you will then more accurately be able to jog the X and Y axis to the zero point on your material (usually the corner)

Then jog the Z-axis down in small increments until the bit is just touching your workpiece, this will be your zero point.

To set this point use the work positions drop down and click Zero Out Work Offsets (pictured)



This will then set all of the work position values to 0.000

Helpful tips:

This is the manual way of setting your zero point, to set it more accurately you can use the Vertigo CNC touch probe found here:

<https://vertigotech.co.nz/collections/offset-tool-probing/products/cnc-touch-probe-x-y-and-z>

Running A Program

Once you have loaded your program and zeroed your machine and your workpiece is secure you are now ready to run the job.

- Make sure you raise the router up so the bit is above the clamps, this will help prevent any collisions
- Once you have made sure your bit is clear of the clamps turn the router on
- Press the Play button on the top of the main view and your program should start immediately
- Always make sure you are in reach of the E-stop when running a program
- If at any point you have to hit the E-Stop make sure you either pause or stop the program in CNCjs before you release it again, or the machine will continue the program as it was before you stopped it, and this could cause the machine to miss steps

- If everything is still safe, the material and bit are still secured wait until the router has fully ramped up to speed before continuing with the program

Helpful Tips

- *Make sure your workpiece is secured to the bed with at least 4 clamps*
- *If you are cutting all the way through your material it is a good idea to have a sacrificial piece of material underneath to prevent any damage to the bed of the machine*
- *ALWAYS make sure the bit is tight in the router*
- *ALWAYS be within reach of the E-Stop*
- *NEVER release the E-Stop without stopping or pausing the program in CNCjs*

This is a very simple “getting started” guide if you need any more help please feel free to contact us at sales@vertigotech.co.nz or call on 03 668 0262

Also, make sure to join our facebook group, there are always people on there that are more than happy to help <https://www.facebook.com/groups/231186783952206/>