

1. Start the computer

By pressing the button on the front

2. Start the machine

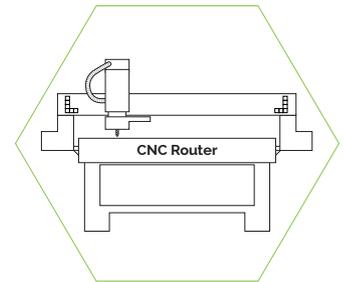
By pressing the green button on the control box (white cabinet), the green light should turn on, now the machine is powered

3. Start the "Mach 3" program

This program is used to control the machine

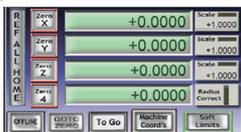
4. Reset the virtual emergency stop

By pressing the "Reset" button the emergency stop is activated after loading a Gcode/ending a Gcode etc. If this button is flickering green/red then again press "Reset" so the emergency stop will turn off.



5. Home the machine

- Make sure there is nothing on the bed of the machine
- Press the "REF ALL HOME" button, the machine does the homing process now
- Press the "Soft Limits" button (if it's not green yet)



6. Setting the starting point of your Gcode on your workpiece

- Move/Jog the machine to the beginning of your workpiece using the *arrow-keys*.
- To make the machine move faster you can hold the "Shift"-key and then hit the *arrow key*
- To move the machine up and down you have to use the "Page-up" and "Page-down" buttons
- To make the machine move slower (for example the Z-axis) you can change the speed by pressing the "Tab" key, this shows the virtual pendant on the right of the screen. Changing the jogging speed is done by pressing the "Slow Jog Rate" "+" and "-" buttons. (Make sure the "Jog mode" is set to "cont."), press "Tab" key again to exit the pendant mode
- When the milling bit is on your workpiece (e.g. bottom-left corner) hit the "Zero X", "Zero Y" and "Zero Z" button, this is now the starting point of your Gcode

7. Open your Gcode

- File -> "Load Gcode"
- When your Gcode is loaded you can see a preview on the top right screen. With your mouse you can see the 3D view

8. Feedrate and Spindle control

- Your feedrate is defined in the generated Gcode, when you start your Gcode make sure to start slow, e.g. with a feedrate-override of 5% and then increase this number when milling goes OK
- Changing the feedrate is done by the "+" and "-" buttons on the "Feed Rate" tab. Shortcuts can also be convenient, F10 and F11
- Changing the Spindle Speed is done by the "+" and "-" buttons on the "Spindle Speed" tab

9. Emergency stop

- At any time you can stop the machine by pressing the "Esc" key, the machine then stops the movement, spindle and activates the virtual emergency stop ("Reset" button). Resetting is done like described before (pressing it)

10. Start the machine

- If your Gcode looks OK in the preview and you have set your feedrate correctly (low) then you can start the machining
- If needed you can start the vacuum dust shoe by pressing the white button on the vacuum machine (where the big vacuum hose runs to).
- Press the "Cycle Start" button to start your Gcode
- Press the "Esc" key to stop if things go wrong
- To restart your Gcode press the "Rewind Ctrl-W" button and then press the "Cycle Start" button again

11. Stop the machine

- When done milling clean the bed with the vacuum cleaner and turn off the (big) vacuum machine
- Press the "Esc" key and turn the machine off by pressing the green button on the control box (white cabinet), now the green light should be off.

Safety

Always wear headphones and safety glasses

