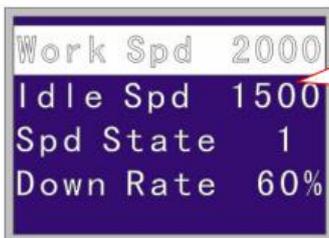


CNC Router crib sheet

TL;DR: CAM>Clamp>Zero>File>Speeds>Extraction>Spindle>Go

1. Create design (what you want to end up with, either in inkscape, CAD or vcarve/cut2d/3d)
2. Identify piece of material (not just 'wood' but exactly what piece, thickness length)
3. Identify cutters to be used
4. Create CAM (cutting profiles, usually in vcarve or cut 3D) and put on usb stick. Remember to accurately measure and set the thickness of the material (+/-0.1mm) and set any full depth contour cuts to no more than 0.5mm deeper than the thickness of the material.
5. Turn on CNC router (single switch on wall)
6. Check area around router gantry is clear
7. Press ok to allow router to 'Datum' (home)
8. Move router head to give enough room to position your work (use XYZ ↑ → buttons on pendant)
9. Secure workpiece to router bed (using screws, clamps or double sided tape)
10. Secure cutter in router using appropriate collet
11. Zero work coordinates (either move cutter tip to where zero is for your CAM, then separately press XY0 & Z0, or use Z0 & ok together to initiate auto Z0 using brass puck). Move cutter clear of work when complete
12. Insert usb stick into pendant
13. Press run/pause>U-Disk File>YourFileName to select the cut path to run. Use X+ & X- to move up and down the menu options, and ok to select
14. Set the feed rates and offsets. Use the lookup table on the printed sheets for examples. To change the values use X+ & X- to select, then press origin to enter edit mode. Enter the number required then press OK to confirm. X+ & X- move between lines/pages:

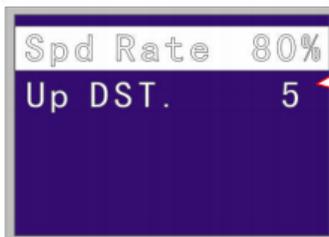


Linear X/Y travel speed when cutting (mm/min, max 5000)

Travel speed when not cutting (mm/min, max 6000)

Parameter for spindle control, (not enabled, usually 1)

Fraction of X/Y 'Work Spd' for Z axis (% , usually 30%)



Initial percentage of 'Work Spd' job starts at. Shift ↑ & Shift ↓ can change speed up to a maximum of 'Work Spd' once job starts. Usually 25%

Distance moved up when STOP pressed.

15. Put on safety glasses and optionally ear defenders
16. Turn on the large dust extractor and check the gates are set to only extract from the router.
17. Shut the door on the router extraction shroud and turn on the spindle (green button on the inverter on the front of the router, use the trim pot to set the spindle speed, refer to the lookup tables)
18. Press run/pause to start the cut
19. Use run/pause to stop the router if there is any unusual noise, smoke or swarf build up. Use the vacuum cleaner to clean slots between passes.
20. Stop the spindle when the cut is complete and turn off the extraction
21. Check the cut has completed correctly (profile cuts all the way through) before removing the work or turning off the router (datums will be lost)
22. Clean the bed and surrounding floor area when finished cutting, tidy away all tools used
23. Put the appropriate money in the cash box for use of Makespace's cutters.