Overview

This CNC router will cut and shape softer materials like woods, plastics, and some rubbers.

You are required to undertake an induction before using this machine, which will cover the basics of workholding and running the machine. This will teach you how to set up and home the machine, change tools and run cuts using the software.

This tool was purchased as part of a pledge run: Pledges/OxCNCIan (Many thanks to Ian for all the additional bits)

For more in-depth documentation, please go to the Github page.

WorkFlow

- You design your part in Cad software or as a vector diagram / inkscape etc
- You pass the design into CAM software which plots out the paths needed to mill the part (similar to a 3D Printer slicer)
- You run the generated G-Code on the mill (usually via chillipepr)

Software

Open Source Software

- JSCut - Easiest to use Open source Cam software, limited to 2.5 CAM / 2 dimensional profiles similar to a laser cutter
- FlatCAM - PCB Milling via G-Code, this is one of the few PCB to G-Code softwares that has a GUI.
- PyCAM - Can handle STL Files and generate 3D Cam profiles, but seems not to be updated often
- FreeCad - Path workspace, this is the closest match to Solidworks in the open source world and has support for importing openscad files
- HeeksCad / HeeksCNC

Free / Non open source software

- Autodesk Fusion 360 CAM / Cad

Commercial Software

Generally CAM software falls into two catagories one for solid parts such as gears / wheels etc, this includes HsmWorks and MasterCAM. The second for graphical artworks such as fancy reliefs like dragons or lettering or Han solo in carbonite.

- HsmWorks / Solidworks - Milling Solid 3D parts
- MasterCam / Solidworks - Milling Solid 3D parts
- Aspire - Milling graphical / artwork type patterns such as lettering or meshes.

- Autodesk ArtCam - Milling graphical / artwork type patterns such as lettering or meshes.

If your using Solidworks then the top two items of commercial CAM software includes Hsmworks and MasterCam. Hsmworks is by far the easiest to use, but not to good at turning or 4 / 5 Axis. MasterCam has the most features but is much more difficult to use.

Category:Equipment

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