Samuelsen Lab
CNC Machine Operation

Blake Hourigan

April 28, 2025

Contents

1 Obtain a Model to Machine

Before telling the machine what path to take and what setting to use to cut out a certain part, the user must decide which part to cut, find the Solidworks part file or Fusion360 'step' file, generate a 'drawing' (dxf) file and then layout this drawing file in the 'Carbide Create' application so that machine understands what part is being cut out, how large the stock piece is, and where to cut into this stock piece.

An exception to this general rule is the case where a 'C2D' toolhead path file has already been generated for a given part. If this is the case for your part, skip to Section... REFERENCE THE SECTION FOR CHECKING AND RUNNING AN OPERATION HERE!!!!!!!!!!!!!!!!!!!! An example of when this will be the case includes the CNC files for all models created for the 'Photologic Experiment Rig' and can be found in the 'Rig Assembly Files' of the Rig's GitHub repo found here.

2 Obtain a Drawing File for this Model

3 Toolhead Settings for Given Materials

4 Fixing the Materials to the Machine

5 Running a .C2D File on the CNC Machine