CREATING G-CODE

- Use VCarve or Carbide Create to create toolpaths from vectors. Imported vectors made in Illustrator or Rhino are best for complex designs; when importing designs into Carbide Create make sure scale is correct
- Make sure toolpath specifies correct tool type (End Mill, Ball Nose, V-Bit) and its diameter
- Use digital calipers to measure the depth of your stock; for an “onion skin” cut, specify a depth .05” less than stock, or set the Cut Depth .05” deeper than your stock to make sure it is cut cleanly
- Use default Pass Depth/ Cut Depth or set no deeper than half the diameter of End or Ball Mills and one fifth the diameter of Vee bits
- Use Ramps in VCarve to provide a safer and cleaner cuts
- Add tabs to any profile cut that will cut through your stock; convex or straight areas can be cut, sanded and finished more easily
- Save toolpath

CNC OPERATION

- Wear safety glasses, ear protection and dust mask
- Open Carbide Motion
- Turn on Shapeko with rocker switch
- the Shapeoko should be configured as XXL model
- Home/ Initialize the spindle
- Screw stock to spoilboard, making sure it is square and secure, that no screws or clamps will be in the path of the spindle, and that the gantry will not hit the stock
- Change/ insert correct router bit using spindle lock button and wrench
- Zero your X, Y, and Z dimensions
- Attach hose to dustboot
- Lower dustboot level to bottom of cutter
- Plug in the dust collector; it will turn on automatically
- Select Run Job
- Turn ON spindle, set to directed speed
- Start job
- Stay in the CNC studio to monitor the duraton of the job

FINISHING

- turn off spindle and dust collector
- jog spindle to back of CNC and turn off when done running jobs
- remove stock from spoilboard
- cut any tabs with hand saw

- Clean up after yourself, return tools, cutters and other equipment to designated storage areas
- throw out non-usable scraps and stock; sort large usable scraps against the wall
- vacuum any sawdust not collected by the dust collector; empty the small vacuum as needed
- sweep the floor

- Hand sand or glue in CNC studio/ nodelab
- Complete complex finishing/ assembly in 7th floor woodshop; spray paint or stain in the spray booth in the woodshop