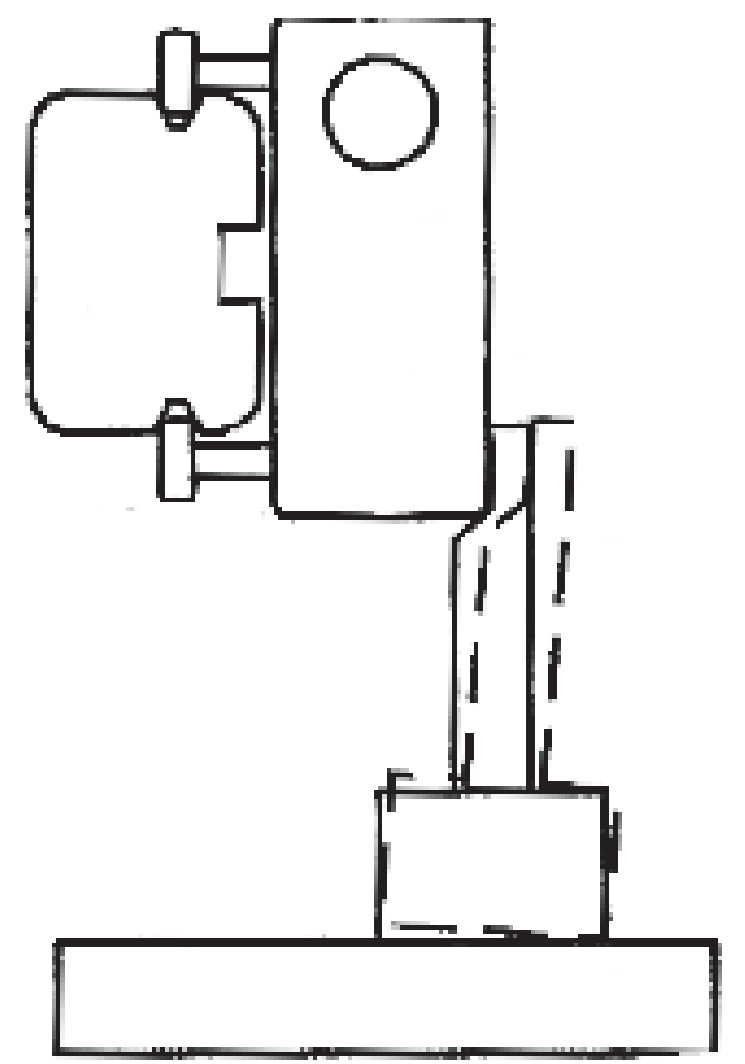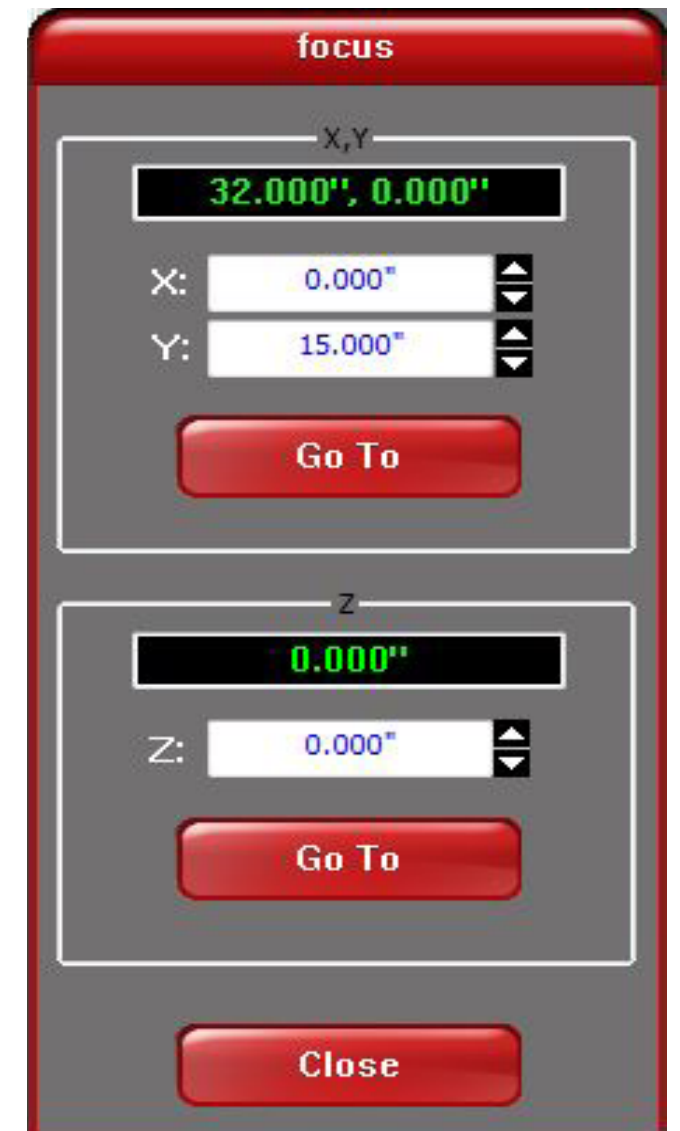/please read before using equipment./
questions/comments: contact jeff wilkinson
don swanner

//how to focus

1. **start_** Begin focusing by turning on the laser cutter and opening the laser cutting software, UPC.

2. **material placement_** Place your material on the bottom left-hand corner bed of the machine .

3. **zoom icon_** On the main screen of the laser cutting software, press on the Z-icon located on the right side panel. This will bring up the focus window as shown here.

4. **x,y coordinates_** Use the x,y coordinates to locate the laser directly over your material. Enter values within the following range x[0,32] and y[0,18] in the designated spots of the focus window.

5. **z-controls_** On the laser cutting machine are the controls for the z-axis. These arrows will move the bed up and down in order to raise the material to the appropriate height. Alternatively, the software has z-controls that requires the user to enter a specific distance to raise the material to the appropriate height. Either method is allowable.

6. **focus tools** Locate the focusing tool. This is the small plastic object located next to the computer and shown in the diagram below to the right. This tool will allow you to accurately position the bed exactly two inches from the laser.

7. **focusing_** When you are ready to focus, move the bed about three inches visually from your material. Set the focusing tool on your material and slowly bring the bed closer to the laser. If you get too close, the plastic tool will tilt and fall over due to the chamfer.

8. **finishing_** When the bed is in the correct position you may close the focus window. Press 'Home XY' to return the laser to the start position before cutting. Put the focusing tool back beside the computer. Without this tool the laser cutter cannot be used, so be sure and return it when you are finished.

focus

X,Y
32.000'', 0.000''
X: 0.000''
Y: 15.000''
Go To

Z
0.000''
Z: 0.000''
Go To

Close

//important to remember

+ALL new users should go through the **tutorial** before attempting to use the laser cutter. If you are still unsure as to how to use the machine after that, ask for help before you proceed.

+ALL users must log-in to the computer using their **NetID and password** in order to use the laser cutters. It is strictly prohibited to use a NetID other than your own as the use of NetID's provides accountability for damages that occur while the machine is in use.

+ALWAYS make sure the **extraction system** is on before starting up the laser cutter.

+ALWAYS use the **focusing tool** to be sure of proper lens height before cutting.

+Use only the predefined laser cutter settings chosen by the software once the appropriate material choice and thickness has been selected or the settings printed by the laser cutting table.

+NEVER increase power settings above those predefined for your material type and thickness.

+BE PATIENT - increasing the power above recommended settings is more likely to destroy the lens than to speed up the cut.

+NEVER leave the laser cutter **unattended** while cutting. The computer will automatically log you off at ten minutes if the system goes unattended. Once the computer logs you off, the machine will automatically stop the cutting job once its connection to the computer is lost.

+Students are alotted two consecutive **thiry minute slots** per day, any additional time that is needed must be approved by the shop Supervisor(s). Refer to the online schedule for available times to use the laser cutters.

+ALWAYS revert to the default settings for your material when creating your file. Otherwise you may be using the settings left over from the previous user.

+**anyone disregarding any of these policies or guidelines will be permanently banned from using the laser cutters.** Respect the machines, the facilities, and the workers. Thank you.