Desktop Max Shopbot Cutting using Aspire/ VCarve Toolpath

March 16, 2021

1. Shopbot Machine

a. Put on eye and ear protection
b. Close the doors
c. Check to see that the machine has been warmed up
d. Check to see bit is not loose
e. Raise **Z AXIS 2.5** inches using the **JZ 2.5** command (this is different height than alpha)
f. Use the proximity switch to set Calibrate. **(C3 keyboard command)**
g. Calibrate Z AXIS on the table. **(C2 keyboard command)**
h. Raise **Z AXIS 2.5** inches using the **JZ 2.5** command
i. Measure thickness of material that you plan to cut.
j. Attach material to the table using screws
k. Set new X and Y Origins for your design
    i. Raise the Z-axis so the bit won't drag on the table
    ii. Using keyboard jog to the appropriate X and Y location. (**J2 X,Y)**
    iii. Using keyboard to zero the appropriate X and Y Location. **(Z2)**
    iv. You set origin.
l. Select Cut

2. Start up Aspire and VCarve software

a. Open your file
b. Select objects you wish to cut
c. Select Toolpath
d. Pin Toolpath

3. Click on material setup

a. Check Z-0 - it should be off the board not materials
b. Enter the thickness of the material *
    i. Model position material should be the same thickness of the material.
c. Go to home start position
    i. Confirm x and y axis are both zero
    ii. The z axis should one inch plus the thickness of the material.
d. Click OK.

4. Go to TOOL PATH OPERATIONS

   a. Select 2D Profile Toolpath
   b. Under cutting depth, select the cut depth of the material (CLS tools).
   c. Select the proper tool -CLS down bit 1/4
   d. Click add tabs to tool pads.
   e. Hit CALCULATE.
   f. Preview toolpath
   g. Click on CLOSE
   h. Select SAVE TOOL PATH and save the file in a shopbot format

5. Start ShopBot Command Console

6. Conduct air cut

   a. Select FILE-LOAD
   b. Load the appropriate file
   c. Select 1 3-D offset
   d. Press ENTER
   e. Turn on the spindle by pressing the big GREEN Button
   f. You should hear a "SOUND" of the spindle now turning
   g. Press ok
   h. After checking that everything is good; press space bar
   i. Return to origin **(J2 0,0)**

7. Perform cut

   a. Select FILE-LOAD
   b. Load the appropriate file
   c. Select **no offset** rather than 1 3-D offset
   d. Press enter
   e. Turn on the spindle by pressing the GREEN Button
   f. You should hear a "SOUND"
   g. Turn on the vacuum
   h. Press enter again to start cut

8. Cut is done

   a. Turn off vacuum (which is so loud you shouldn't forget)

9. Clean up after yourself