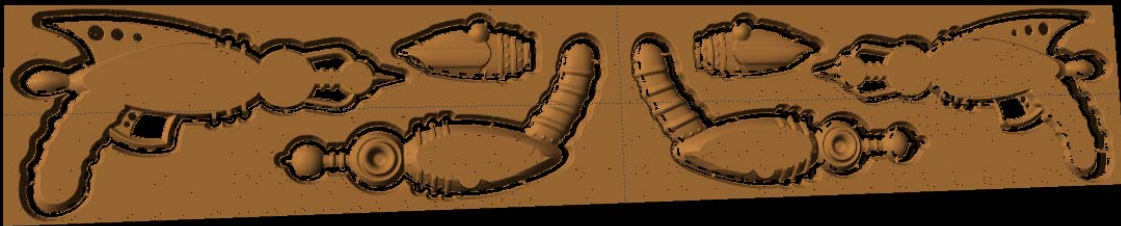


This project covers the following design concepts:

- ✓ IMPORTING STL OR SCAN
- ✓ PATTERN EDITOR
- ✓ EXPORT TO STL
- ✓ STL IMPORTER TOOLS
- ✓ ORIENTING & SCALING MODELS
- ✓ SLICING MODELS
- ✓ PLACING STL PATTERNS
- ✓ OFFSET PATH
- ✓ MAKING TABS
- ✓ MIRRORING
- ✓ MANAGING DATA



## INSTRUCTIONS:

### ✓ IMPORTING STL

Open the CarveWright Project Designer Software

*The Welcome screen appears with project options.*

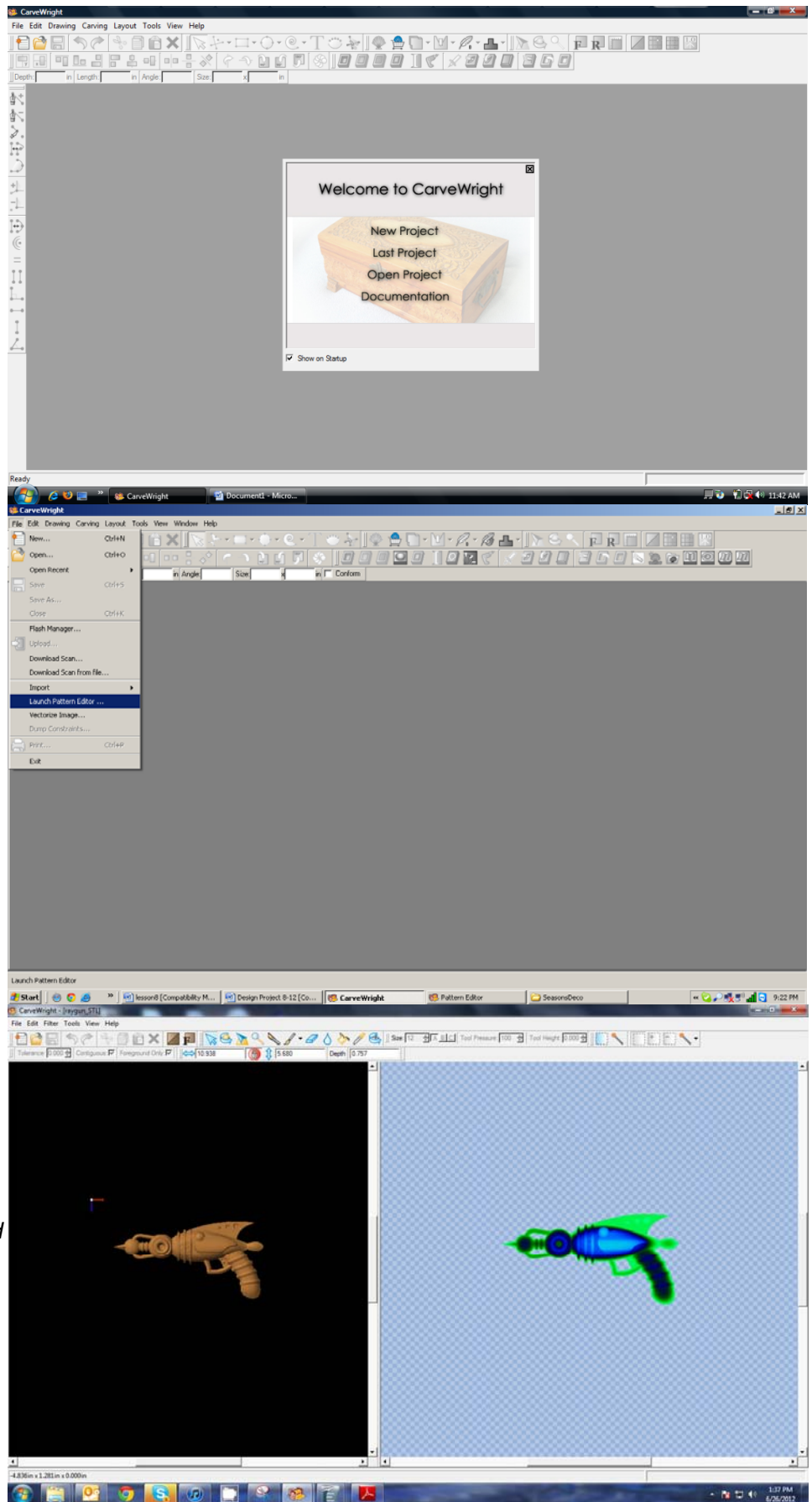
Click the X in top right of Welcome to CarveWright screen to close the window.

### ✓ LAUNCH PATTERN EDITOR

After scanning or modeling your design, open the raygun\_stl in Pattern Editor. (If you are importing a scan, Pattern Editor will automatically open).

Click on the FILE menu > Import > Import DXF File.

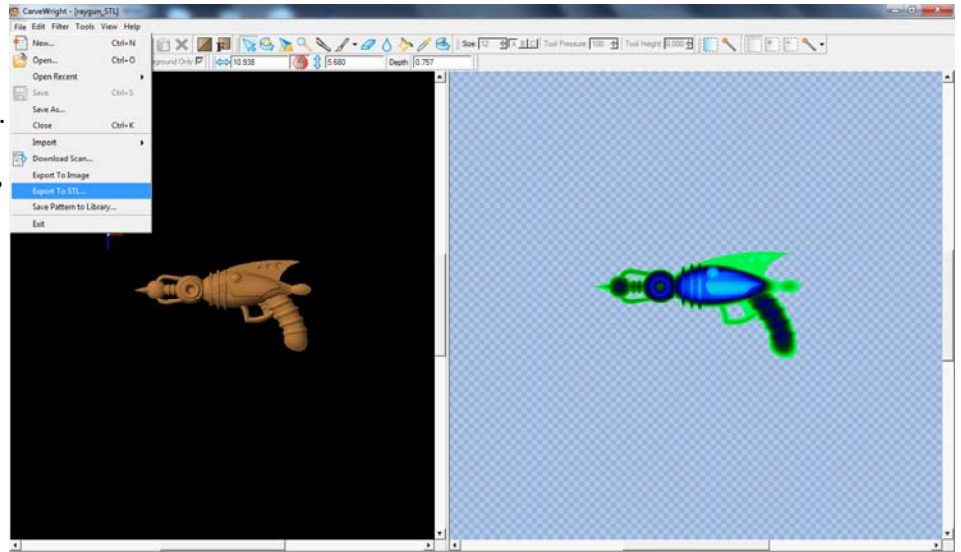
*Pattern Editor allows you to manipulate a pattern on a pixel by pixel level. You must be the “creator” of the pattern in order to edit it. PE comes with the scanning probe and allows you to fine tune your scan. It can also be purchased as stand-alone software.*



## ✓ EXPORT TO STL

Select Export to STL from the File menu.

*In order to Export to STL, you must have an activated license for both Pattern Editor and STL Importer.*

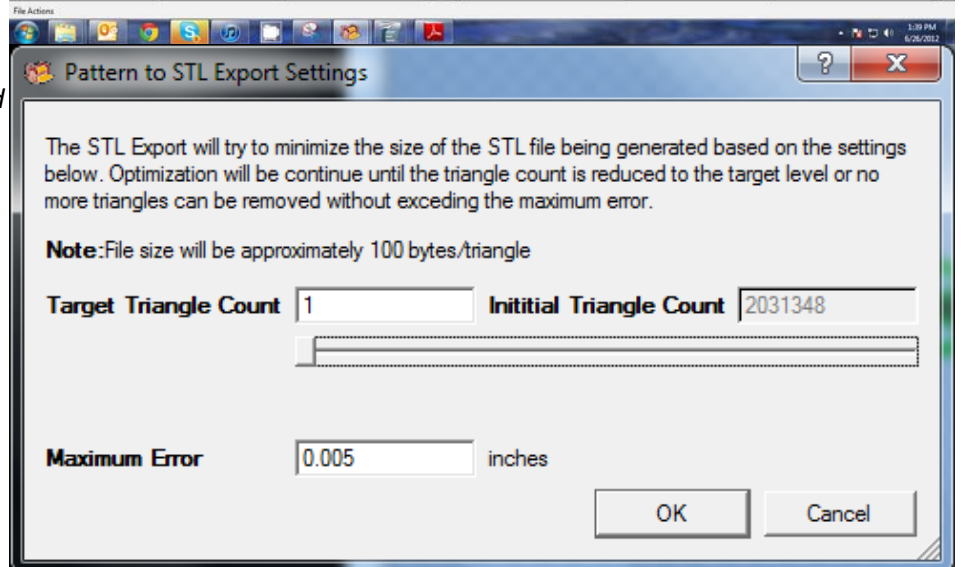


*In the Export Settings dialog, you should attempt to reduce the amount of triangles as much as possible.*

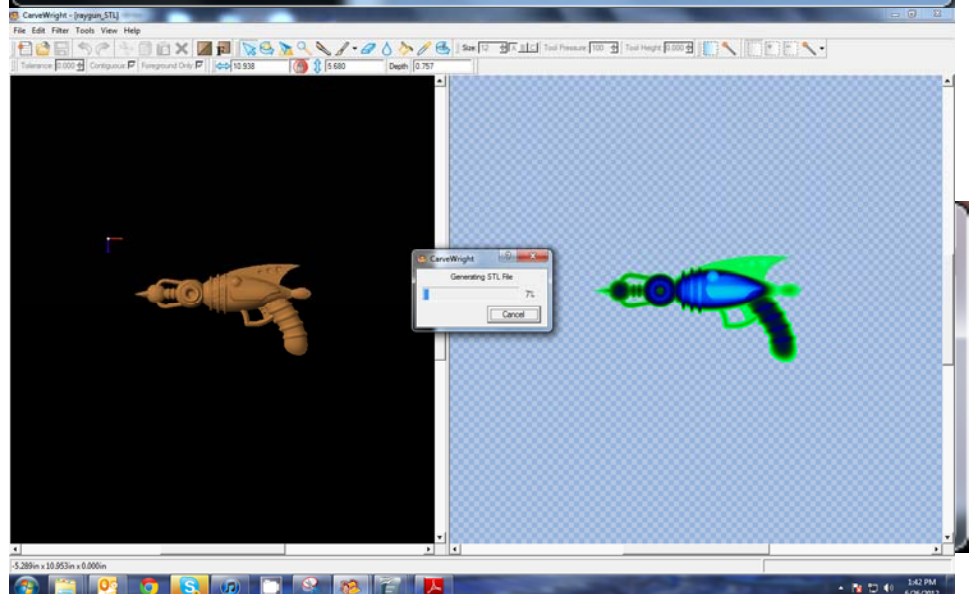
For simpler patterns, such as this raygun, set the target count to 1 and leave the minimum error at 0.005".

*You may need to adjust the amount of triangles up depending on the amount of memory your system has.*

Click OK



Wait as your software generates the STL file. It will open in STL Importer.



## ✓ STL IMPORTER TOOLS

*The importer tools will step you through the process.*

*First is the orientation window where we will scale the model.*

## ✓ ORIENTING & SCALING MODELS

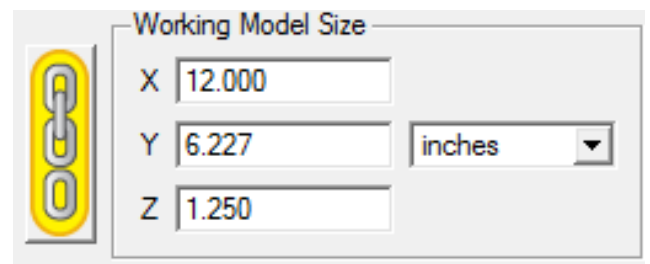
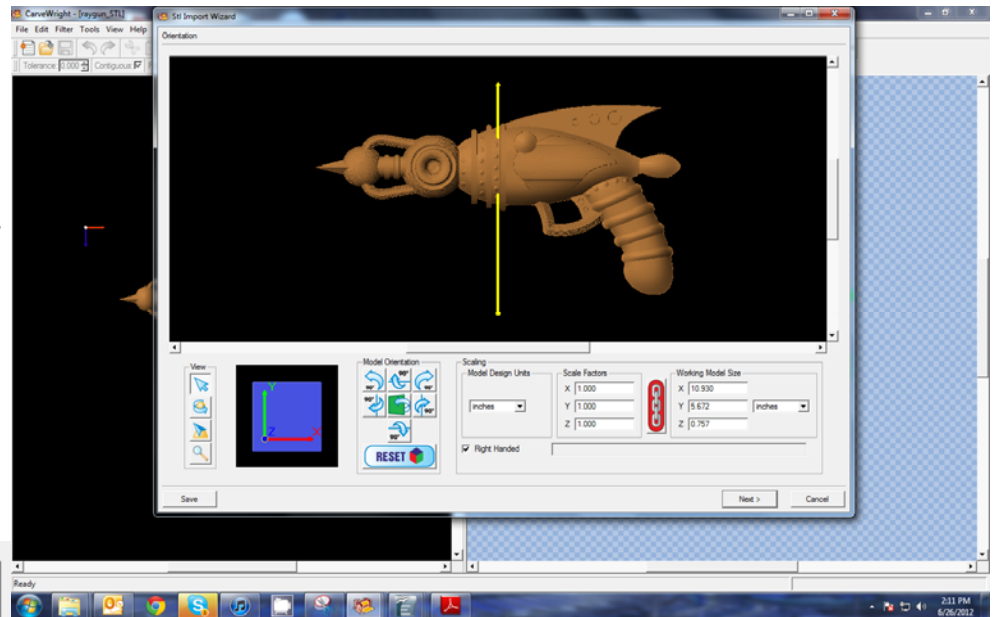
In this window, change the X axis to 12".

Click on the linkage graphic to change it to yellow. This will allow you to manipulate Z axis independently of X and Y.

Set the Z to 1.250"

*A green linkage graphic indicates that all 3 axes are independent of one another.*

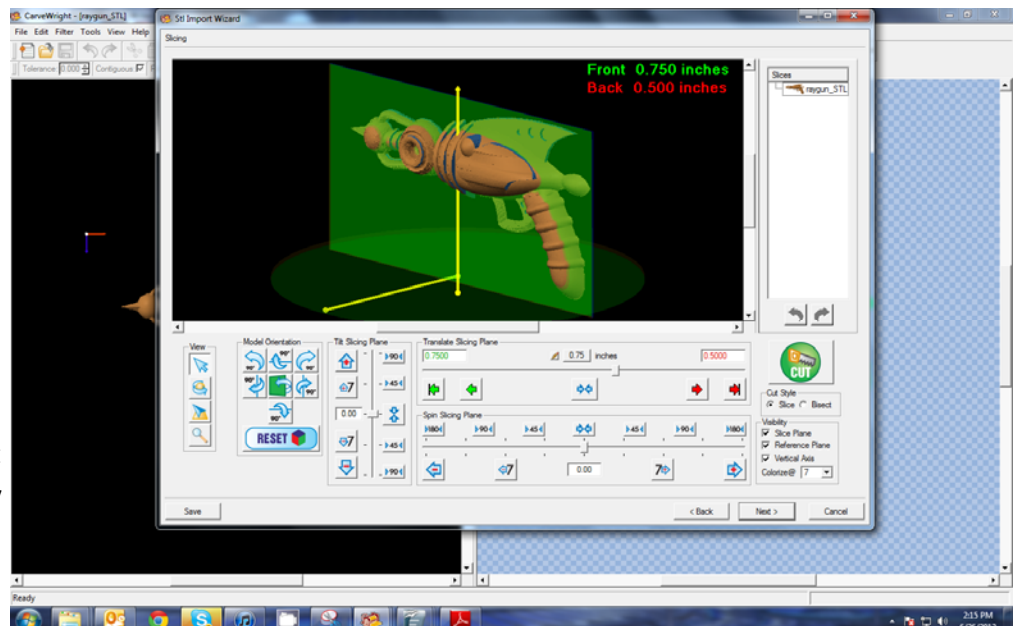
Click Next.



## ✓ SLICING MODELS

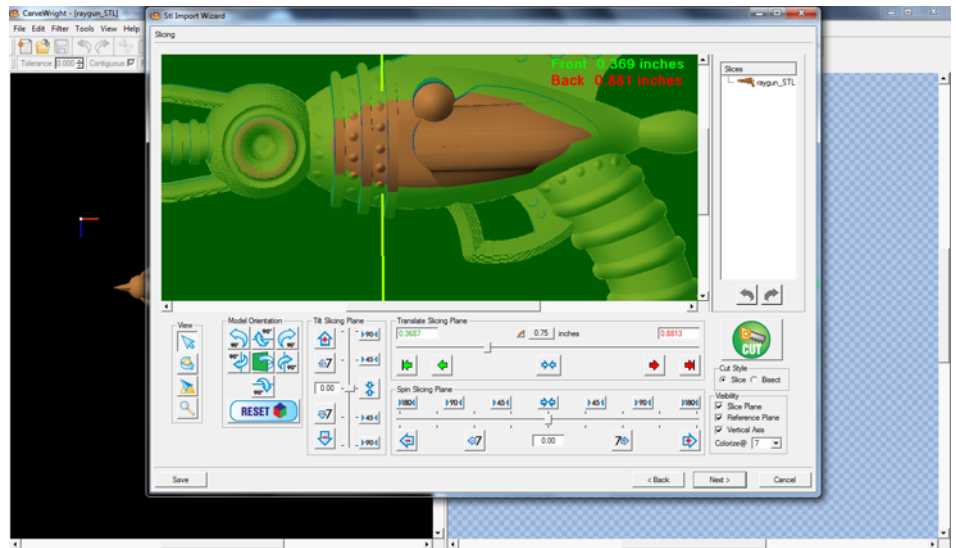
*The Slicing Window will appear. It will default to a 3/4" slice depth. Some models may require re-orientation or slices taken at different angles.*

Move the "Translate Slicing Plane" slider up so that only the top most of the side of the gun is sliced. Just above where it will not slice off any of the other pieces.



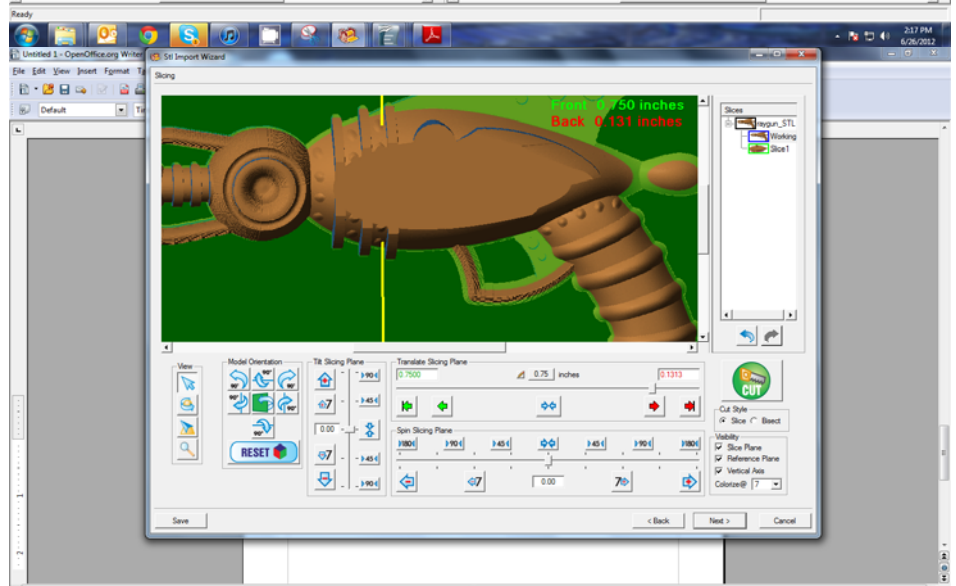


Click the Cut button.



Notice the slice that becomes a pattern in the top right window.

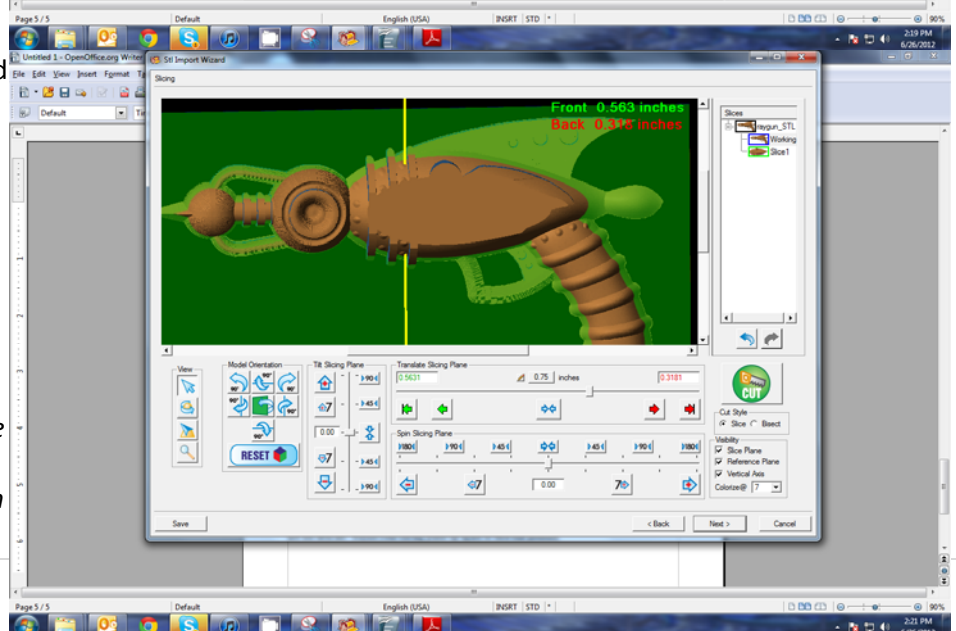
Manipulate the “Translate Slicing Plane” slider to position the second slice just above the thin pieces around the barrel. Avoid creating pieces that will be too delicate.



Click the Cut button to make the second slice.



Notice in the slice window that slices we have already made are in a green box and what is remaining of the model is in a blue box.



Allow a full depth cut for what's remaining of the final slice.

Click Cut button.



Click Next.

*The Confirm Import Window will appear. This is where you make a final check of each slice before naming and saving.*

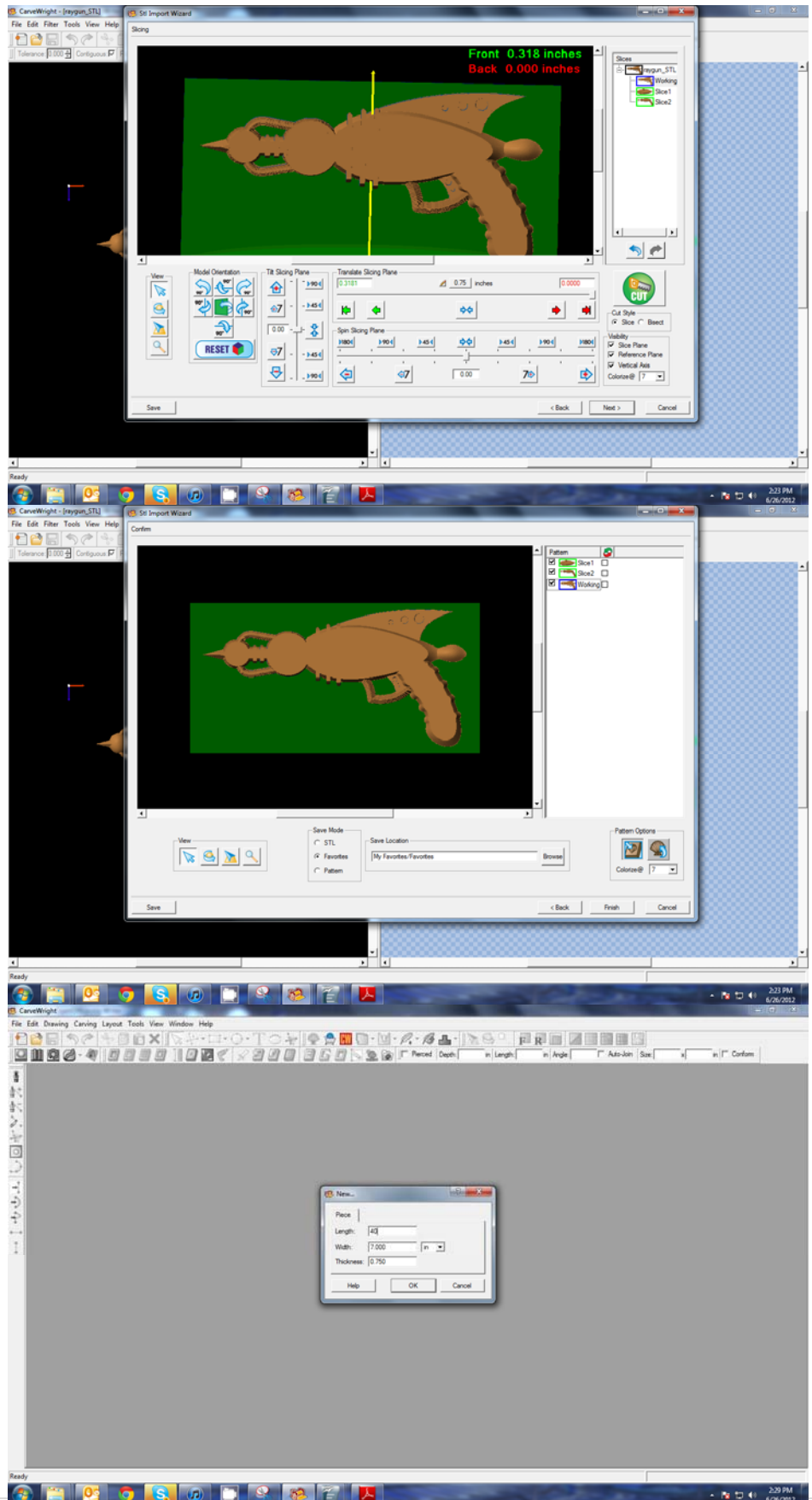
Make sure the Save Mode is "Favorites".

Click next to Save Patterns into your Pattern Library Favorite's folder.

Close Pattern Editor.

Create Project Board in Designer.

Set the dimensions of this project to 40"x7"x.75"



If they are on, toggle off texture, grid, and snap to grid.

## ✓ PLACING STL PATTERNS



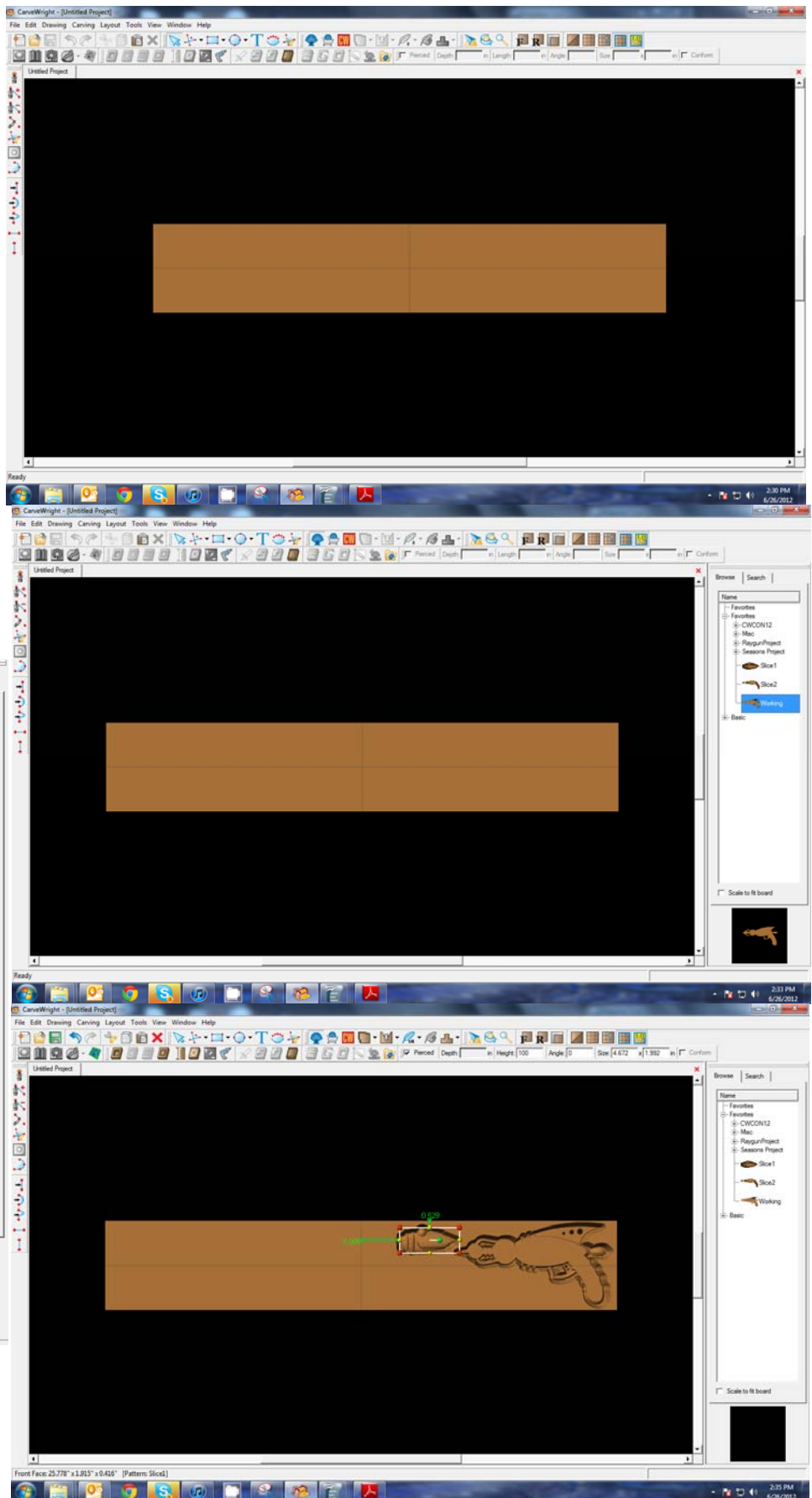
Open the Pattern Library.

Locate your slices.

Deselect the Scale to Fit Board check box.

Place the largest pattern piece to the far right of your project board.

Place the smallest slice to the left at the top of the project board.



Place the third pattern. Right-click and select “Rotate 180” and arrange it with the other two patterns making sure all patterns are on the right side of the board’s center line.

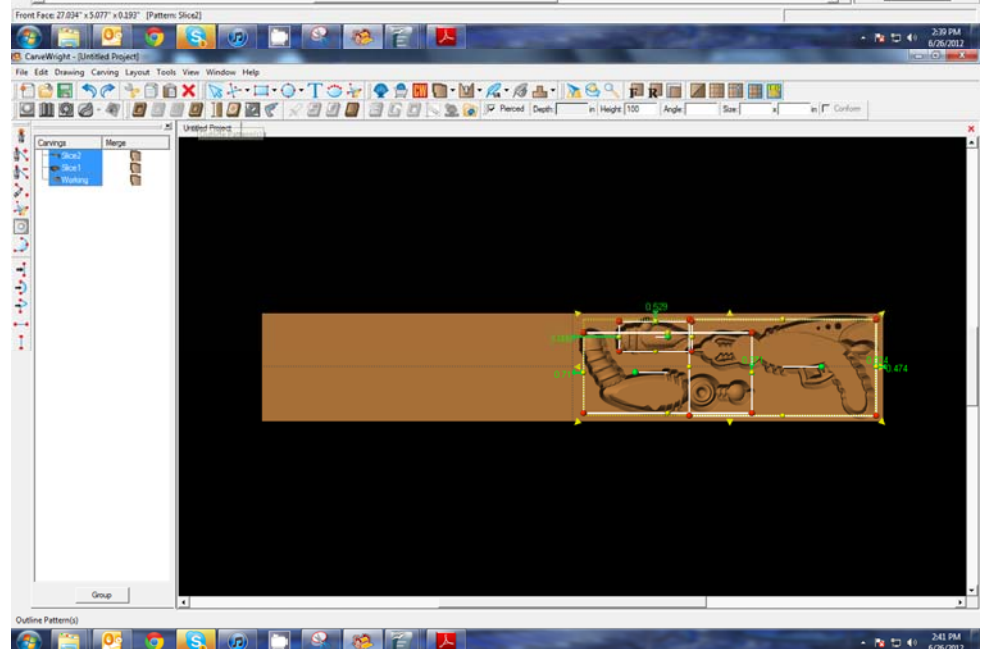
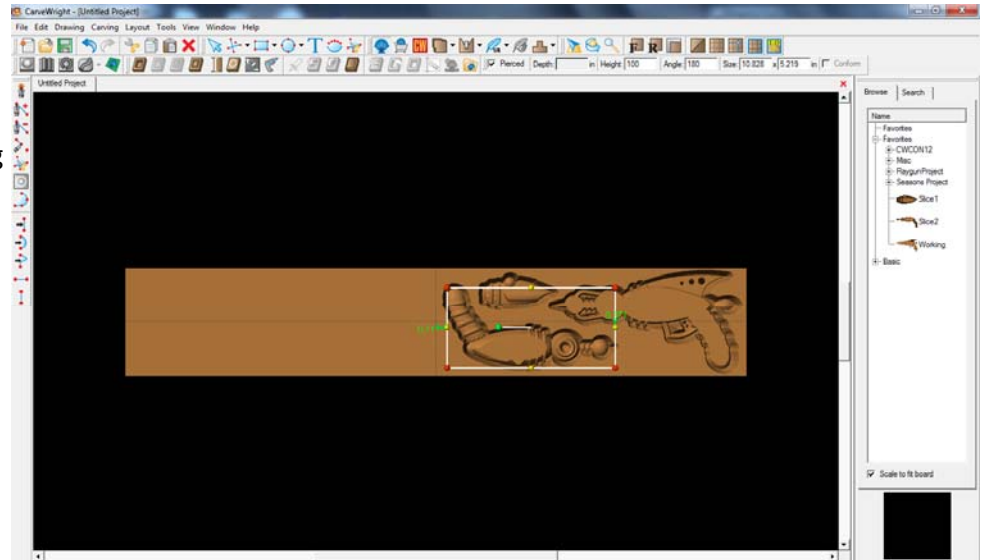
Click View > Carving List to open.



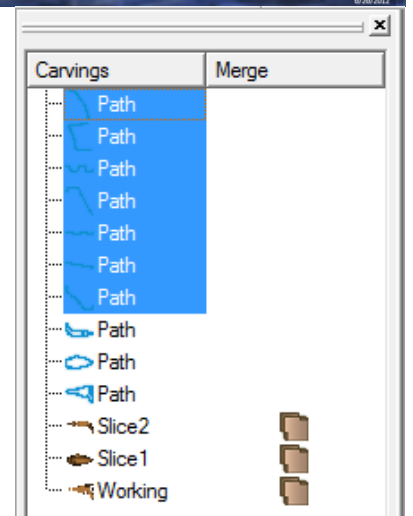
## ✓ OUTLINE PATTERN



Select all three patterns, right-click and select “Outline Pattern” or select icon.

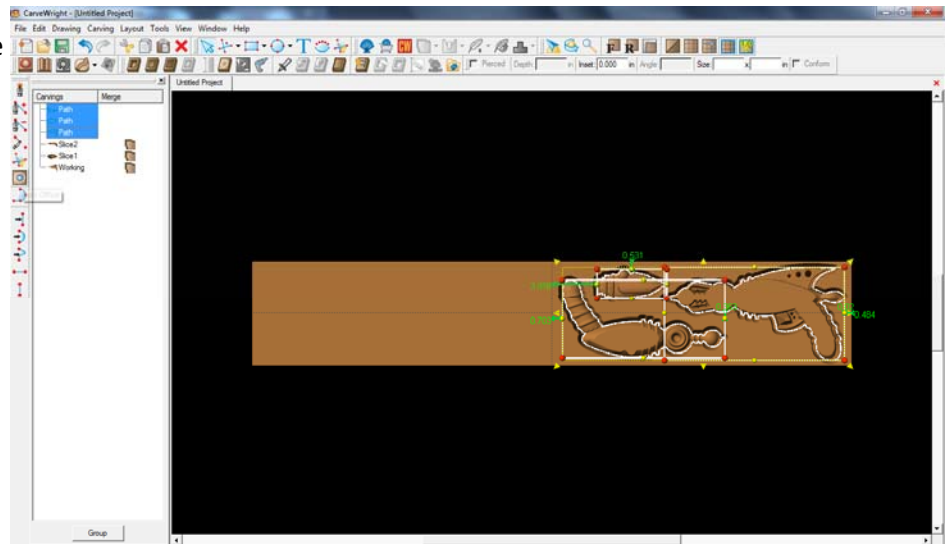


From the Carving List, select only the inside paths, leaving the outlines of the three patterns and press the delete key.





Select the three outlines either from the Carving List or on the project board.

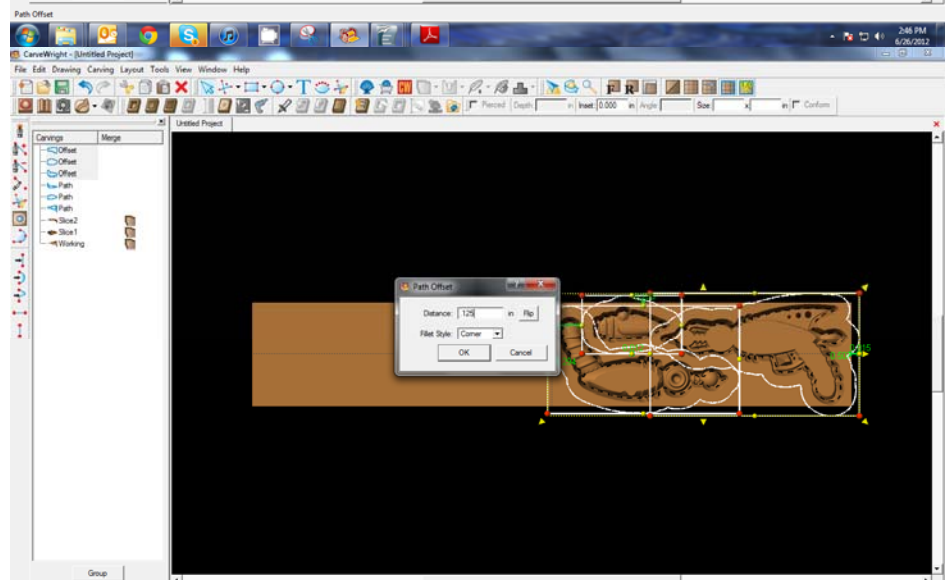


## ✓ OFFSET PATH

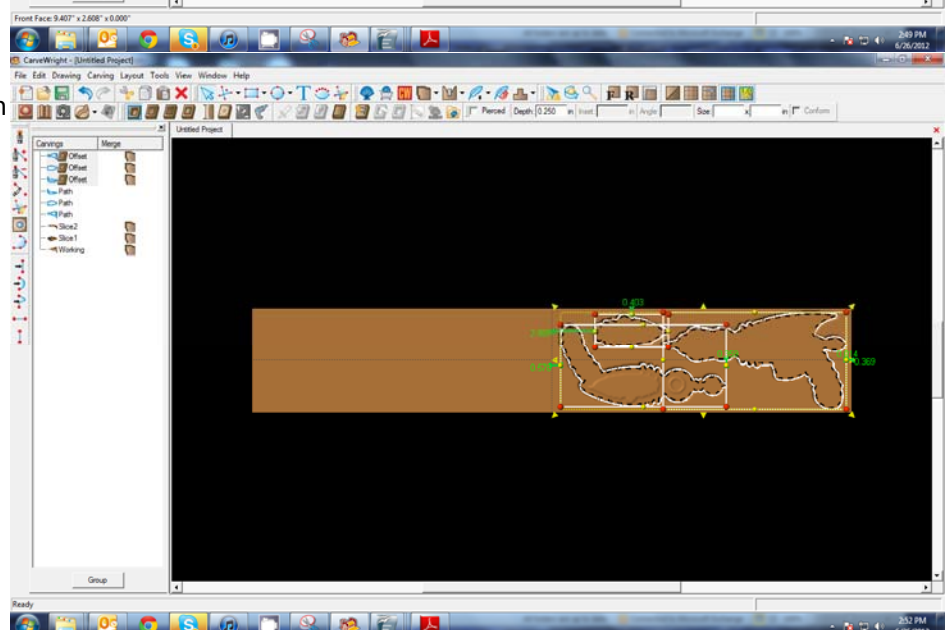


Click "Offset Path" icon.

Set the Distance to .125" and click OK.

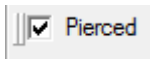


With the offset regions selected, click on the Carve Region tool.



## ✓ MAKING TABS

Select the Pierced Tool check box.

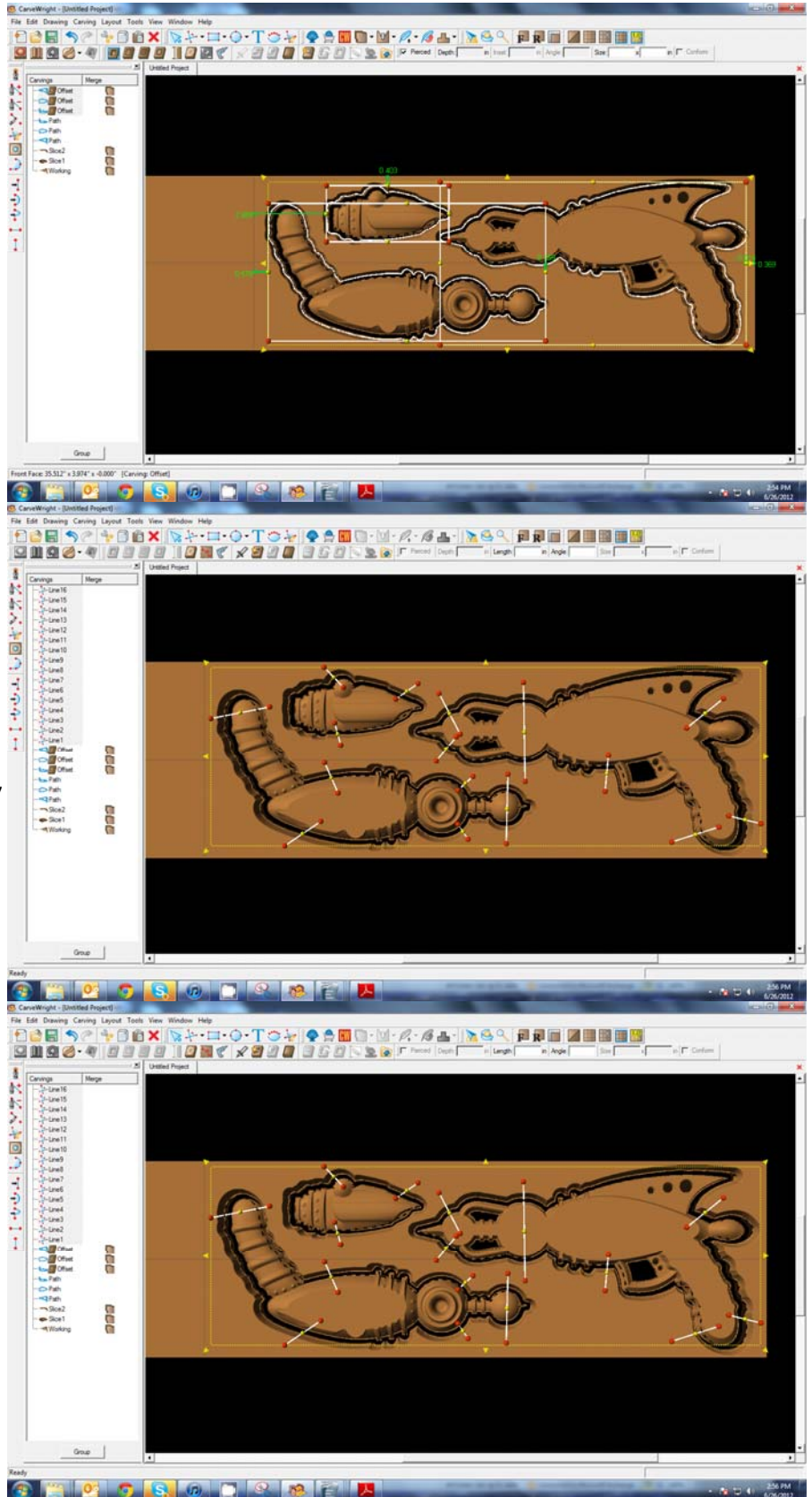


Using the Line Segment tool, draw lines to create tabs.

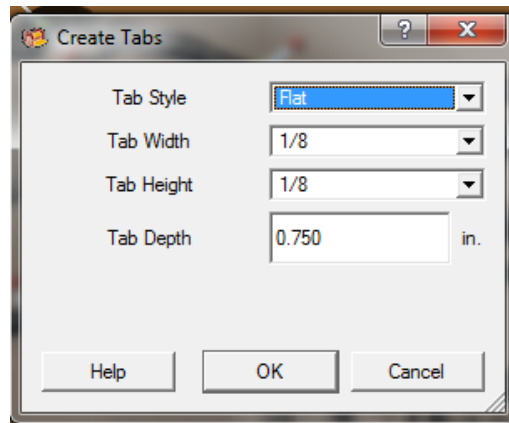


*Try not to put too many, but enough to hold the piece into place when carving. Keep in mind the tabs will need to be sanded off, so try to place them in areas that will have easy access for cleaning.*

With all your tab lines still selected, choose the "Make Tabs" tool.

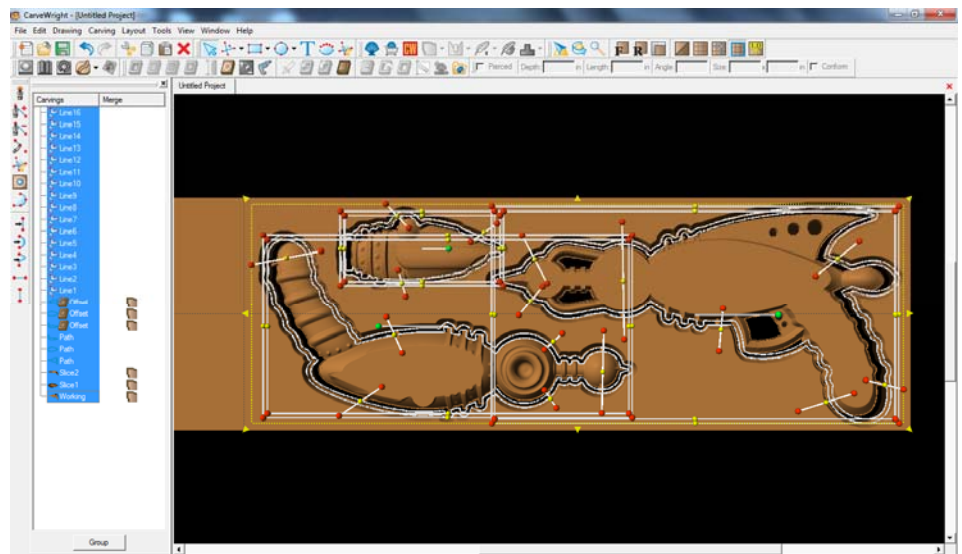


Set the tabs to be flat and 1/8" x 1/8".



### ✓ MIRRORING

Now with all your tabs created, select everything on the board and mirror horizontally.



### REMEMBER THESE FUNCTIONS FROM PREVIOUS STEP-BY-STEP PROJECTS

### ✓ MANAGING DATA

#### \*\*\*\*\*IMPORTANT\*\*\*\*\*

Once a project is uploaded to a memory card, it cannot be brought back from the memory card into the software. Always **SAVE YOUR PROJECT** on your hard drive. A **Projects** folder is recommended and you should know where you saved it.

Save your project.  
Select your quality setting.  
Name your project.  
Upload to memory Card.

