Design Project 6-12

“Martian Ray Gun Box”

This project covers the following design concepts:

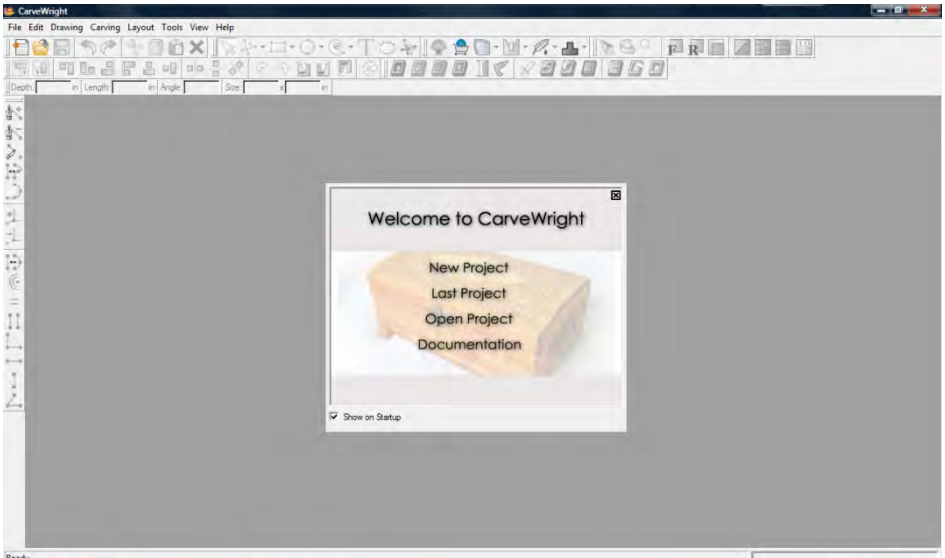
- ✓ OPEN PROJECT OR LAST PROJECT
- ✓ PATTERN PLACEMENT
- ✓ SETTING DIMENSION CONSTRAINTS
- ✓ CLIP CARVING
- ✓ MERGE
- ✓ ATTACH TO EDGE
- ✓ MIRROR ALL
- ✓ GROUPING
- ✓ OFFSET TOOL
- ✓ PIERCED CARVING
- ✓ MAKING TABS
- ✓ MANAGING DATA

INSTRUCTIONS:

✓ OPEN / LAST PROJECT

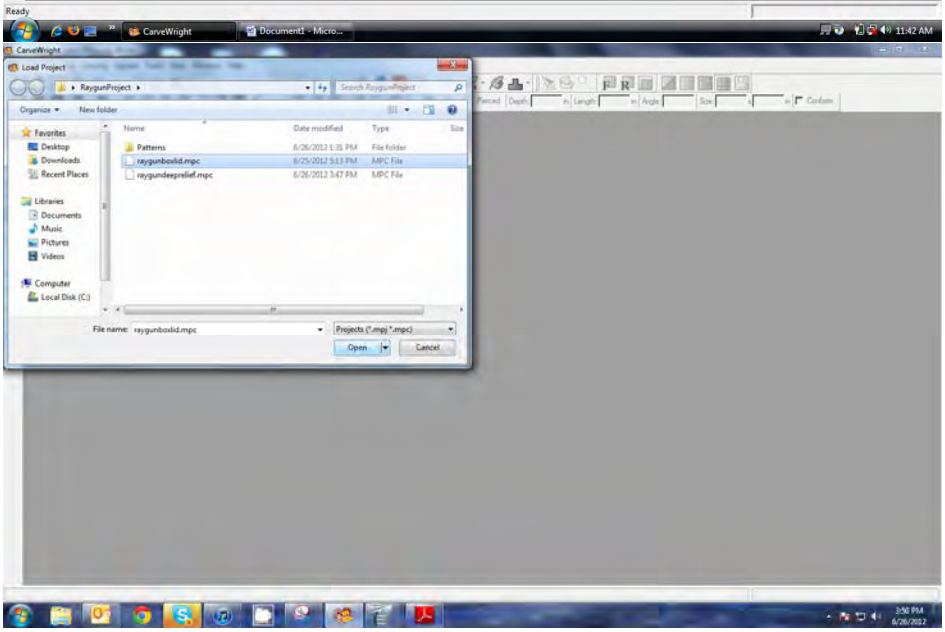
Open the CarveWright Project Designer Software

The Welcome screen appears with project options.



Select “Last Project” or “Open Project” (if you have done something else, since Project 4-12 “Martian Ray Gun”).

Browse to the Martian Ray Gun Project (.mpc) file and open.

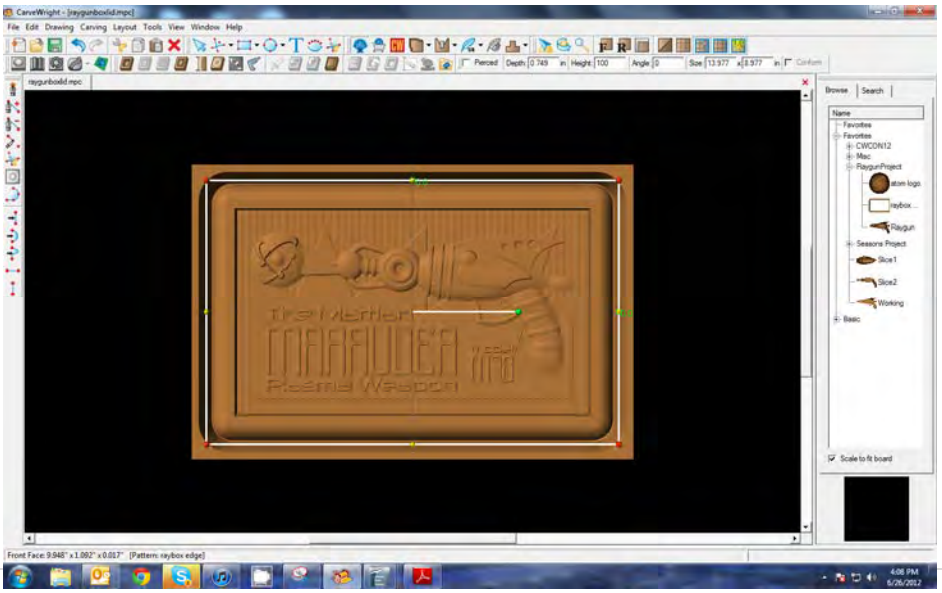


✓ PATTERN PLACEMENT

Open Pattern Library

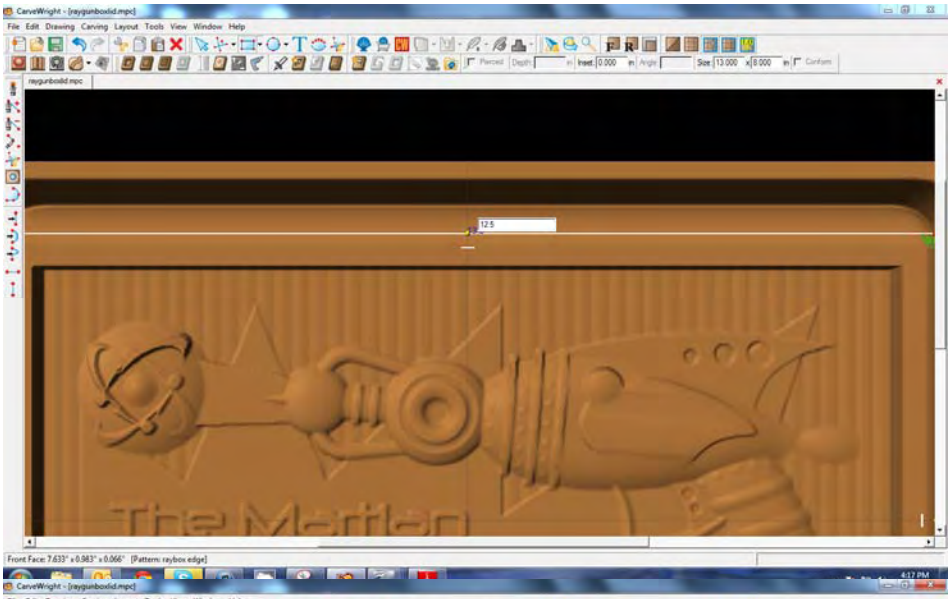
Locate the Ray Box Pattern and place on the board.

Center > Both



✓ DRAWING TOOL

Select the Rectangle tool and draw a box around the board.



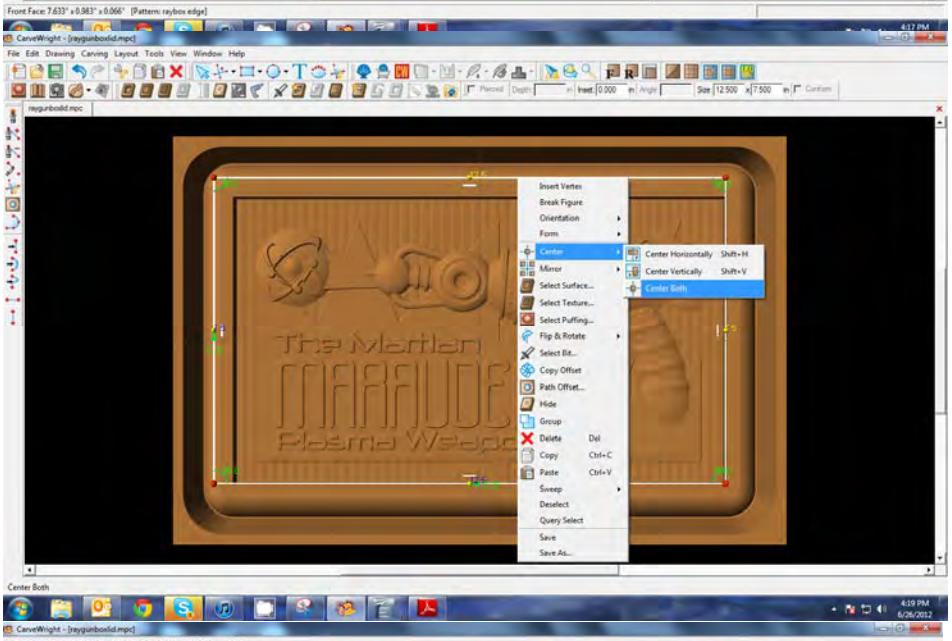
✓ SETTING DIMENSION CONSTRAINTS

Click the numbers on the side of the box and make the length 12.5” and width 7.5”.

To change a dimension, left click the dimension to open a pop-up box, enter the desired value and press enter. Dimension can also be changed through the context menu, by right-clicking and selecting “Edit Dimension”.

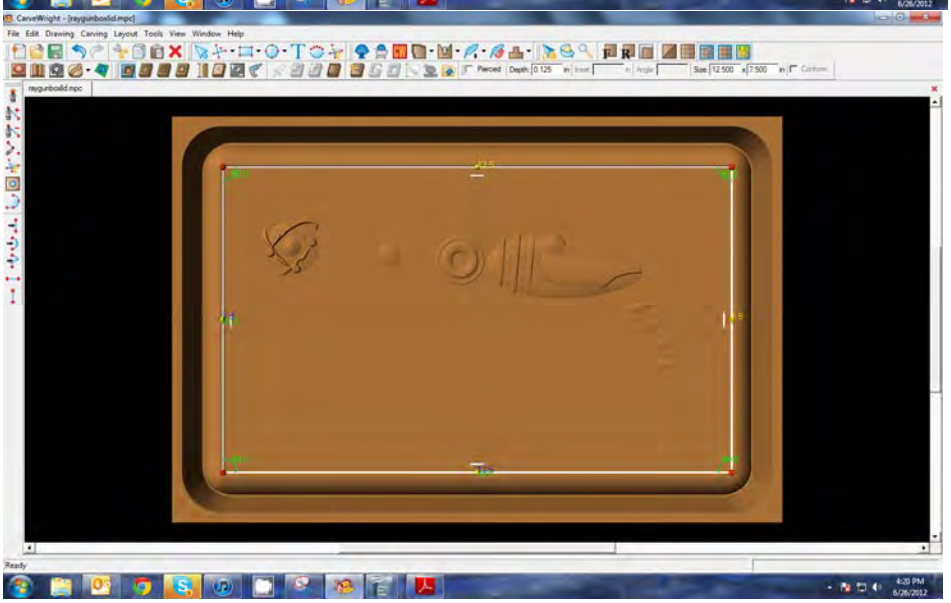
Once a dimension has been set it will turn yellow and become locked or fixed. The dimension will remain fixed until a new value has been entered or it is unlocked. To unlock a dimension, left-click on it and select “Remove Constraint” from the context menu.

Center > Both



✓ CLIP CARVING

Click Carve Region tool and set the depth to .125”

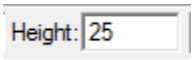


With the rectangle still selected, right-click and choose the Clip Carving Exclusive icon.

Clip Pattern can be used to eliminate a portion of a pattern either inside or outside of the carve region.

Locate the rivets pattern in the Pattern Library and place on the box edge.

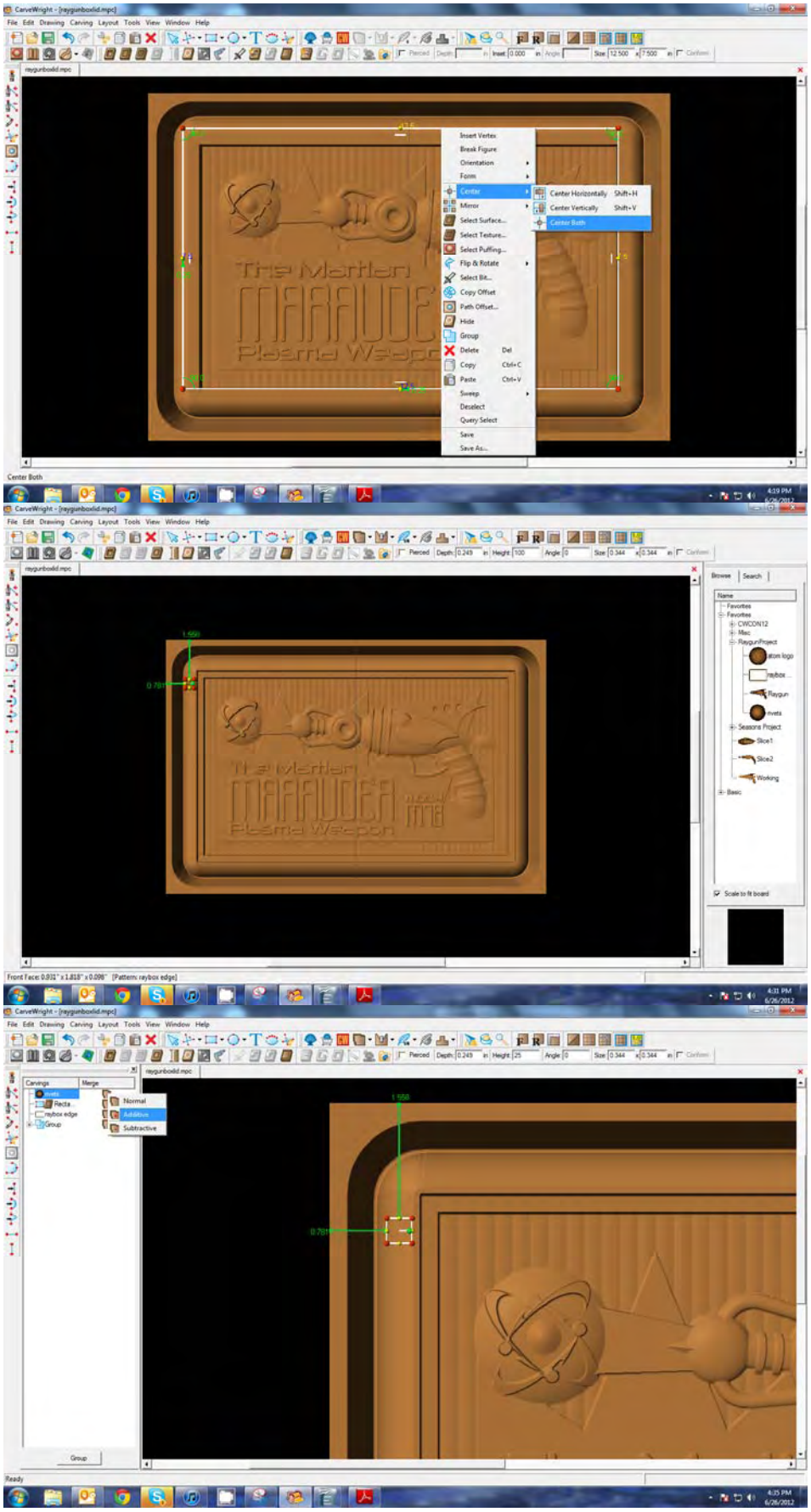
Set the height to 25.



✓ MERGE

Open the Carving List.

Select the rivet pattern and choose Merge > Additive.



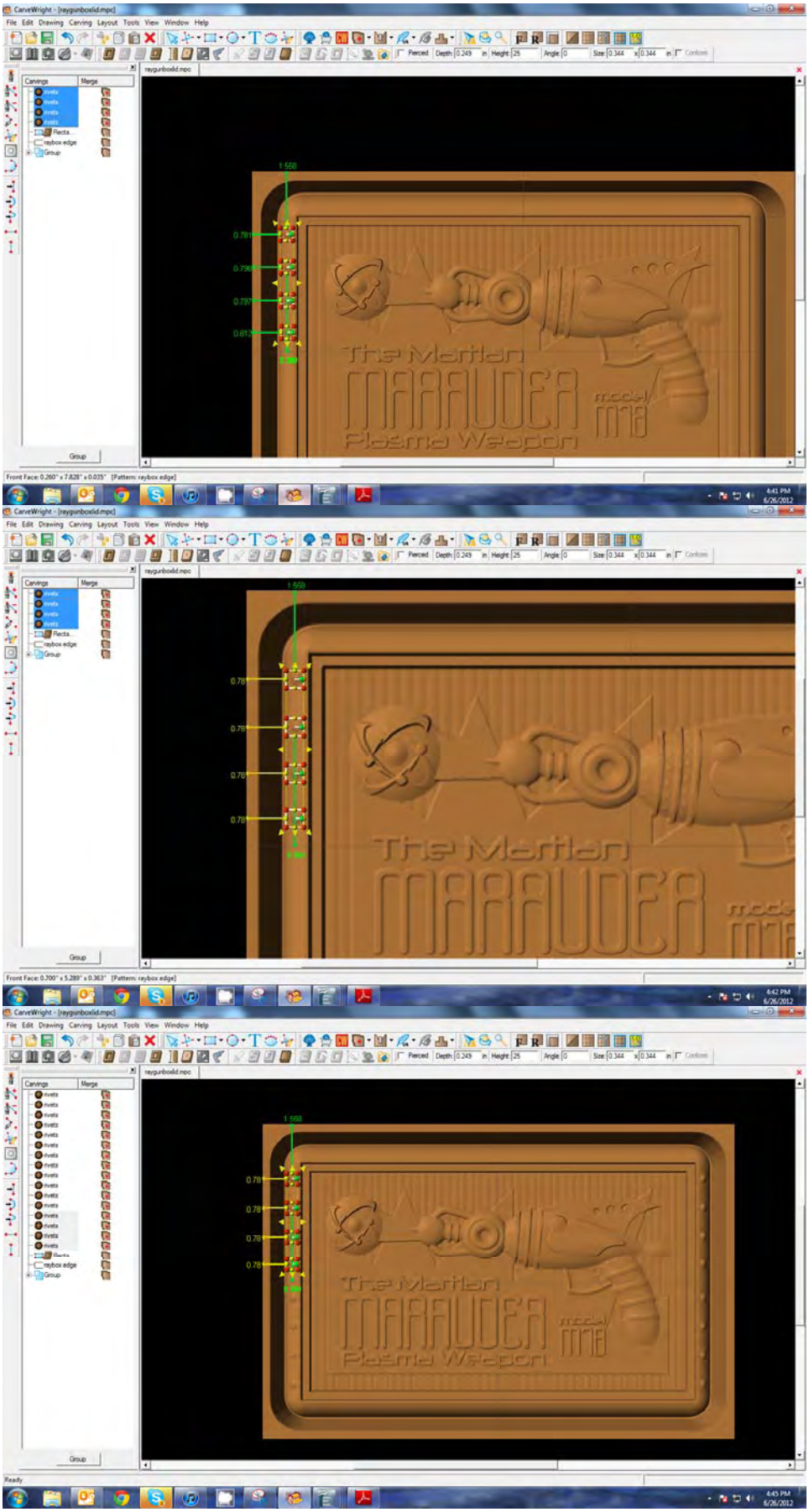
Copy and Paste the rivet pattern 4 times and space the patterns evenly across the top half of the left edge.

✓ ATTACH TO EDGE

The green arrows pointing to the edge of the board are “Attach Points”. Click on each one and set them all to .78”.

Notice once constrained, they turn yellow.

Attachments can be made to the board edge of the center lines. Once set, they must be removed or edited to change.



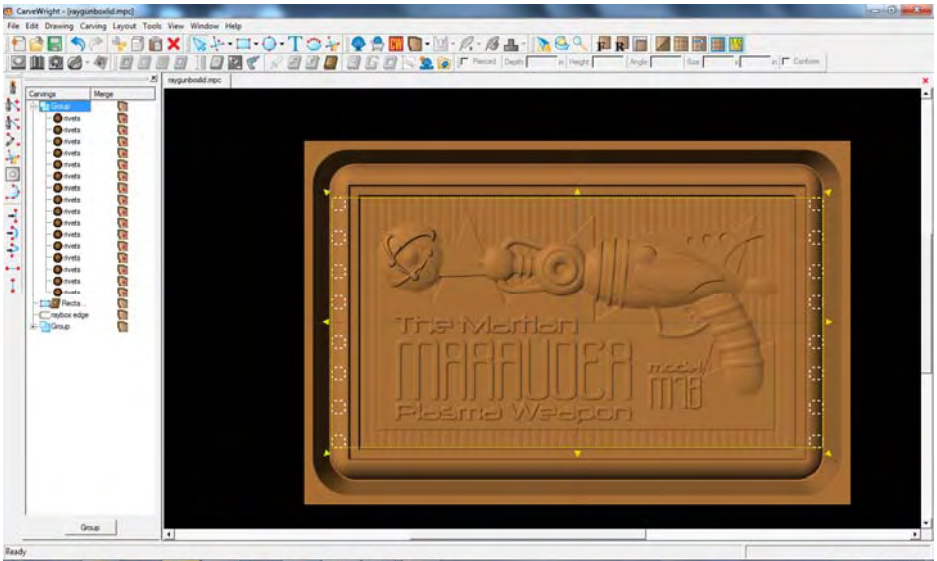
✓ MIRROR ALL

Select the four rivets and right-click. Select Mirror > All.

✓ GROUPING

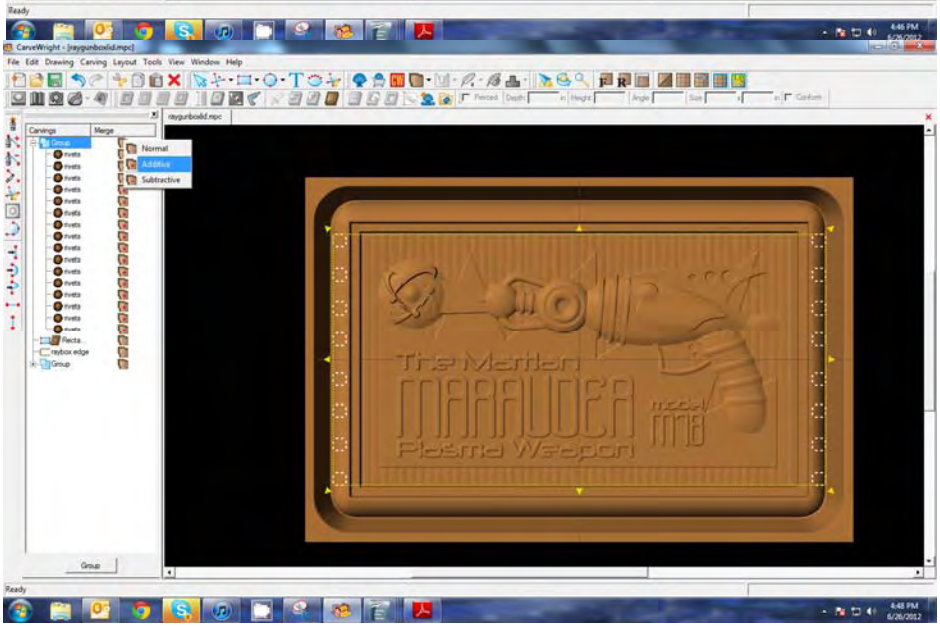
Notice the carving list is starting to get full. Use Groups to organize carving lists.

Select all of the rivet patterns and click the “Group” button. Rename the group to “Rivets”

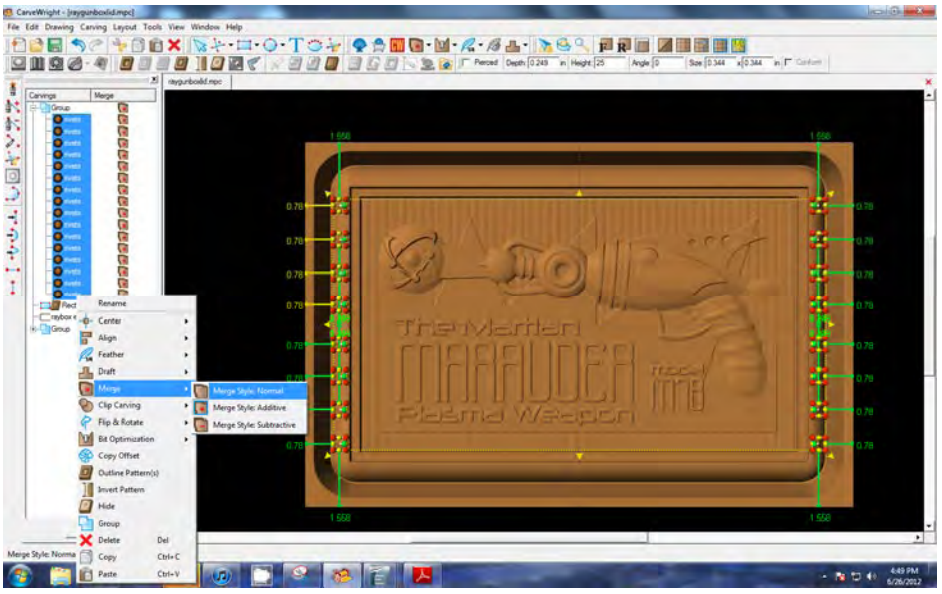


By grouping these patterns, the merge style has been isolated and no longer applies to the box edge.

Select the Rivet Group folder and make it Merge Additive.

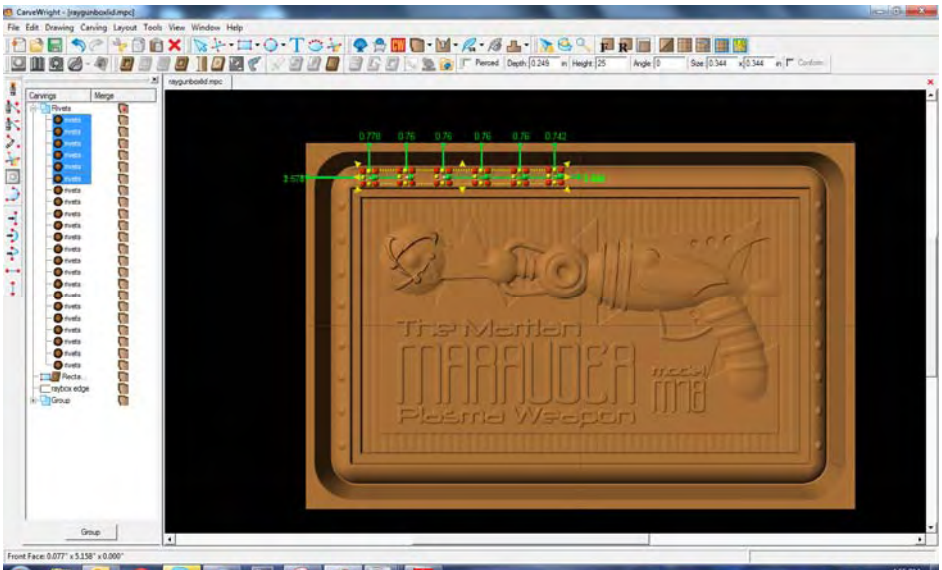


Select all rivet patterns within the folder, right-click and select Merge > Normal.



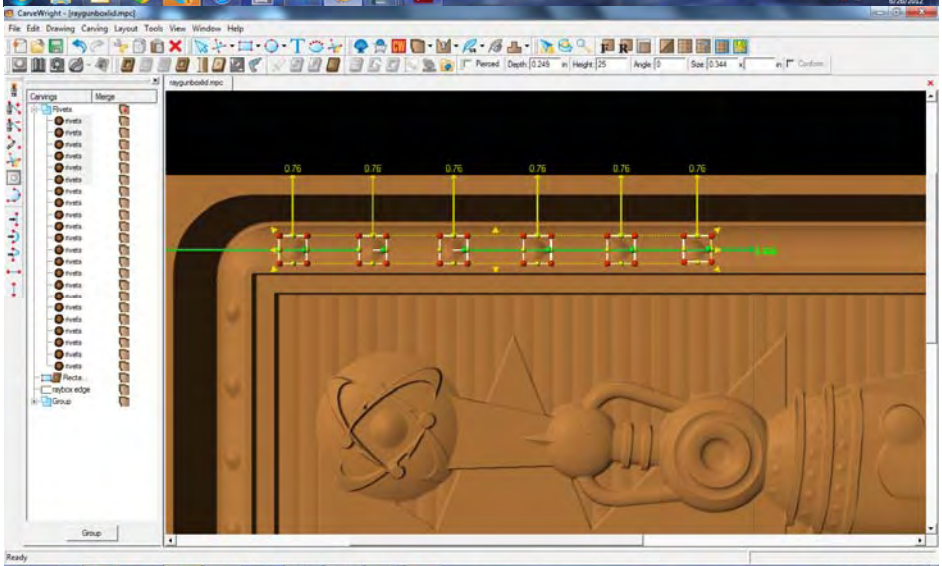
Paste 6 more rivet patterns and move them into the rivets folder.

Then place evenly across the top left quadrant.

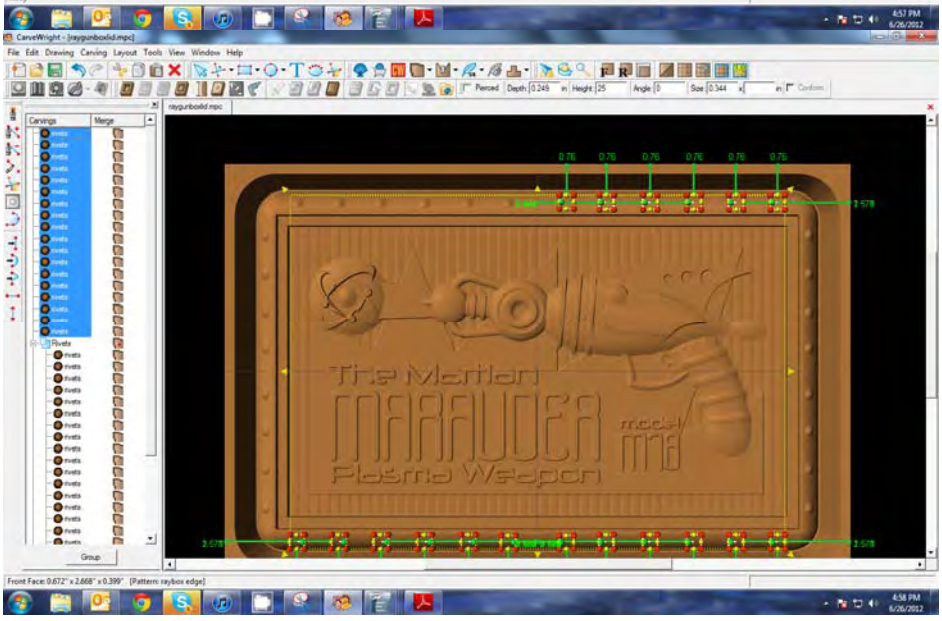


✓ ATTACH TO EDGE

Attach evenly to the edge as before.

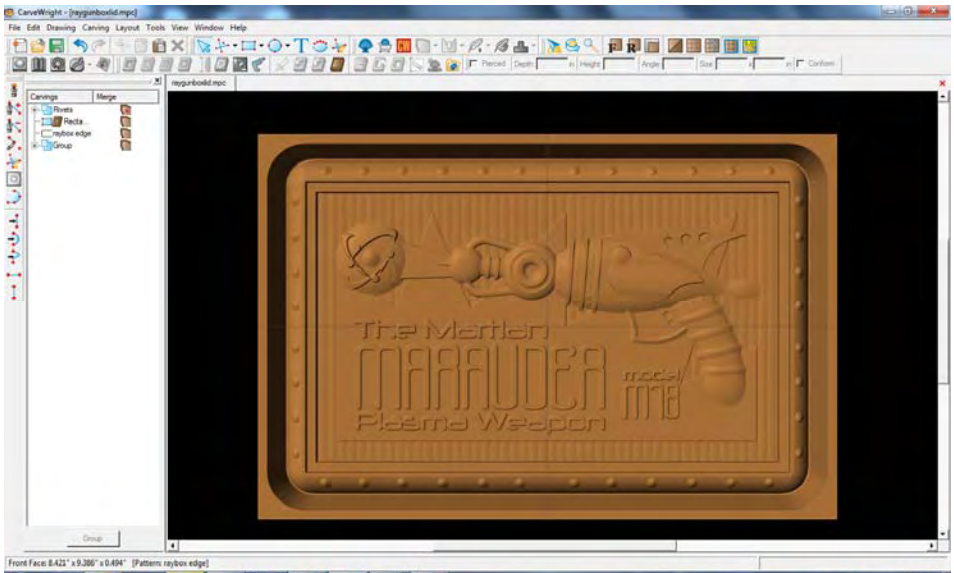


With these new six rivets selected, right-click and choose mirror all.



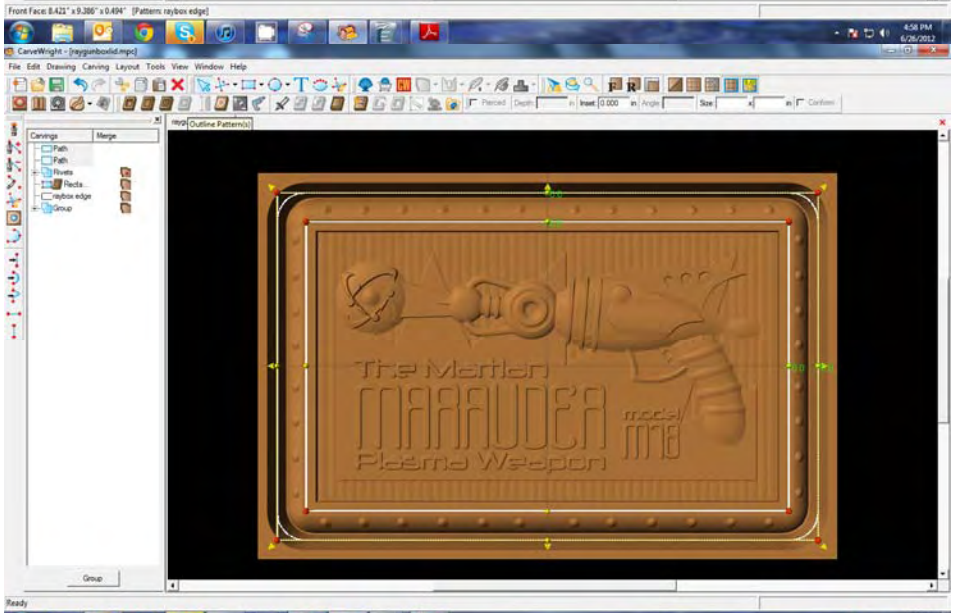
✓ GROUPING

Place all new rivet patterns in the rivet folder



Select the raybox edge pattern and choose the Create Outline tool.

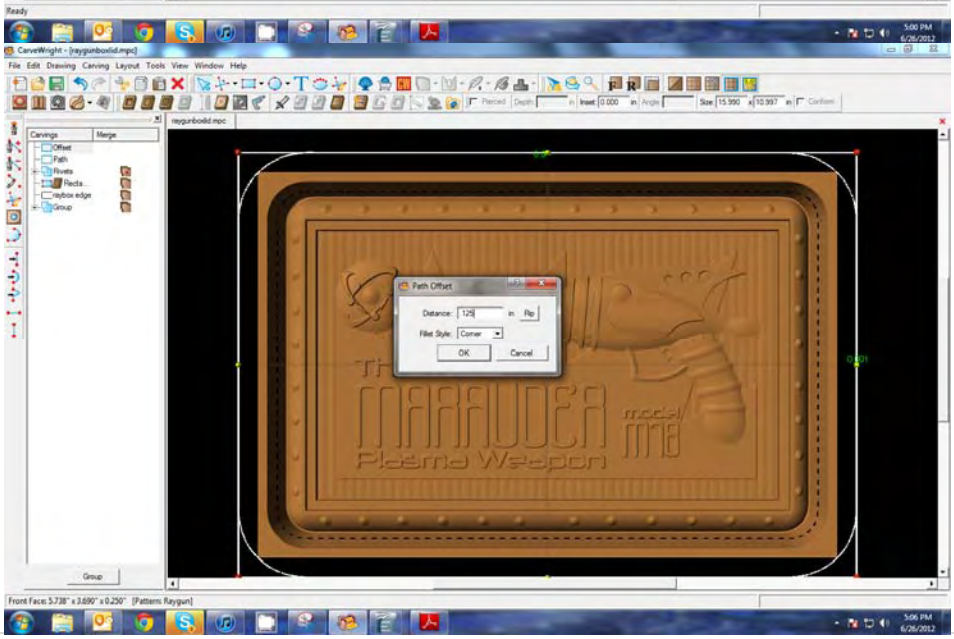
Select the inside path and click the Delete icon.



✓ OFFSET TOOL

Choose the remaining outside path and select the Offset Path Tool.

Set the offset to .125”
Click OK.



✓ PIERCED CARVING

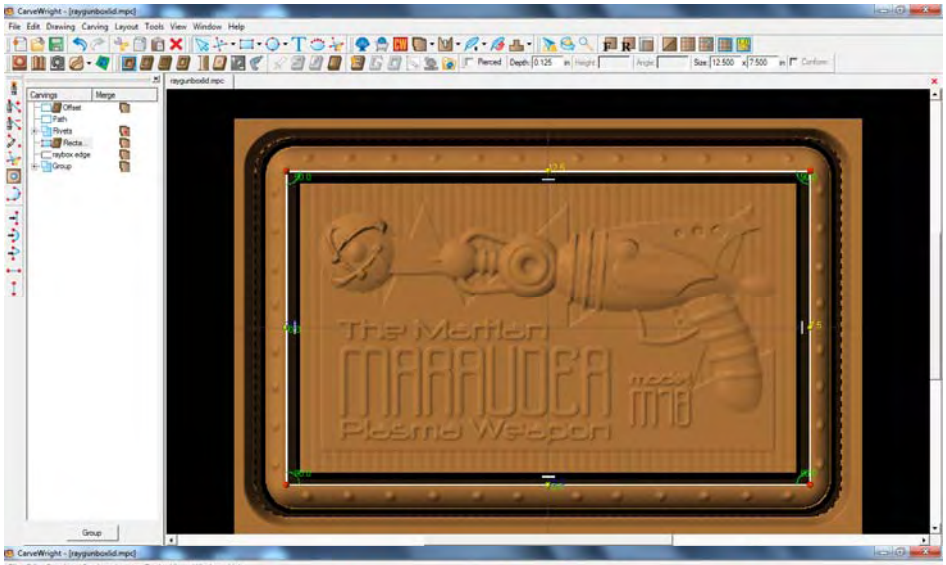
With the offset paths selected, choose the carve region tool.

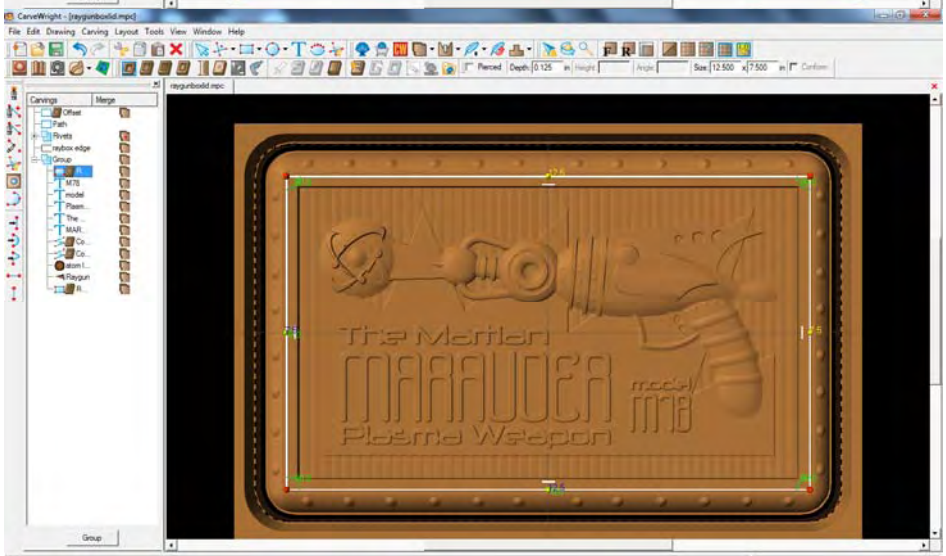
Select Pierce tool

Notice the carved region we had applied the Clip carving to carves all the way through. This is because it is in the same directory as the pierced carving.

We just want it to clip the original group we made in the earlier lesson.

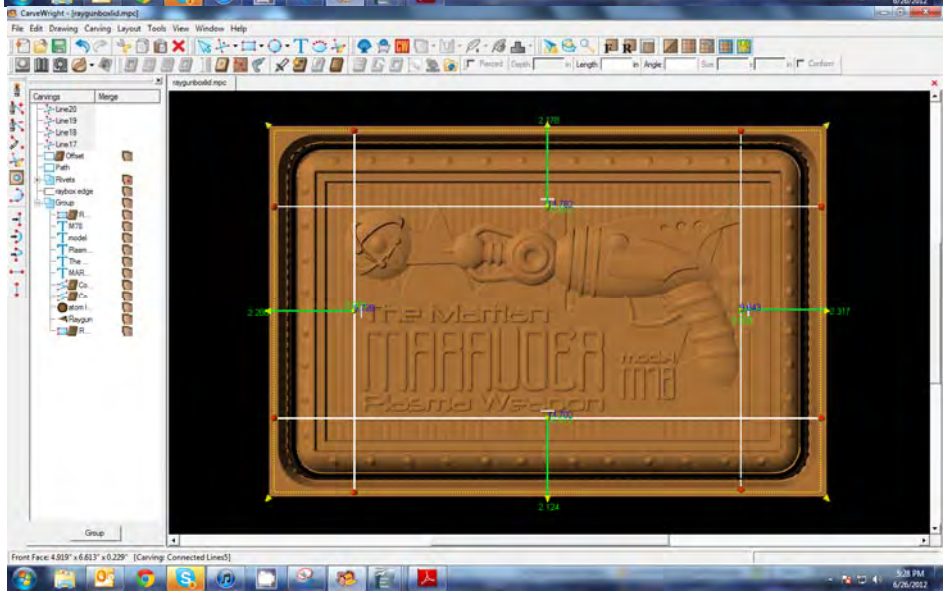
Select the clipped region and drag it into the original group folder.





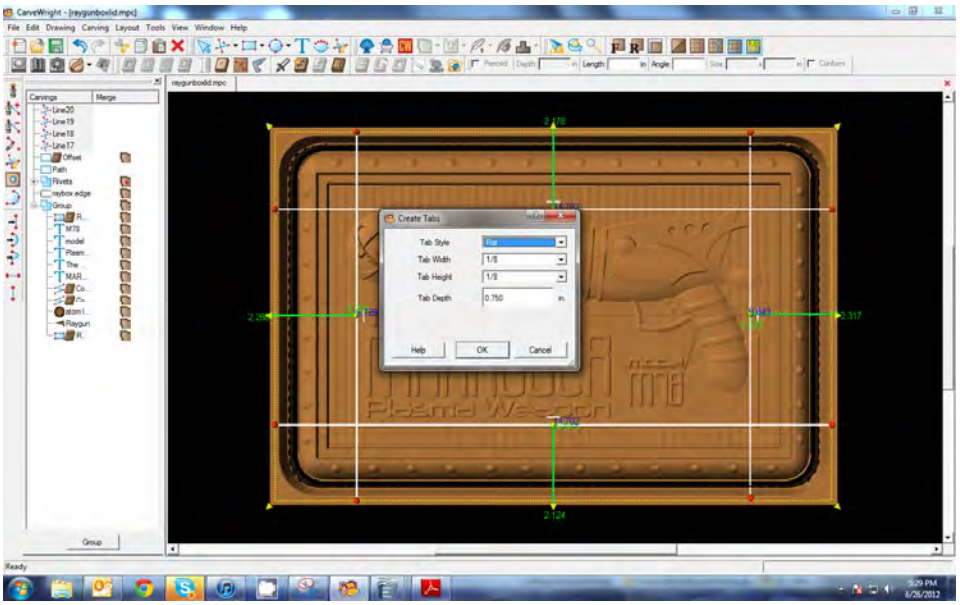
✓ CREATE TABS

Using the Line Segment tool, draw your tabs.



Click the Make Tabs tool.

Set the tabs to Flat, 1/8” x 1/8” and click OK.



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.