Design Project	**"Carving Your Cutouts; No Cutting Bit Required"**

This project covers the following design concepts:

- ✓ STARTING SOFTWARE
- ✓ PATTERN PLACEMENT
- ✓ PATTERN MANIPULATION
- ✓ PIERCED PATTERN
- ✓ OUTLINE PATTERN – 3 OPTIONS
- ✓ PATH OFFSET
- ✓ CONNECTED LINES TOOL
- ✓ PIERCED CARVE REGION
- ✓ ADD FEATHERING
- ✓ CREATE TABS
- ✓ LINE SEGMENT TOOL
- ✓ SET TABS
- ✓ FINETUNING
- ✓ SAVE & UPLOADING TO MEMORY CARD

This technique, generally, means your project will be done with only the carving bit. There would be no need for the measuring of both the carving & cutting bits during setup, or bit changes. It eliminates the chances of the cut path not lining up with the pattern and avoids the use of the cutting bit altogether.

INSTRUCTIONS:

✓ STARTING SOFTWARE

Open the CarveWright Project Designer Software

The Welcome screen appears with project options.
Select "New Project"

Set your project board dimensions.
Length: 20"
Width: 14"
Thickness: .75"
Remember your actual board should be bigger than your virtual board unless you are using a sled.
Click OK

✓ PATTERN PLACEMENT

Open the Pattern Library Tool and select the STAR from the BASIC folder under CENTERS AND FILLS.

To place a pattern, you can either click once on the pattern and then once on the virtual board or you can click and drag it onto the board.

If you double click on the pattern, it will attempt to open it in Pattern Editor software and give you a message that "You may only edit unlicensed patterns, which you have authored." Pattern Editor is also an advanced feature that you may not have purchased or activated.

✓ PATTERN MANIPULATION
Resize to fit using one of the corner red knobs, so that your pattern stays proportional and is not skewed.

Remember to keep at least a ½" away from the top portion of the board, so as not to interfere with the tracking roller.

Right-click on the pattern and select CENTER & CENTER BOTH to center it on the board both horizontally & vertically.

This will lock the pattern into place and you will not be able to move the pattern placement until you go back and select again to toggle that feature off.
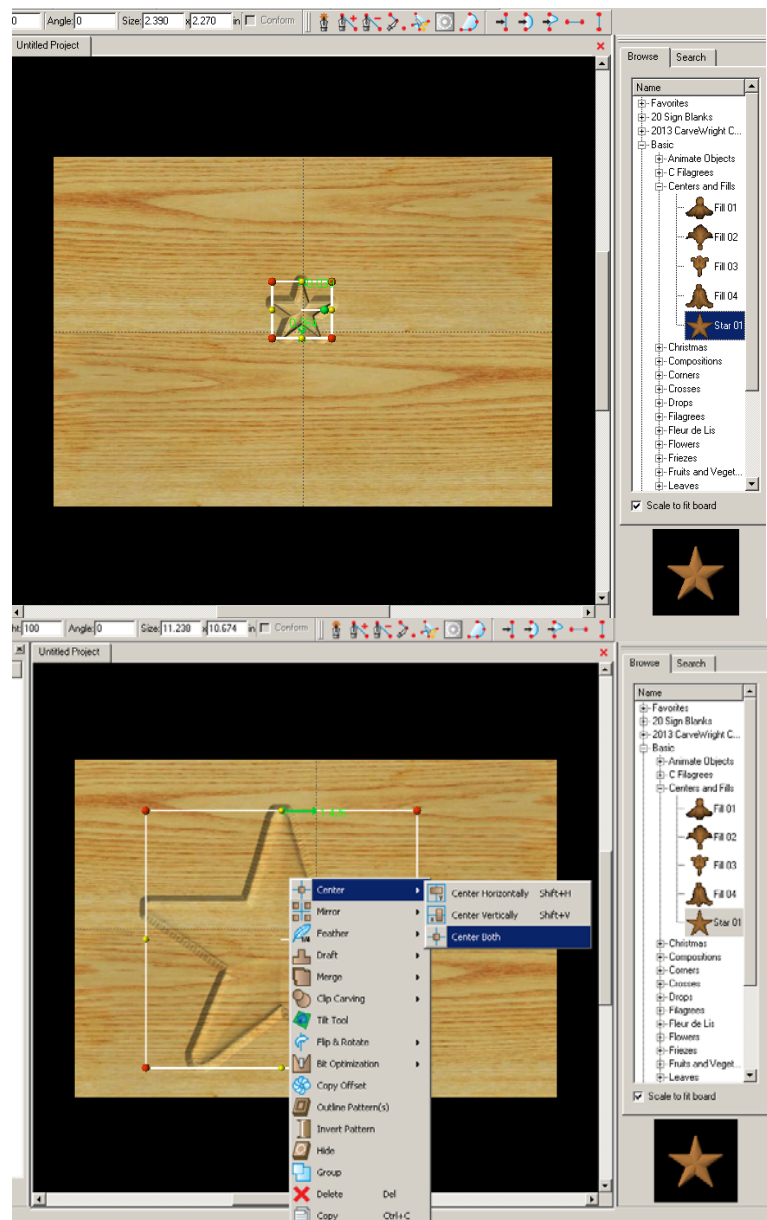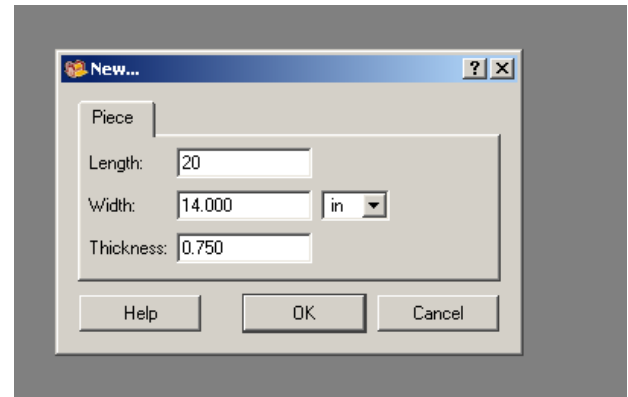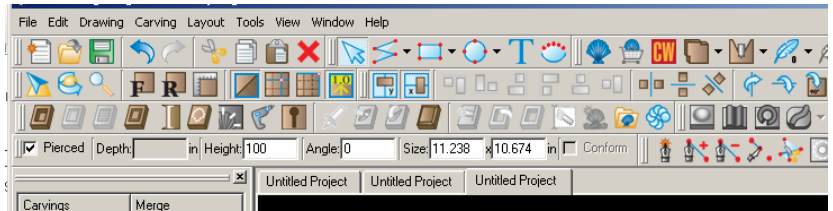
✓ **PIERCE PATTERN**

With the pattern selected, click the Pierced button on the Input Toolbar.

This sets the depth of the pattern to the bottom of the board.
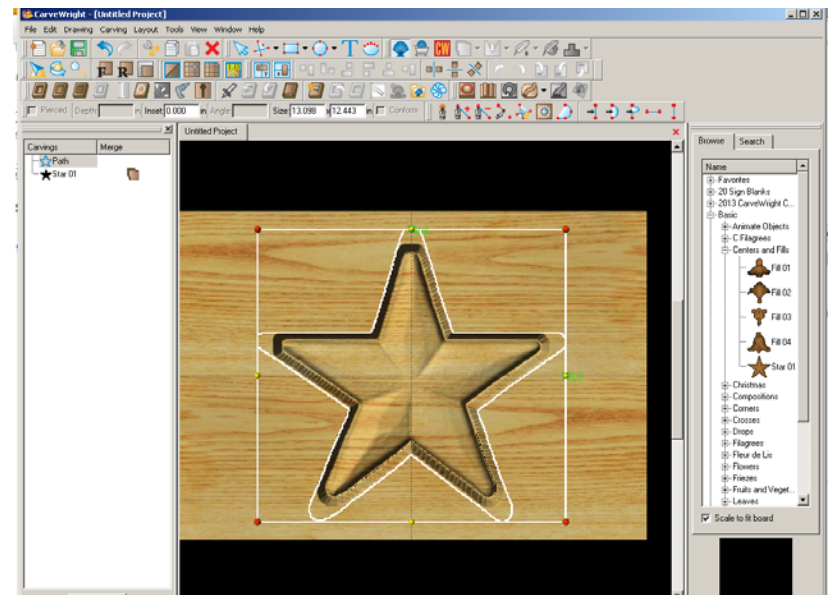
Change the FEATHERING to NONE.

✓ **OUTLINE PATTERN**

THREE WAYS TO OUTLINE:

Option 1: *Uses the drawing tools in the Designer Software (1.X & 2.X)*

With some patterns, you can right-click on the pattern and select OUTLINE PATTERN and then enlarge it to fit around the pattern.
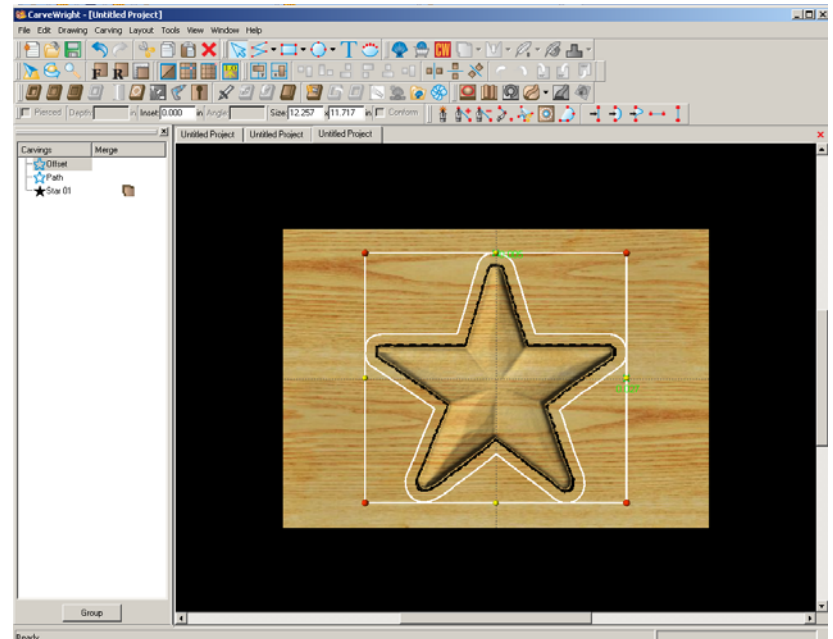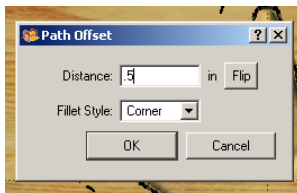
Center outline path.

Option 2: *Uses the PATH OFFSET tool that is part of the advanced 2D Vector Drawing Suite (purchase required).*

With the pattern selected, right-click and select OUTLINE PATTERN. Then select the PATH from your Carving List.
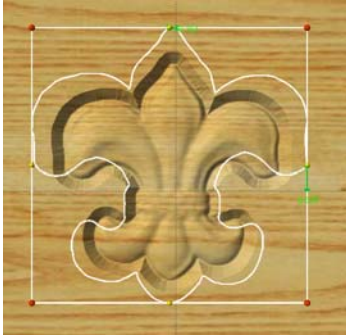
✓ **PATH OFFSET**

Click on the PATH OFFSET tool and set the distance from the path to offset the outline. I selected .5 and hit OK.

Option 3: *Uses the drawing tools in the Designer Software (1.X or 2.X)*

Because of the shape of some patterns, it is not always possible to use options 1 or 2. You will instead need to manually draw a path around the pattern using the CONNECTED LINES TOOL.

✓ CONNECTED LINES TOOL

Click on the Connected Lines Tool from the DRAWING TOOLBAR. Outline around the shape close to it, but not touching or crossing the pattern.

To close the shape make sure you get the STARBURST. When you have a closed path, the CUT PATH Tool will become an option. If it is not, play with the ends of the connected lines until they become closed.

✓ PIERCED CARVE REGION

Now that you have a closed region, we are going to select the Carve Region tool and then select PIERCED.

Remember, because there are two separate belts pulling your board through and a space between them, your carving bit will NOT carve into the belts or machine. You will need to make sure that it does not interfere with the tracking roller. If you are closer than a ½", it will give you a warning message.

✓ ADD FEATHERING

Cliffs are straight up and down edges that the top part of the tapered carving bit may hit. To avoid this, add a feathering to give it a ramped area to carve.

Select path & Feathering tool, feathering size that gets you close to pattern, but not connected, and Accept it on the inside of the path.

You may need to look at the back of the board to see how close you are and make adjustments.
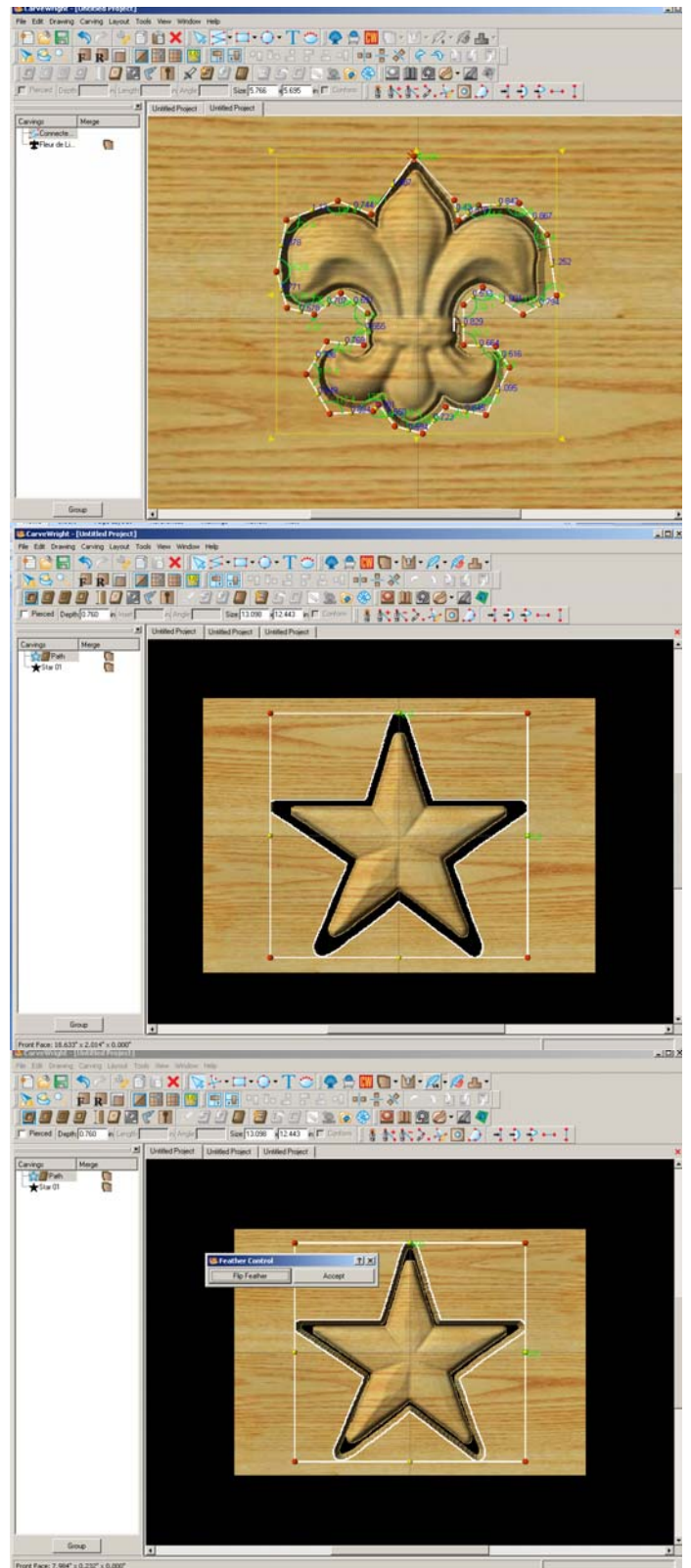
✓ CREATE TABS

To keep from having a loose piece floating around in your machine, we will create tabs to hold the pattern to the project board.

✓ LINE SEGMENT TOOL

First, you will need to use the LINE SEGMENT TOOL from your drawing toolbar.

Draw lines across the pattern and carve region to connect the pattern to the board.

✓ SET TABS

Click on the Tabs icon and select the settings. *(I usually just let it default and hit OK.)*
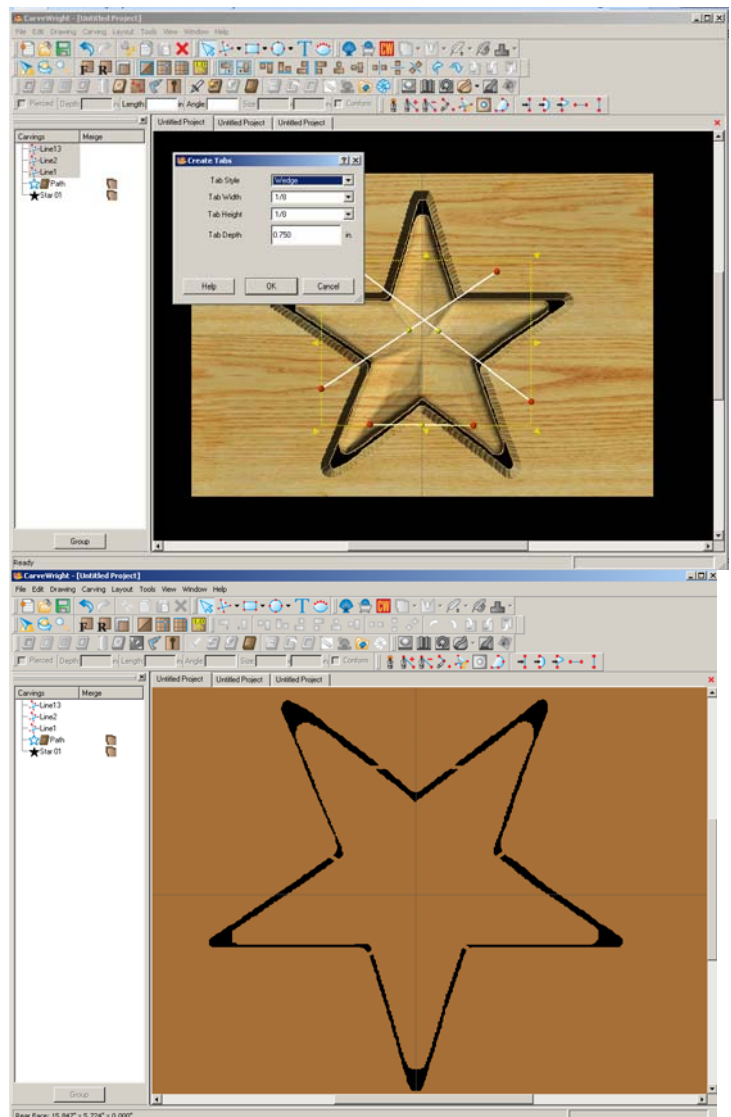
✓ FINETUNING

You can look at the REAR of the board to see the tab placement and if there are any changes you would like to make. Don't forget to consider adding DRAFT or BIT OPTIMIZATION to your pattern.

✓ SAVE & UPLOAD TO CARD

Select "File" > "Save"

*****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.

✓ UPLOADING TO MEMORY CARD

Make sure your Memory Card & Programmer are properly attached via your USB port, Select "File" > "Upload" to save to your memory card.

Select Quality Setting

Name Your Project

Click "Upload"