



CARVEWRIGHT™

WOODWORKING SYSTEM

TIPS & TRICKS

September 2008



Designer 1.131 New Feature Highlights

by Michael Tyler of www.CarveBuddy.com

It just keeps getting better and better! The Designer software has been recently updated with some great new features that offer more control over how you choose to run your projects, making this a “must have” update!

The CarveWright software developers have added some mighty handy tools to the Designer software as well as some “behind the scenes” improvements. This issue will cover the highlights of the new features and help you start taking advantage of them right away.

In the *previous* version (1.130) a major change was made to how the machine handled cut paths. Before then, all cut paths were made in multiple and incremental passes of the cutting bit until ultimately making its way through the board. When 1.130 came out, this was changed so that the machine would perform cut paths (cutouts) in a single, full-depth pass of the bit. Some folks preferred the “old” method of the multi-pass cutouts, so this has now been made an option in this new version 1.131 of the Designer software! Of course, the fewer passes of the bit, the smoother the cutout, but now you can choose for yourself which method you prefer - let the machine do cutouts in a single, full-depth pass, **or** do cutouts in multiple passes like before. This new feature is called the **Cut-Out Control**.

Cut-Out Control

When you assign an outline as a Cut Path, the Cut-Out Control window will pop up on your screen. (fig. A)

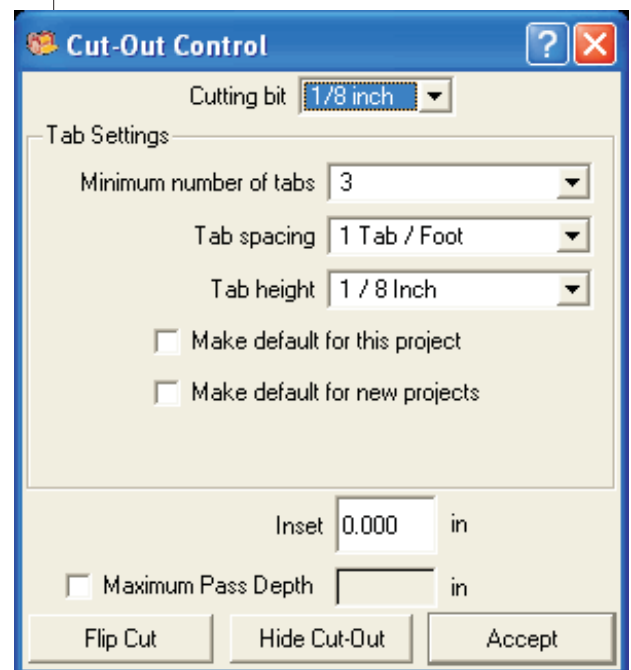


fig. A

As you can see, there are a number of options available in this window. The Cutting Bit field is automatically set for the default 1/8” cutting bit, and that’s what most people will use. However, you can choose a 1/16” cutting bit as well for smaller, thinner-stock cutouts. (The 1/16” bit is limited to shallower depth cuts than the 1/8” bit, so keep that in mind.)

I’ll point out each of the option fields and label their function. (see fig. B)

Please visit the manufacturer’s website for more information about the CarveWright machines and see the new Pattern Depot at: www.carvewright.com

For Additional Patterns you can add to your Designer software library, please visit: www.carvebuddy.com

Cut-Out Control (cont.)

Select either 1/8" or 1/16" Cutting Bit as appropriate for thinner, more intricate cutouts

Tabs (or Safety Tabs) are the areas of the cutout that are "skipped" in order to hold the cutout in the board. Tabs are essential to keep cutouts from coming loose during the machining process.

Select the number of MINIMUM Safety Tabs You Want (range from NONE to 7)
3 is the normal setting

OPTIONAL: You can specify a higher number of Safety Tabs per foot of path length (from 1 to 8 per foot)

Specify the thickness of the Safety Tabs (1/16", 1/8", 3/16", 1/4")
1/8" is the normal setting

Click the left mouse button to put a check in the box to save these settings for this particular project

Click the left mouse button to put a check in the box to save these settings for all future projects (you can always change them at will)

Type in a **NEGATIVE** value to move the cutting bit farther **OUT** from the cut path. Type in a **POSITIVE** value to move the cutting bit **INWARD** from the cut path. (maximum input is +/- .125")

Click the left mouse button in the Maximum Pass Depth checkbox to activate this control. Then type in a value for the maximum cutting bit depth you want.

If you want the bit to make multiple passes for your part cutouts, then enter the depth of each pass here. If you input, say .25", it would take at least 3 passes of the bit to complete the cutout on a 3/4" thick board.

The range of values depend on the board thickness you specified in your project. This box will NOT accept any value that exceeds your board thickness setting (max. 1").

NOTE: If you want the bit to make a cutout in **ONE** pass at the full depth of your board, do NOT activate this control.

fig. B

Toggles between cutting inside or outside of the line

Hides the cutout in the Designer window

Click "Accept" when done

NOTE: Be aware when you set a board thickness for a new project that is less than 1/2" you will see an error message pop up that says "Invalid Dimension". You will have two choices: "Retry" or "Proceed". Simply click "Proceed" and the new project will open just fine.

Designer 1.131 New Feature Highlights

Cut-Out Control (cont.)

There's a few things I want to bring to your attention when using the Cut-Out Control window.

1) If you have set up Designer to use Standard units of measure (inches), all the measurement settings in the window will be input using either fractions or decimals of English (inch) values. This is the default setting.

2) However, if you set up Designer to use Metric units (centimeters), the Inset and Maximum Pass Depth fields are the only two that will allow input of metric units - all other fields will be in English values (inches).

3) When setting up a project, it is now **VERY IMPORTANT** to set the board thickness to the correct amount (i.e., the actual thickness of the board you will be using in your machine). In most prior versions of Designer, this setting was for visual aid only, but now **that has changed**. The Cut-Out control "knows" what the board thickness is and is dependent upon the board thickness setting in order to work properly when you run your project through your machine. You'll need to be sure to get in the habit of correctly specifying the board thickness for all your projects from now on.

4) There are 3 new icons that you might want to add to your menu bar in Designer for your convenience.

They are the "Edit Cut Out" icon , the new "Hide" icon , and the new "Make Pattern" icon .

These may not be added automatically when you install the new 1.131 update, so you'll need to add them manually via "**View/Toolbars/Customize...**"

The icons will be in the right-hand column labeled "Available Items". Scroll until you see the new icons, then drag-and-drop each icon over to the left-hand column labeled "Selected Items" then click "OK". The icons will now be visible in your main menu bar.

5) Your settings in the Cut-Out Control window can be edited at any time for any cut path. Just select your cut path outline, then click the **Edit Cut Out** icon, or select "**Tools/Edit Cut Out**" from the menu bar and the window will reappear so you can make your changes.

6) In certain situations when you run your project, you may be prompted with a query "**Select Cut Through Depth**" on the LCD display. There will be two choices...1) **Project** and 2) **Board**. You will usually want to select the "Project" option (#1). That will tell the machine that you want it to calculate all cutting depths based upon the board thickness setting you specified in your project file (mpc file).

If you select the "Board" option (#2), that tells the machine to *ignore* your thickness you specified in the project and the machine will measure the actual board thickness and calculate all cut depths based upon the actual thickness dimension of the board that is in the machine.

Read the next section for information on a cool "hidden" feature this simple pair of options allows you to take full advantage of!

The Cool "Hidden Feature" -

Performing Cut-Outs on Thin Stock

The machine used to be limited to performing "safe" cutouts on stock that was a minimum of 1/2" thick - that is if you wanted to use the automatic Cut Path feature for your cutouts complete with the safety tabs. In the past, cutouts on stock that was thinner than 1/2" meant that you could not perform a cutout with automatic safety tabs. This was a bit of a hassle, since it required that you figure out a way to affix the "soon-to-be-loose" cutout pieces to your carrier board or sled jig.

Most folks usually used double-stick carpet tape, either strategically placed under the thin stock in the cutout areas, or they would apply the double-stick tape under the entire surface of the thin stock. This was necessary to prevent the cutouts from "flying around" in the machine. Of course, this was neither desirable nor particularly safe for your machine! The machine was not able to automatically create safety tabs on stock less than 1/2" thick.

Have I got good news for you! Now you can use the normal, automatic Cut Path tool AND have safety tabs on thin stock cutouts! What's more, you can use the Cut Out Control to specify the number and thickness of safety tabs for thin stock cutouts just like you can on 1/2" to 1"-thick stock! No more manually-drawn outlines for "psuedo cut paths" or "fake tabs" for thin stock!

Performing Cut-Outs on Thin Stock (cont.)

Here's a quick step-by-step on the new method of performing cutouts on thin stock (less than 1/2" thick.)

STEP 1

For this example, I created a new project and specified a board thickness of 1/4". Then I placed a few patterns on a board, then created the outlines automatically by clicking the Outline Tool.(fig.1a)

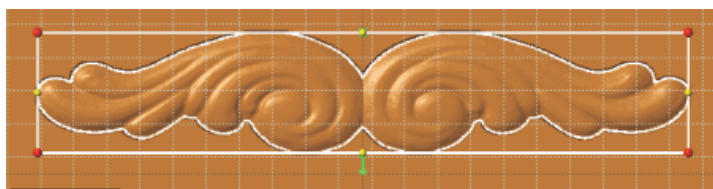


fig. 1a

I then deleted the patterns, leaving the only outlines on the board to make plain silhouettes. (fig.1b)

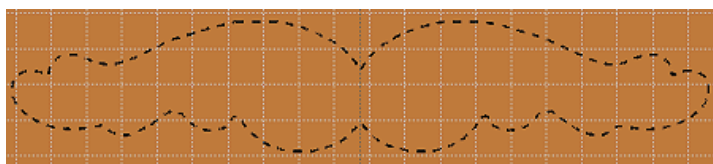


fig. 1b

I clicked the Cut Path Tool and specified a minimum of 4 tabs and a Maximum Pass Depth of 1/8" (.125) for the large outline and left the Maximum Pass Depth blank (no check mark) on the candy cane outlines in the new Cut-Out Control window. (fig. 1c, 1d)

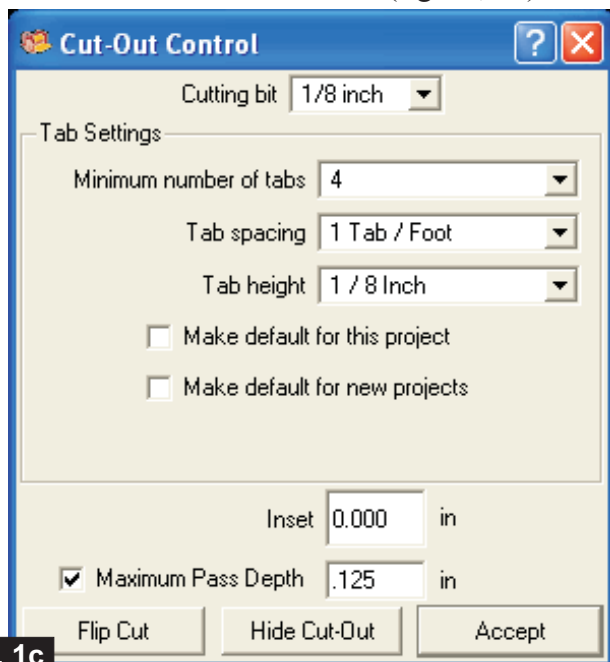


fig. 1c

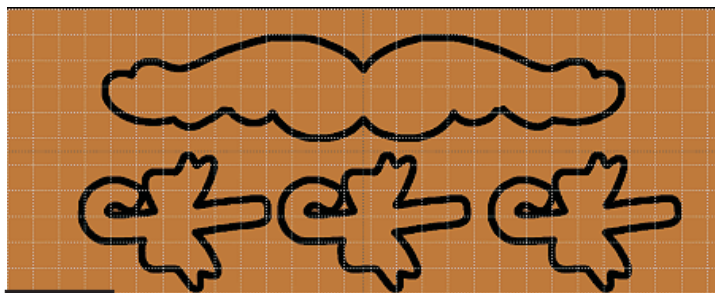


fig. 1d

This illustrates how you can perform cutouts in incremental, multiple passes and full-depth passes on the same project board, giving great flexibility and control over your cutouts! (By the way, I could have left the carvings as complete relief carves, but I made them plain silhouettes just to speed up my cut out "test" example when I ran it through the machine).

The top cutout will be performed in 2 passes because I set the outline's Maximum Pass Depth to 1/8" and the board is 1/4" thick ($2 \times .125 = .25$ Total cut depth). The candy cane outlines had no Max. Pass Depth applied at all, meaning the machine will cut them out in one pass at the full-depth of 1/4". That's because the cutout depths will be based upon the board thickness that was set in Designer simply by leaving the Max. Pass Depth checkbox blank.

As mentioned before, when you actually run the project in the machine, you will see the following new option appear on your LCD before the cutouts are performed...

"Select Cut Through Depth"

- 1) Project
- 2) Board

You will select **Project** (press 1) because you want the machine to know that the cutouts are on a 1/4" thick board just like was specified in the project file (mpc file). Anytime you select the other option (Board) the machine will ignore the thickness you specified for the board and base it's cut depth on the measurement of the board thickness you put in the machine.

Since this project requires a carrier board to put the 1/4" thin stock on, you do NOT want the machine to combine the thickness of the board and the carrier board because it will cut all the way through both! Of course, that's NOT what you want!

Performing Cut-Outs on Thin Stock (cont.)

STEP 2

Here are a few photos showing the example cutout project I ran through the machine...



fig. 2a

I taped the 1/4" stock to a scrap piece of 1/2" board that I had laying around the shop. I made the scrap board the same size as the 1/4" top layer.



fig. 2b

This is the underside view of the scrap carrier board I taped the 1/4" stock to.



fig. 2c

This is what my test looked like after running it through the machine. All cutouts were performed beautifully and without incident - complete with the safety tabs on the 1/4" stock!

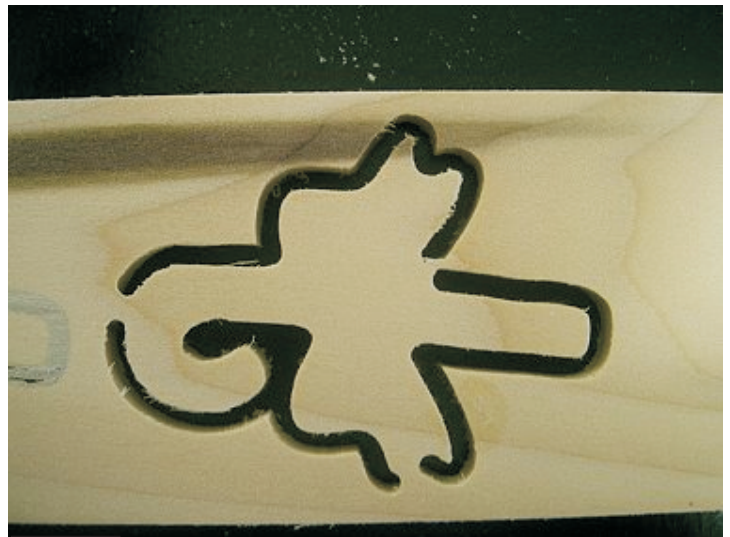


fig. 2d

Here is a closeup of the backside of one of the candy cane cutouts. You can see the safety tabs that were left to hold the piece in place during the cutout process on the 1/4" stock.


What a great feature! Now we can do cutouts on stock thinner than 1/2" without any worries or hassles with work-arounds to make sure the cutouts are performed safely and precisely. Being able to use the automatic Cut Path in conjunction with the new Cut Out Control window has opened up a host of project possibilities. You're going to have a lot of fun with this!

Designer 1.131 New Feature Highlights

The New “Hide” Feature

This feature was requested by folks who wanted to be able to temporarily “hide” design elements on their project board without having to delete them. Using the new Hide feature allows you to click on any object and make it “invisible” while you are working on a project.

Another aspect of this feature is that hidden elements will not carve! That can come in handy if you want to do a complete layout to see how a total design will look, yet gives you the ability to run the project in separate “sections” if desired.

To access this new feature, click on the object(s) you want to hide, then go to **Carving/Hide** in the main menu bar (or just click on the new Hide icon if you added it to your menu bar as described earlier). 

The object will now be hidden from view, but NOT removed from the project. You can still see that the object is in the Carving List and it will have a yellow highlight to alert you that the object is present, but hidden from view. (fig. 3) To un-hide the object, select it and click the Hide option again to toggle it back into view.

In the Carving List, the yellow highlight indicates that this rectangle object has been hidden from view. You can hide any object and restore visibility any time you wish.

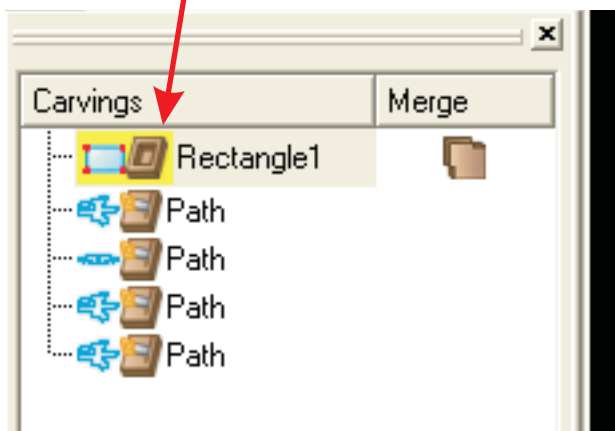


fig. 3

The “Make Pattern” Feature

Another great addition is the ability to create new patterns from composite groups of existing patterns. The Make Pattern feature works with any patterns that do not have any copy-protection. These include patterns you have created yourself, any of the patterns included in the Basics Library, or any patterns given to you as MPW files that you have converted to PTN files on your own computer (to make MPW to PTN conversions, you must own the CarveWright Pattern Editor software).

It's easy to make your composite/groups into patterns:

- 1) Just drag your desired patterns onto the board just as if you were creating a project layout.
- 2) Arrange, layer, adjust depth, height, add carve regions, assign domes, etc. until you have an arrangement you like.
- 3) Select all the objects in the arrangement and make them a Group (right-click your mouse and select “Group” from the pop-up menu as normal).
- 4) Once the objects have been grouped, you can make the group a pattern by selecting the group, then right-click your mouse and choose the new “Make Pattern” option (or click the Make Pattern icon in the menu bar). A window will pop up for naming and saving your new pattern! Simple, quick and easy!

Let your imagination run wild - you can create rosettes, fancy picture frames, ornate appliques, and any other custom arrangement you want to make a pattern of. The nice thing is you now have the convenience of having your custom patterns available in your Pattern Library ready to use for any future projects.

You can even make patterns made up of just carve regions. Just for fun I drew a few ovals and made them all carve regions to create a shape that looks a lot like a famous theme-park cartoon mouse. I don't dare publish it here - it might make a company named after a fellow called Walt awfully upset! Anyway, I wanted you to know that shaped carve regions can be grouped and made into a pattern. The only thing that you cannot include are plain line vectors. You can draw closed vector shapes and make them carve regions for pattern making though.

Designer 1.131 New Feature Highlights

The “Make Pattern” Feature (cont.)

Here’s a simple pictorial example showing the Make Pattern feature.



fig. 4a

I dragged 2 patterns from the library and drew a circle and made it a carve region. I then arranged these objects with the circle and star over the middle of the large pattern. I adjusted depths and heights to achieve the layer over the middle area.

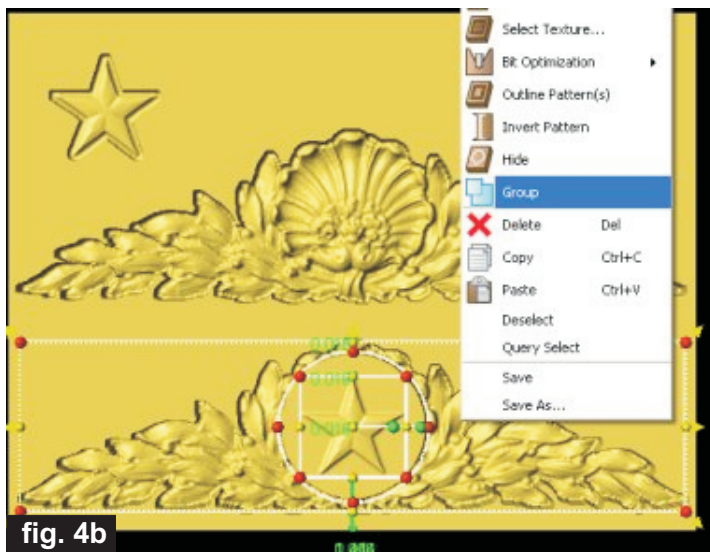


fig. 4b

I then selected the objects in the new arrangement and made them a Group.

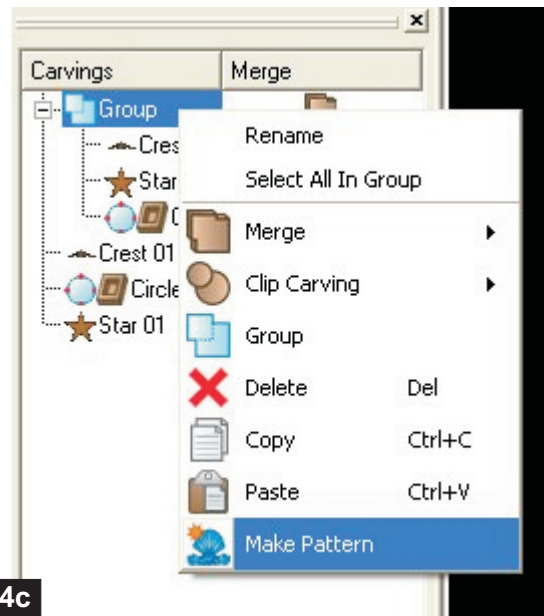


fig. 4c

I right-clicked the Group in the Carving List and then selected the Make Pattern option.

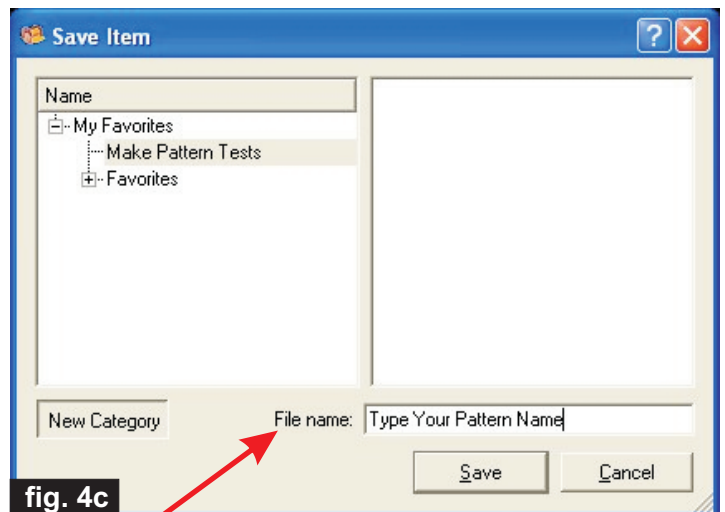


fig. 4c

I then named and saved the pattern to the Pattern Library.

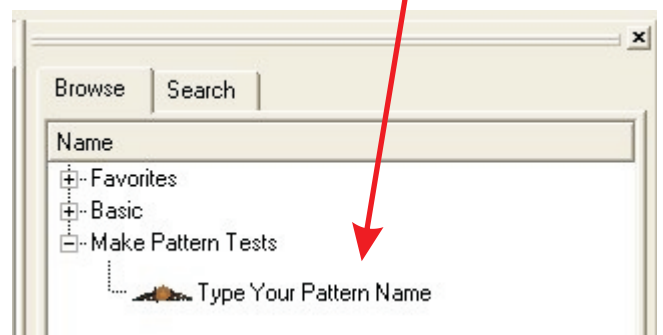


fig. 4d

Designer 1.131 New Feature Highlights

Cut Out Order Improved

A welcome change was made in this version of Designer that is not readily apparent, but is very important. Whenever you have “nested” cutouts (such as a circle cutout within another circle cutout), it is usually best for the machine to cut the innermost cut path first.

In previous versions of Designer it was unpredictable which order the cut path would be performed. This version has improved the cutout ordering and more intelligently decides which cut path needs to be performed first to prevent any problems with nested cutouts. (fig. 5)

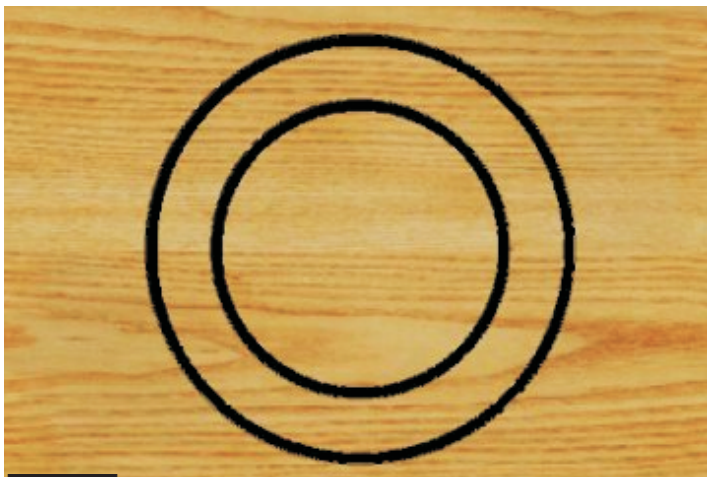


fig. 5

The inner circle will be cutout before the outer circle.

CONCLUSION

Several other improvements “under the hood” were done in this version. You can’t see them, but they are there nonetheless and make Designer more flexible during project creation and improves the performance and quality output of your machine. I think you’re going to really enjoy this new version of Designer!

Michael

RESOURCES...

There are numerous resources for the CarveWright/CompuCarve owner to make their experience with these machines much more enjoyable.

Every owner should join the [CarveWright User Forum](#) where fellow users share their experiences and knowledge with these machines on a daily basis. It is a FREE service that you will surely appreciate. A handy Search Feature helps you find answers to any questions you may have.

Another handy resource are the FREE monthly Newsletters and Announcements. You can sign up on the [CarveWright Homepage](#) to have the newsletters automatically delivered to your email address each month. You’ll see a “Join Our Mailing List” section. Sign up and you’ll not miss a thing!

Special thanks to Michael Tyler of
www.CarveBuddy.com
for providing
the content for this issue of
CarveWright TiPS and TRiCKS.