



# CARVEWRIGHT™

## WOODWORKING SYSTEM

# TIPS & TRICKS

March 2009

## Scaling and How to Avoid It!

by Michael Tyler, Editor



Every now and then, I hear from a user that their project came out “too small” after they have run it through their machine. This is a fairly common occurrence for brand new users but some seasoned users also experience similar issues.

This month’s Tips presents a few reasons why unintentional scaling might occur, and how to avoid this problem altogether. Typically, when a project is reported to have come out smaller than intended, the user allowed the machine to scale the project to a board that was not the correct size, or was not correctly measured by the machine during the project setup routine.

You do not want to allow the machine to scale your projects...the machine will alter the dimensions of your project undesirably.

Think of any scaling prompt as an **early warning system**. If you ever receive a scaling prompt, something needs your attention before proceeding any further. Most likely, your board is too small and you’ll need to change to a board with the correct dimensions.

**The most common cause of scaling** is an obvious one...the failure to add an additional 7" to the length of the actual board that will be tooled. If the board placed into the machine is shorter in length than the Designer **layout board+7"** then a prompt to scale the project to fit the board

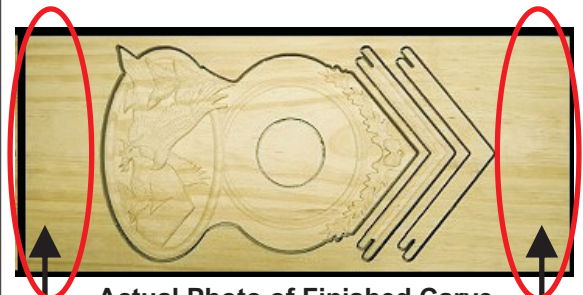
will be received when selecting “YES” to the Stay Under Rollers prompt. For best results, you ALWAYS want to run your projects so that the board is captive under the rollers. Not doing so, can or will lead to problems sooner or later! (see the Dec. ‘07 Tips & Tricks issue for more details)

Here is a simple example of a project that illustrates the “Seven-inch Rule”. (fig 1a)

fig. 1a



Designer Layout in Software  
FAKE Board is 3/4" x 11 1/4" x 19" Long



Actual Photo of Finished Carve  
REAL Board is 3/4" x 11 1/4" x 26" Long

Extra 3 1/2" at each end = 7" Total  
This is required to keep the board under the rollers at all times, and to prevent scaling when selecting “YES” to Stay Under Rollers.

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

For Additional Patterns you can add to your Designer software library, please visit: [www.carvebuddy.com](http://www.carvebuddy.com)

# Scaling and How to Avoid It!

In the example, you will notice that the design layout is placed on a “fake” board that is just large enough for the design to fit upon. With this type of layout, the real board is the same thickness and width, but the length will need to be at least 7" **LONGER** than your layout.

When you upload a project like this to your memory card, you will get a pop-up window with an “Auto-Jig” warning message. You have the options to “Ignore”, “Manual Jig”, or “Auto Jig”. This is perfectly normal.

“**Ignore**” is the option to choose since the board that is going to be carved is 7" longer than the “fake” board (virtual) work piece, as in our example. In other words, since the board will have sufficient length, there will no problems at all, so it is safe to select “**Ignore**” in the warning box. (fig. 1b)

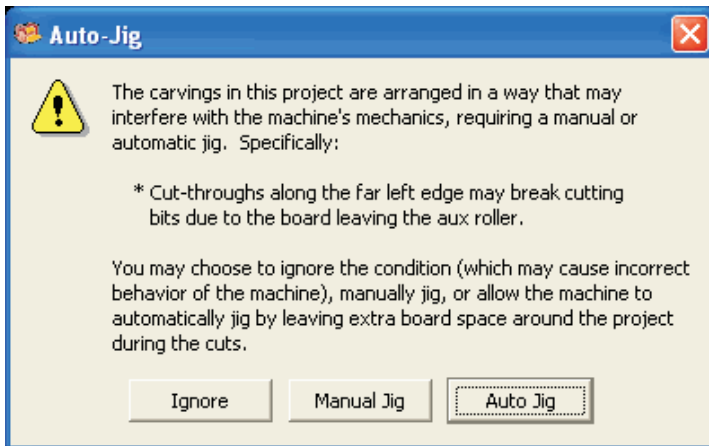


fig. 1b

We’ve covered scaling regarding the length of a board if you fail to follow the “Seven-inch Rule”, but there are other occasions when you may receive a scaling option as well.

The following describes other common reasons why you may receive a scaling prompt...

**If your board is too short**, you will have the following scaling options presented to you:

- 1) Scale To Length
- 2) Load New Board

**If your board is narrower in width** than what you specified in your design layout, you’ll receive the following options:

- 1) Scale To Width
- 2) Load New Board

In these two cases you will need to **load a new board** with corrected dimensions in order to keep the project at the desired size.

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**If your board width is wider** than what you specified in your design layout, you’ll receive the following options:

- 1) Keep Original Size
- 2) Scale to Width
- 3) Load New Board

**If your board is longer and wider** than what you specified in your design layout, you’ll receive the following options:

- 1) Keep Original Size
- 2) Scale to Width/Board
- 3) Load New Board

Notice in the above two scenarios, you can simply choose option #1 “Keep Original Size” or you can choose option # 3 “Load New Board” with corrected dimensions if you wish, and the project will come out just fine either way.

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When setting up the project at the machine, make certain that you stay under rollers, choose Center On Length when doing a layout as shown in the example, and respond “NO” to the “Cut Board To Size” prompt.

Most importantly, if you ever receive an option on your LCD display for any scaling function, do not allow it to scale. This your cue to check your board and make sure you insert a board with the proper dimensions for your project.

Sometimes, you may have a board that you think is cut to the correct dimensions but you receive a scaling prompt anyway. This can be a little confusing, but the reason this can occur is the board may have a slight flaw and throw off the width dimension measurement at the machine. The machine is quite accurate when measuring. A cupped board, even if minor, is often the culprit. The solution is simple - load a board that is flat and free of defects.

Many folks, including me, will cut the board lengths just slightly longer than necessary. Not much - we're talking maybe an 1/8" is all. That way I'm sure to avoid a length scaling prompt.

It is a good idea to measure your board width, just to give you a heads-up for any future scale to width prompts. For example, Select Pine boards often are wider than "regular" pine boards by as much as 1/4". If you know this ahead of time, you can input the known width into your design layout to begin with, or just keep in mind that you'll receive a width related scale prompt and deal with it at the machine (The "Keep Original Size" prompt would be the option to select in a case like this.)

Some of you may be wondering whether there is any useful function for the machine to actually allow it to scale a project. I have not found any good reason to do so.

As far as I can tell, the primary function for a scaling prompt is **simply to alert you that there is a problem with the board size placed into the machine** compared to the desired size you originally created in the Designer software. As mentioned earlier in this article, a scaling prompt of any kind is your "early warning" that something is amiss and requires correction before proceeding with the project. In that sense, the scaling prompts are quite useful.

With an understanding of the causes for scaling prompts, you have the opportunity to make dimension corrections to your board and run your projects so that they will come out exactly as you intended.

Happy Carving!



Michael Tyler - Editor

**P.S.** - You can read the Dec. '07 Tips & Tricks for more information about adding the extra 7" to your project boards and for information about occasions when you may want to say "NO" to the stay under rollers prompt, but without the risk of allowing a project to leave the rollers!

Another helpful article appeared in the April '08 issue of the Tips & Tricks, written by Ken Johnson. Ken describes the use of carving jigs (i.e., sleds, carrier boards and rails) to help reduce waste material and for special project situations you may encounter.

Special thanks to  
Michael Tyler of  
[www.CarveBuddy.com](http://www.CarveBuddy.com)  
for providing  
the content for this issue of  
CarveWright TiPS and TRiCKS.



# Additional Resources

## RESOURCES...

There are numerous resources for the CarveWright/CompuCarve owner to make their experience with these machines much more enjoyable. Please sign up on the [CarveWright Homepage](#) to have the monthly newsletters automatically delivered to your email address each month. You'll see a "Join Our Mailing List" section. Just fill in the form and you'll be all set! 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.

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picture of June's Project

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