



CARVEWRIGHT™

WOODWORKING SYSTEM

TIPS & TRICKS

October 2008

Tips, Common Questions and Answers - Part 1

by Michael Tyler of www.CarveBuddy.com



This month I'll go over a variety of tips that were inspired from some questions and comments from machine/software users.

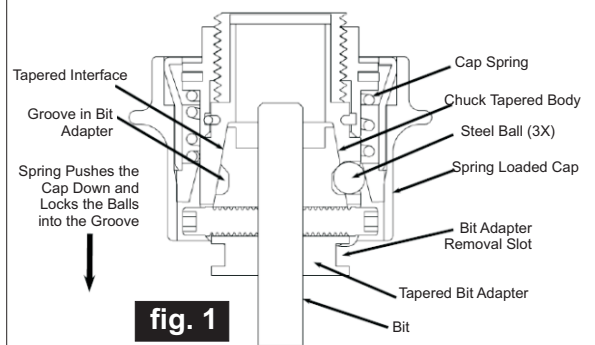
As always, we also appreciate your suggestions for topics you would like to see covered in the monthly Tips & Tricks issues! If you have an idea, send me a PM (private message) on the CarveWright User Forum. My handle is **mtylerrfl** on the Forum.

We encourage all machine owners to join and participate in the CarveWright User Forum for up-to-date information and a place to go for sharing your ideas and experiences. It's free and you can join by visiting <http://www.carvewright.com> and filling in the "Join Our Free Mailing List" box on the page.

Care of the Quick Change Chuck
CarveWright designed the Quick Change mechanism for bits as a convenience for the user and because it yields better accuracy than a conventional means of securing a bit in a "standard" chuck found on most hand routers. Testing has shown that the QC offers a more secure means of holding a pure carbide bit than other types of chuck mechanisms. (Carbide bits tend to "slip" in so-called conventional chucks, especially during long carve sessions.)

The QC on your machine does require some special attention and regular cleaning to avoid unnecessary problems.

Here is a cross-section diagram of the QC components (fig. 1)



The QC will tolerate a considerable amount of dust during a carving, but you will want to thoroughly clean and lubricate it after each project. Using a flashlight and a mirror under the QC will help you detect any dust build-up that needs removal.

- Regularly blow out any dust from the recesses and the taper of the chuck with low-pressure air (<80 psi). WD40 may be used to clean any stubborn dust that has accumulated. Put towels under the chuck to avoid drips onto the traction belts.
- Once cleaned, wipe the inside of the chuck and inspect it with a mirror and a flashlight to make sure all the dust is out. I "scrub" it with an old toothbrush as well. Work the chuck up and down a few times to make sure any hidden dust falls out.
- Put two drops of 3-in-1 on a finger and swab the inside of the chuck with a thin film of oil and on the three ball bearings by "rolling them" with your oiled finger.

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

Tips, Common Questions and Answers - Part 1

Care of the Quick Change Chuck (cont.)

Additional Inspections and Checks...

- Periodically remove pitch from bits, bit adapters and the internal surface of the tapered body using mineral spirits. Pitch buildup can become a problem if left unchecked.
- Check surface of bit adapters and surfaces of the chuck for damage. Damage to mating tapered surfaces will prevent the bit adapter from sitting in the tapered body correctly. Any damaged parts must be replaced before use.
- Always verify that your bits are fully seated and secure in the bit adapter. Assure a snap is heard when you insert the bit. Assure that the bit is secure by pulling down on the bit. Assure that no play can be felt at the bit tip once inserted into the chuck. Nine times out of ten any damage to the QC can be traced to improper bit insertion. You don't want a bit coming loose during a project. Check and double check!
- Take time to check the tightness of the spindle assembly before each project. To check, simply insert your finger into the tapered body of the chuck from below with no bit present and move your finger back and forth checking for looseness. If you find looseness contact CarveWright support to diagnose the problem.
- Never cut deeper than the length of the sharpened cutting surface of your bit. **The maximum cut depth for the straight 1/8" cutting bit is 1". The maximum carving depth for the 1/16" tapered carving bit is 3/4"** because that is the length of the sharpened flutes.*

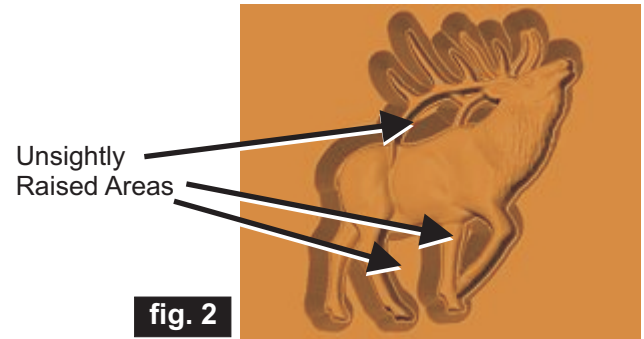
*This maximum depth rule applies to all bits; you cannot carve deeper than the length of the sharpened cutting surface on any bit. ALWAYS verify flute length of each bit before setting a cut or carve depth.

For a much more complete and detailed procedure of maintaining your QC, you may download a PDF copy of "Care and Maintenance of Your CarveWright's Quick Release Chuck" from the CarveWright website <http://www.carvewright.com/cms/downloads>

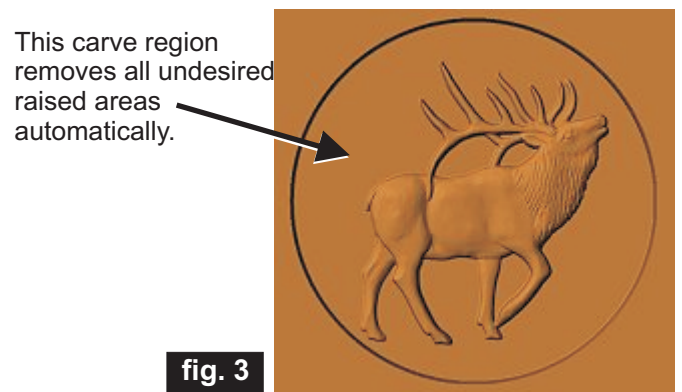
Common Questions

Q: I get undesirable raised areas inside my pattern. Why?

A: Some patterns contain internal areas that if not dealt with will leave unsightly raised areas. A good example is this Elk pattern. (fig. 2)



If placed directly on a board, a couple areas between the antlers and legs look a little odd because of the raised areas. There is an easy way to eliminate the problem. Simply place the pattern inside a recessed carve region and set it to the same depth as the pattern - the raised areas automatically disappear! (fig. 3)



In some cases, you can draw closed vector shapes over each of the "undesired raised areas" and make each enclosed vector shape a carve region (instead of placing the entire pattern inside a larger region). That way the undesirable raised areas are carved away when you run the project, but you can maintain a "hand-carved look" if you want a "feather" around the carving perimeter on a flat board. **NOTE:** "Flat board" pattern placements (i.e., without the use of a carve region) usually look best with a feather around the pattern.

Tips, Common Questions and Answers - Part 1 (cont.)

Common Questions (cont.)

Q: When do I need to use the Depth and Height Settings for a pattern?

A: In ISSUE 1 of the Tips & Tricks (October 2007 "[Pattern Layering and Composition](#)"), I went into some detail of how to use the Depth/Height settings when making a composition of layered patterns. That's one example of when you'll need to use both those settings to get the result you're after.

However, almost any design layout can benefit from the use of the Depth and Height settings. Most commonly, when you enlarge a pattern, the details tend to "flatten out". The larger the pattern becomes, the more detail is lost. To compensate, you will need to increase the Depth, and often the Height as well, to bring those details back.

Here is a basic overview of the Depth and Height functions as provided by the CarveWright Technical staff...

Depth

The depth setting is the distance from the top of the board surface to the bottom of the pattern or region. (fig. 4) Most of the stock patterns included with your Designer software will default to .25-inch depth when placed on the board. However, not all patterns you may acquire will have that same setting. Many patterns can range from .125" up to .6" or more.

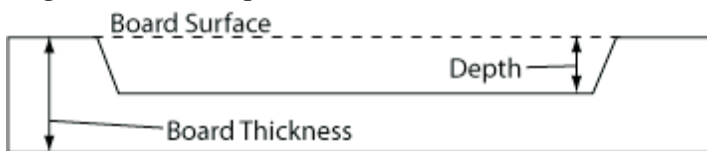


fig. 4

NOTE: The depth cannot be set to any thickness beyond .8-inch *or* the maximum length of the currently selected bit. If the bit is changed and depth exceeds the maximum length of the bit, the depth will automatically change to compensate for the bit.

Height

The height setting is the rise of the pattern up to the surface of the board. **NOTE:** No pattern can be carved above the surface of the board so the pattern's height is automatically scaled to avoid this when necessary.

The height setting is unit-less, meaning it does *not* have a unit of measure associated with it. A height setting of 100 means that the pattern will be carved at the maximum possible amount of its default height without going above the board. The default height for every pattern is always a value of 100, but the height can be set by the user to any value between 0 to 999.

A height setting of 200 means that the pattern will be carved at the maximum possible amount of **twice** its default height if there is enough depth to do so..

Every pattern also has a default depth assigned to it when it was created, and exactly how the height setting affects a pattern depends largely on the pattern's original default depth.

If the height is changed to 0, then all rises for that pattern are reduced to a point where none of the pattern is seen (fig. 5a). Compare to the default height of 100 (fig. 5b) When the height for a pattern is increased beyond 100 (fig. 5c) it changes the highest point of a pattern and raises it closer to the surface of the board. This can improve the detail of a pattern, especially when the pattern depth has been increased as well. You will want to experiment with your Depth and Height settings for each project pattern layout to make it look its best!

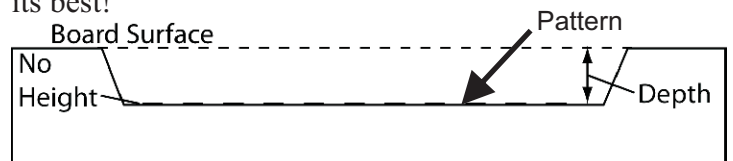


fig. 5a Side Cut-Away View - Zero (0) Height

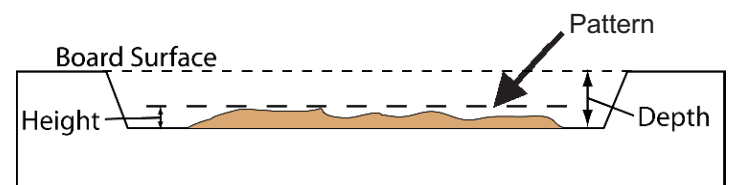


fig. 5b Side Cut-Away View - 100 Height

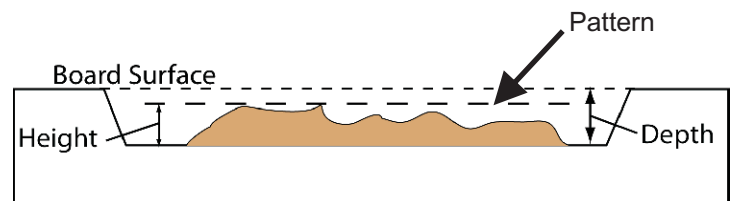


fig. 5c Side Cut-Away View - 800 Height

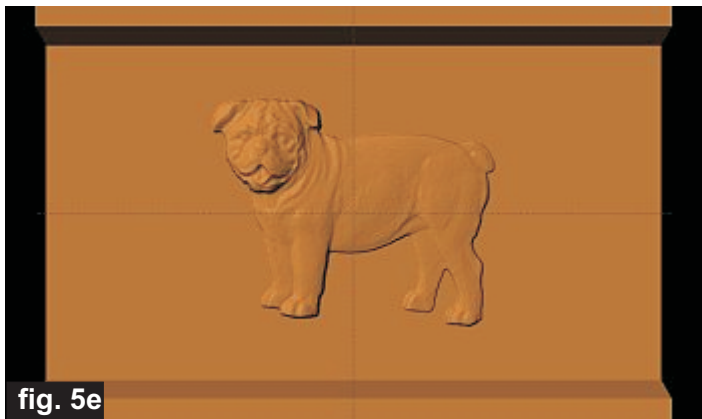
Tips, Common Questions and Answers - Part 1 (cont.)

Common Questions - Depth/Height (cont.)

Here are some illustrations (top views) of how the height setting affects a pattern. First is the zero (0) height setting. It looks just like a flat board since the pattern has no height at all. (fig. 5d)



Second, is the same pattern with the default height setting of 100. (fig. 5e)



Third is the same pattern with a setting of 800 for the height, yielding even better detail for the machine to carve. (fig. 5f)

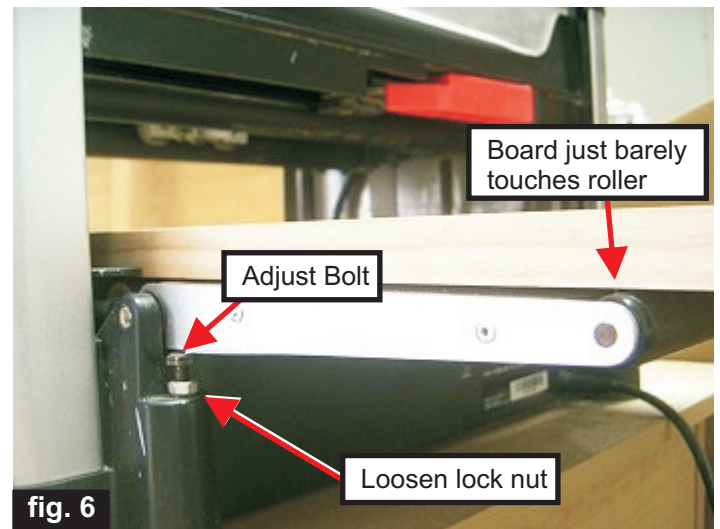


Common Questions (cont.)

Q: Why do I get lines in my carvings or Z-axis errors during a carve? (Boards are already flat and straight.)

A: It is very important to adjust the outfeed table rollers to the proper level for every board you put into the machine. If you don't, the board can get "bumped up" or can "fall down" by a few hundredths of an inch causing unnecessary errors or lines in your carvings. NOTE: I don't even use the outfeed tables when I'm carving lighter-weight boards that are less than about 30" or 36" long...i.e., I lower the outfeed tables so they don't contact the board at all. Use your own judgement when to use or not to use the outfeed tables. Any boards that are heavy and/or over 36" long will require the use of the outfeed tables in any case.

It's easy to adjust the outfeeds. Just place your board in the machine and loosen the locking nuts. Then hold the outfeed table in position so that the rollers just "barely" touch the bottom of the board. Screw or unscrew the bolt until it holds the outfeed in that position, then tighten the nut to "lock" it in place. (fig. 6)



Do this for each board you place in the machine. Test for "lift" or "drop" by pushing the board to and fro through the machine and observe if the outfeeds are causing any problem and need re-adjustment.

Another cause for this type of problem is that you are not adding the required extra 3½" at each end of the board. Don't skip that step or you will invite problems. ([See the Jan. '07 issue of Tips & Tricks](#))

Tips, Common Questions and Answers - Part 1 (cont.)

Common Questions (cont.)

Q: What are the Snap/Grid functions for in Designer?

A: This is a valuable tool to become familiar with and will help you position shapes and lines in your design layouts with precision.

The Snap/Grid menu is accessed via Layout/Snap from the main menu bar. (fig. 7a)

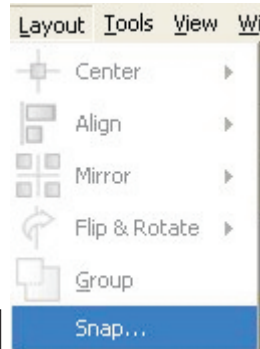


fig. 7a

When you click on "Snap...", the **Snap to Grid** menu opens and you can make your settings there. (fig. 7b)

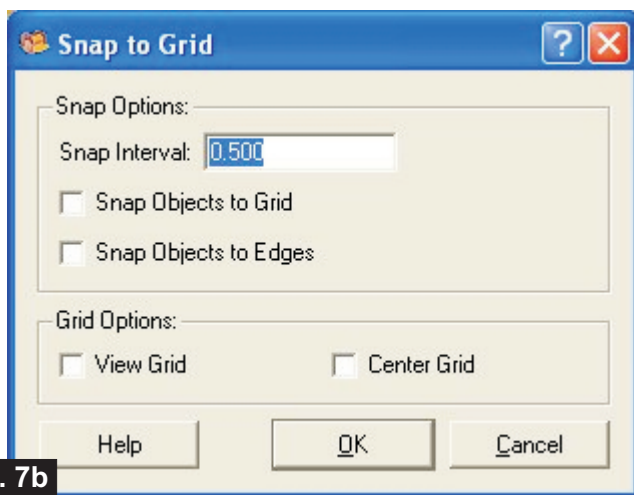


fig. 7b

Snap Interval - type in any value for the grid size, between .001 to 2.0

Snap Objects to Grid - when this is checked, you move objects on the board, or draw lines and they will "snap" (or "lock") themselves to the nearest grid line, making accurate positioning easy.

Snap Objects to Edges - allows drawn lines to snap to edges of the board

View Grid - turns on (or off) the grid visibility

Center Grid - centers the entire grid on the on-screen board display

It is usually helpful to turn off the board Texture when using the visible grid - it makes the grid lines easier to see. Turn the board Texture off or on via View/Toggle Texture in the main menu bar.

When I lay out a project, I often change the grid dimensions frequently to suit whatever stage of the layout I am at. I'll usually start with say, a .5" grid, then move or draw objects into position with the "snap to grid" feature on. If I have smaller objects or need to draw lines that require more precise layout, I may drop the grid size down to .125" or even smaller in some cases. You need to zoom in quite a bit to see the smaller grid sizes. **NOTE:** The Snap to Grid function works even if you have the grid visibility turned off - when you're done with the grid, you can turn off both the visibility *and* the Snap to Grid function.

Try using the Snap/Grid function on your next project layout - I think you'll find it very handy!

CONCLUSION

I hope you have found the items in this issue helpful. Next month, I will go into even more detail - sort of an "advanced" version for you to become more skillful in the use of your wonderful machine and software!

Michael

Special thanks to
Michael Tyler of
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.

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!

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