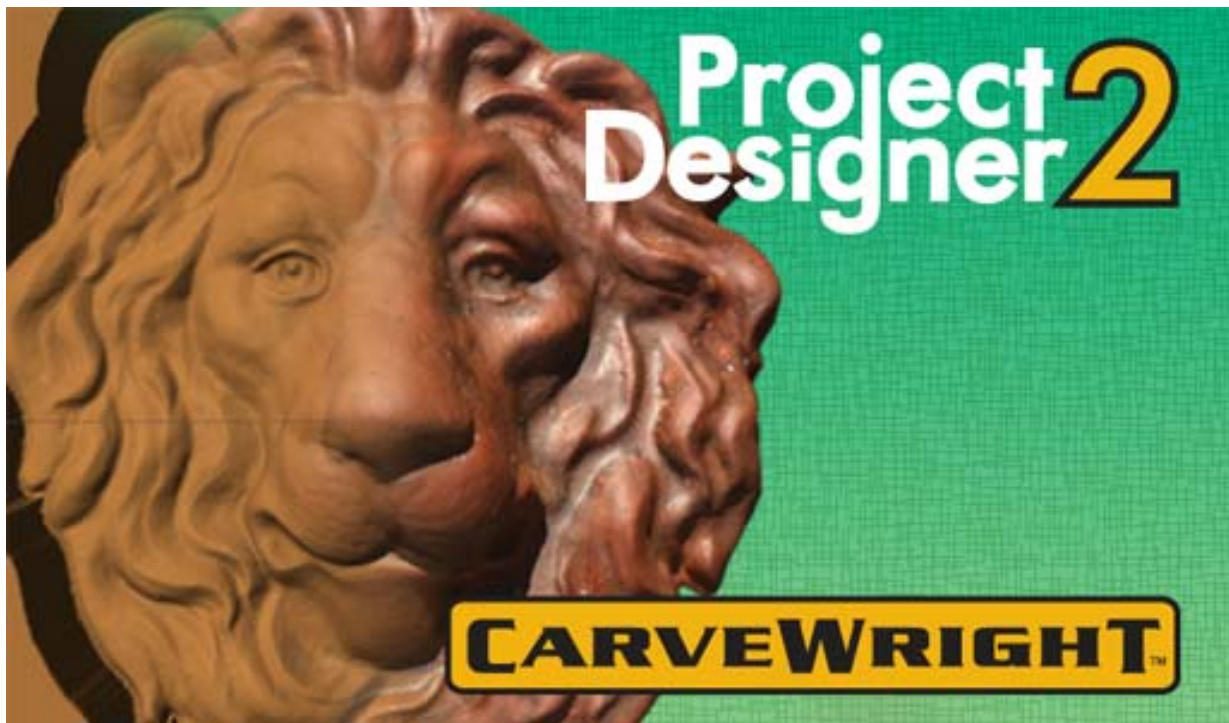


Project Designer 2 Software Manual

Updated May 2014



Contents

Important Information About Designer 2 Upgrade	3
What is included in this manual?	3
Why do I need Project Designer 2?	3
How do I know if I have Project Designer 2?	3
Software Requirements for Designer 2:	3
Windows Operating System:	3
Macintosh Operating System:	3
Before Purchasing Designer 2 Upgrade:	4
Installation & Registration of Designer 2:	4
Designer 2 Features.....	5
Refined Installer and Update Checking	5
Open with Preview	5
Project Board View Options.....	6
Custom Feather Option.....	6
Lithophane Viewer	6
Optimization of Centerline Add-on	6
Text Tool Controls	7
Preview Text on Board	7
Decorate with Text Tool.....	7
Puffing Text.....	8
Edit Envelope Tool	8
Deep Carving.....	9
Font Notification.....	9
Floor Feather Option	9
Dual Wood Grain Textures	9
Rotary Jig and Software	10
Flip Within Jig	15
Designer 2 Frequently Asked Questions (FAQs):	18
Other Resources for Designer 2.....	18

Important Information About Designer 2 Upgrade

What is included in this manual?

This manual describes features and changes made in Project Designer 2 that are not part of the original Project Designer.

Why do I need Project Designer 2?

The underlying structure of the Designer software has been rewritten to allow the addition of features that were not possible in the original Designer 1.XX software. Project Designer 2 contains many and is the platform under which we will design new tools and features.

How do I know if I have Project Designer 2?

On your desktop you will have an icon that looks like the CarveWright machine done in blue and green and will have the number 2 on the side of the machine icon.



Software Requirements for Designer 2:

Windows Operating System:

- Microsoft Windows XP with Service Pack 2, Windows Vista, Windows 7 or Windows 8
- 512 MB of RAM for XP
- 1GB of RAM for Vista, Windows 7 or 8
- 75MB of available hard disk space
- CD ROM compatible drive (With active internet connection)
- Internet access for registration and updates
- Graphics card supporting OpenGL 2.1 with 256 MB of Video RAM or VRAM
- 1.2Ghz Dual Core Processor

Macintosh Operating System:

- Mac OS X version 10.3 or later
- Mac X11 Windowing System (removed from recent Mac OS Mountain Lion – downloadable here: <http://support.apple.com/kb/ht5293>)
- 512MB of RAM
- 75MB of available hard disk space
- CD ROM compatible drive (With active internet connection)
- Internet access for registration and updates

Before Purchasing Designer 2 Upgrade:

- To see the DEMO OF DESIGNER 2 FEATURES, watch the INSTALLATION VIDEO and try the STEP-BY-STEP TUTORIAL, click here: <http://www.carviewright.com/project-designer-2-0-tutorials/>
- You can download the Designer 2.0 software and play with the software as a Free Trial Version for 30-days. You will not be able to upload to a memory card, save or carve until purchased and registered.
- Designer 1 (1.183+) and Designer 2 (2.00x+) can both be installed on your computer, although only one version can run at a time.
- If your computer currently has a version of the Project Designer Software installed that is **Version 1.182 or earlier** (older), then you must first **REMOVE THAT INSTALLATION** through your Control Panel.
- Note that whichever software was installed last will be the default program used when double-clicking on projects, patterns, etc.
- If you OPEN & SAVE a project in 2.00x, it is **NOT BACKWARDS COMPATIBLE** to 1.187 or earlier. Save back-up copies, if unsure.
- All previously purchased & activated patterns, projects and advanced software WILL work in 2.00x, once you have purchased and registered to your existing Customer Account.
- Designer 2 is activated and treated as an add-on. It is non-transferable, if system is sold, however the Basic Designer Software is transferable with machine registration.
- Message to customers with numerous projects or patterns:
 - If you use the OPEN WITH PREVIEW function, you may experience numerous crashes until all of the thumbnails for your ptn & mpc files have been created. These crashes may be the result of ptn or mpc files that were created with much earlier versions of the software.
 - It will create these thumbnails starting with each time you open a folder that contains these file types.
 - The crashes will stop once the preview thumbnail files are created.
 - It can be turned off under HELP > DISABLE FILE PREVIEWS.
 - This is not an issue for new CW customers that are just starting to build their collection of patterns & projects.

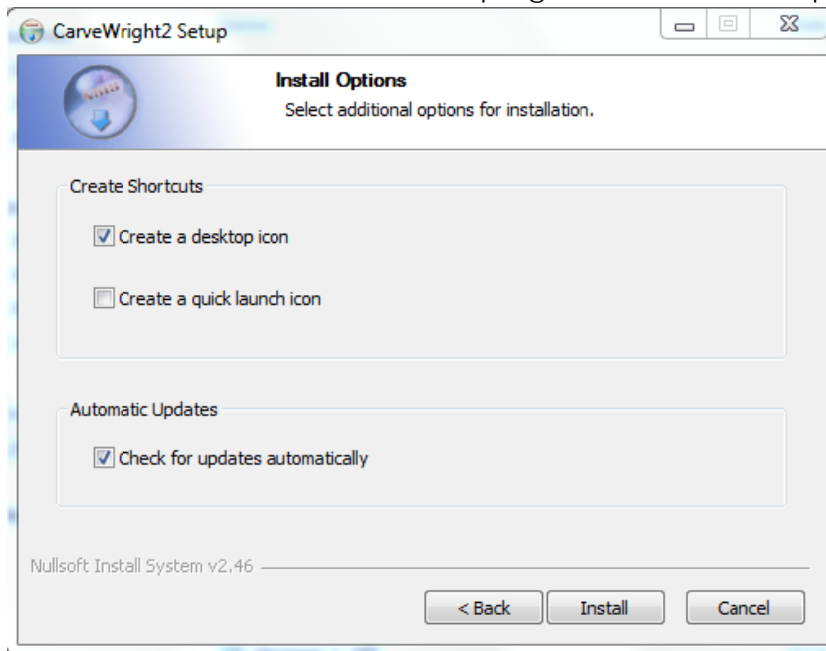
Installation & Registration of Designer 2:

Go here for information on installation, registration & troubleshooting Designer 2 software: <http://www.carviewright.com/support-page/getting-started/update2/>

Designer 2 Features

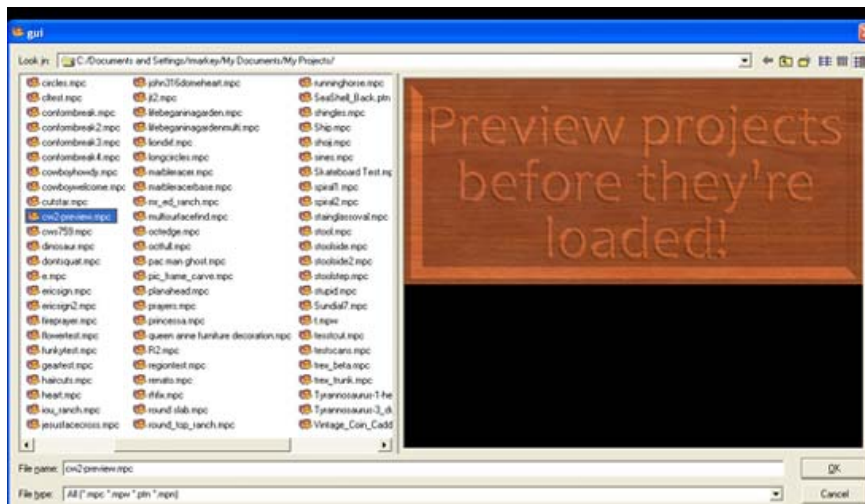
Refined Installer and Update Checking

The Project Designer 2.0 features a stream-lined installer for newer operating systems. During the installation process you will have the option to check for automatic updates to the Project Designer 2 software. This was added to ensure that you will always be able to stay up to date on the software. If you missed the option during installation it can be selected from inside the program. To do this simply go to the Help Menu at the



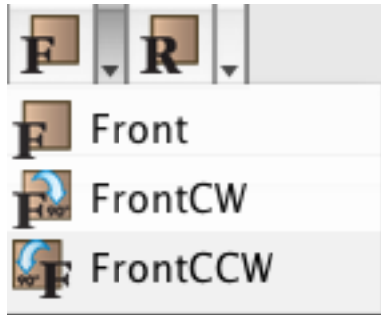
top of the screen and select the option Check for Update Automatically. If you don't want the program to connect and check to ensure you are on the most current version of the software on its own then you can leave it off and manually check for updates. To manually check for updates you will go to the Help Menu at the top of your screen and select the option Check for Updates.

Open with Preview



Open with Preview will allow you to preview projects you wish to use before opening them. To access this feature go to File and select the option Open with Preview. If you do not see this option you will need to go to the Help Menu at the top of your screen and select Enable File Previews.

Project Board View Options

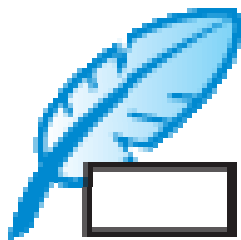


option of Front/Rear CW for a clockwise rotation of the board and Front/Rear CCW for a counter clockwise rotation of the board.

In previous versions of the Designer program you had two options for board viewing, Front and Back. You could always use the Rotate Tool to change the view angle but only had the two options for a quick jump. Now you have the option to view both the front and rear view of the board at a 90° clockwise or counter-clockwise rotation. To select from these simply go to the standard F (front) and R (rear) view buttons and click on the arrow to the right of the button. A new menu will drop down and you will see the options for the standard front or rear, as well as the



Custom Feather Option



We have upgraded the feathering options to allow you to set your own size for feathering. Instead of having to select from 0, 1/8", 1/4", or 1/2" you will now see the Feather: Custom option. This option can be set anywhere from .001" to 1".

Lithophane Viewer

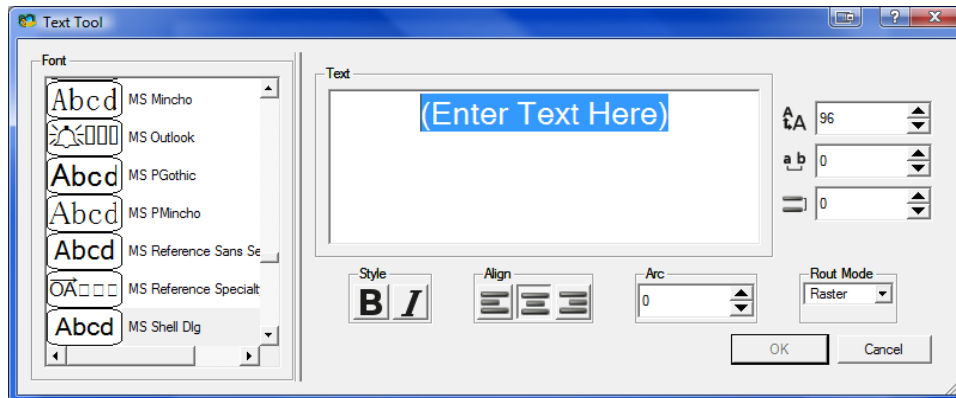


The Lithophane viewer option allows you to see how your project will look, if you were to create it as a lithophane. For those of you unfamiliar with lithophanes they are patterns or pictures carved into cast acrylic or another high density, high heat resistant plastic product (Corian). These are typically backlit to allow better viewing of the image. To switch to the Lithophane Viewer go to your material selector tool and you should see the Lithophane option. You will need to adjust your board settings to allow for the correct view. Most lithophanes are carved in 1/4" material but the machine is set to only allow a minimum 1/2" material. To get this to work you will need to build a sled so that you can get the correct material into the machine. This feature requires OpenGL 2.1 to be enabled. If you do not have OpenGL 2.1 or higher this option will not be visible to you.

Optimization of Centerline Add-on

If you have purchased and activated the Centerline add-on software, then you will see improvements in the software & machines handling of this feature. Centerline is NOT included as part of Designer 2.

Text Tool Controls



The Text Tool allows for more control over your fonts. You can set the size of each individual letter by highlighting the letter/letters wanted and adjusting the point size. You

can also adjust the kerning or letter spacing by highlighting the letters or words intended and changing the kerning number. The higher the kerning number the more spacing you will see between each letter. You can also adjust the line spacing which will change the space separating each line of text, with higher numbers creating a larger spacing.

Remember the changes will only effect the letters, words or lines of text highlighted.


Preview Text on Board

Preview text allows you to see how your text will look on the board as you type it in the Text Tool box. This makes it easier when selecting a font and adjusting the new text controls.



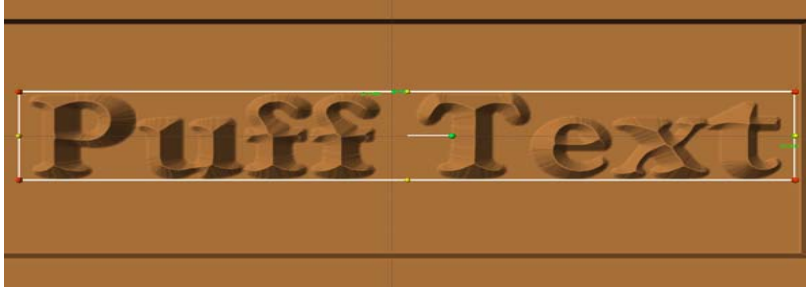
Decorate with Text Tool



The  Decorate with Text tool allows you to apply text to an open path. In past versions of the designer software, you could only place text on the board in a straight line or arc. Now you can create an open path and assign text to follow the shape. To use this feature, first you will need

to create your shape that you want the text to follow. Once you have your shape placed on the board you will select the Decorate with Text Tool, which looks like a slanted letter T. This tool will work the same as the normal Text Tool for sizing, spacing, font selection, and rout mode.

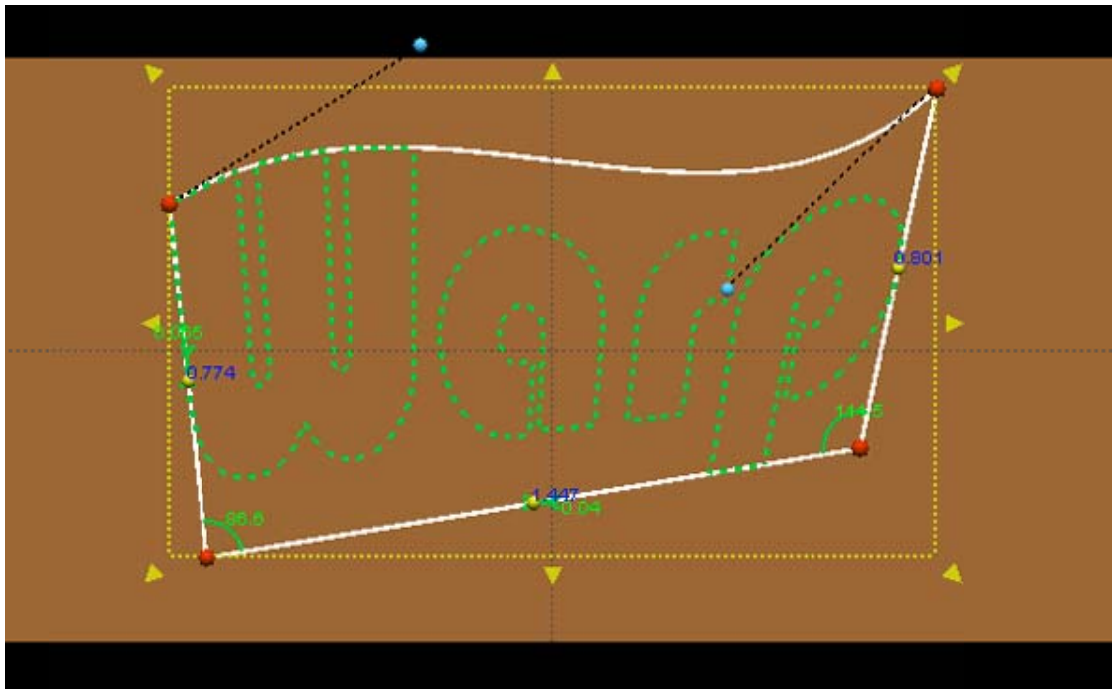
Puffing Text



You now have the option to use puffing on text, as long as you have purchased and activated the 3D Pattern Modeling Suite. This option can be applied to any raster text using any of the 3D

puffing options. To puff text simply add your raster text to the board using either the plain text tool or decorate with text tool. Once you have your text placed on the board you will select the puffing tool and the puff that you want on your lettering. The puffing tool is a feature in 3d Pattern Modeling Suite add-on and NOT included as part of Designer 2.

Edit Envelope Tool

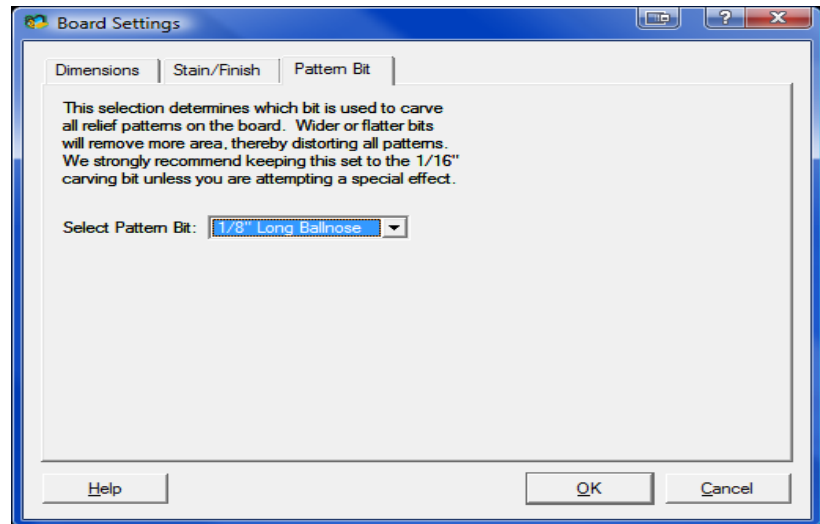


The Edit Envelope Tool allows you to warp the envelope or box of your text or patterns. By editing an envelope you can “conform” the shape of the element to fit the area you have in your project and not have to fit your project to the element. To edit the envelope for your project piece you will need to first layout your element on the board and then you will select the Edit Envelope Tool which looks like a skewed square with red dots in the corners. This tool can be found beside the Decorate with Text Tool and will open when clicked on. The tool will open in a new window and you will need to change the lines to splines or arches as needed to adjust the shape of the element. To change the lines, right-click on the line and select desired FORM. Then, manipulate the shape of the element for preferred effect.

Deep Carving

In version 2.004, we added support for our long bits allowing you to carve up to 2 1/8" or 2.125" deep. This is a vast difference in carving depth capabilities over our previous bits, which were limited to .8" deep based on their structure.

To change a RASTER bit, go to EDIT > BOARD SETTINGS > PATTERN BIT. This bit selection will apply to all raster carving on your project.



Font Notification

Designer will now let you know when you open a project, if the assigned font is not available and offer a substitution.

Floor Feather Option

This option smoothes out the bottom layer of pattern pixels for a cleaner feather. Default is on, but you can turn it off.




Dual Wood Grain Textures

Dual wood grain textures can be applied to your board using two different wood grains in a total of three different layers. OpenGL 2.1 or higher is required for this feature to be available. Go to Edit > Board Settings and set the layers.



Rotary Jig and Software

See attached Tips & Tricks on Rotary Jig. The Rotary Jig Software is an ADD-ON feature that is available for purchase. It is NOT included as part of Designer 2.



CARVEWRIGHT™

WOODWORKING SYSTEM


Rotary Jig

Basic Instruction

ROTARY CARVING!

Rotary Jig and Material Setup

Rotary Carving Accessory for CarveWright™ CNC Machines



Congratulations on your purchase of the Rotary Jig accessory for your CarveWright machine. We hope you will enjoy your new capability of carving in the round!

This document outlines the basic setup and use of the Rotary Jig for rotary carving. Visit carvewright.com to view "how-to" video tutorials for creating your own custom rotary projects using the Designer software and software add-on enhancements. You will need the Designer 2 software, have the rubber traction belts installed on your machine, and own the CarveWright 1/8" Long-Reach Carving Bit for use with your Rotary Jig. This bit is specifically designed for rotary and deep carving "flat" projects. (fig. 1)




fig. 1 1/8" Long-Reach Carving Bit

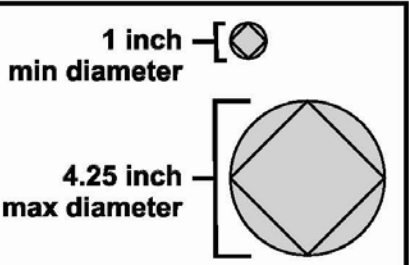
Jig Material Size Requirements

Material Diameter Specifications

The jig requires material with a minimum diameter size of 1" up to a maximum of 4.25" diameter. (fig. 2a, 2b)

Material Length Specifications

The jig requires material with a minimum length of 5.5" to a maximum length of 13" (fig. 2c)




1 inch min diameter

4.25 inch max diameter

Stock shape can be:

Square Corner Cut Round

fig. 2a



For outer diameter, measure from the corners

fig. 2b (outer dia. never to exceed 4.25" nor be less than 1")

IMPORTANT:

Measure across the widest diameter of your stock. This OUTER diameter is what you will need to remember when it comes time to input the diameter measurement at the machine during project runs.

(cont.)

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04/2014

Rotary Jig and Material Setup

(cont.)

Jig Material Size Requirements (cont.)



fig. 2c

Mounting the Material Into the Jig

Cut your material to the appropriate length, then mark the center-point on both ends. A clear plastic center marking template is handy for this (especially for round stock), but not absolutely necessary. (fig. 3a, 3b)

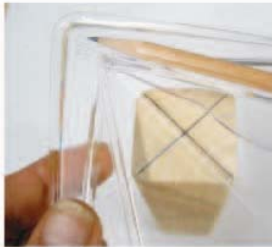


fig. 3a



fig. 3b

Drill holes at the center mark on each end about $\frac{1}{2}$ " deep using a $\frac{7}{32}$ " drill bit. (fig. 3c)



fig. 3c

Thread the stock onto the screw chuck. (fig. 3d)



fig. 3d

Slide the end panel to the stock and align the tailstock point into the drilled hole. (fig. 3e)



fig. 3e

Tighten the wing nuts "finger tight" so it holds the stock snugly, but can still rotate freely. (fig. 3f)



fig. 3f

Rotary Jig and Material Setup

(cont.)

Mounting the Material Into the Jig (cont.)

On the belt drive end of the jig, you will see a trough on the outside metal hub. This allows access to two countersunk holes and the end of the material. Rotate the material to line up with one of the holes. (3f)



fig. 3g

Drive a #8 x 1 1/4" coarse-thread screw through this hole and flush with the countersink. (fig. 3h)



fig. 3h

Rotate the material again to line up the second hole. Drive in another screw. These screws secure the material from slipping during the carving process. Check that the material rotates with no binding of the screw heads against the plate.

Confirm the secured stock and mechanism rotates with no binding after driving in both screws

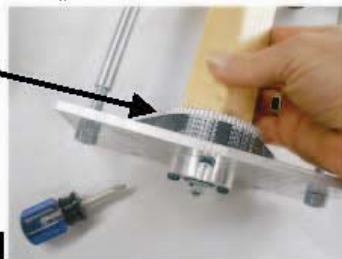


fig. 3i

Page 3

Placing the Jig Into the Machine

The jig has two tabs extending from the bottom of each end panel. These tabs fit into the U-shaped slots of the stationary squaring plate (keypad side of the machine) and the sliding plate on the opposite side. (fig. 4a)



fig. 4a The jig's tabs fit into the two plate slots

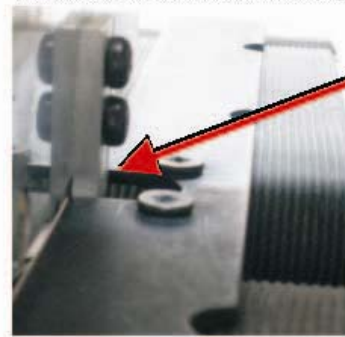
Move the sliding plate all the way to the right, then raise the head just enough to be able to maneuver the jig into the machine. Don't raise the head too high or it will lock in place and you'll need to manually lower it. (fig. 4b)

Raise head and place the jig into the machine with the gear drive on the keypad side of the machine



fig. 4b

Position the jig so the tab rests in the stationary plate slot. Move the sliding plate against the jig so that the other tab rests inside that slot, as well. The sliding plate edge should be right up against the jig roller bearings which rest on the traction belt. (fig. 4c)



Each tab fits into a plate slot on each side of the machine

(this photo shows the tab located in the sliding plate slot)

fig. 4c

(cont.)

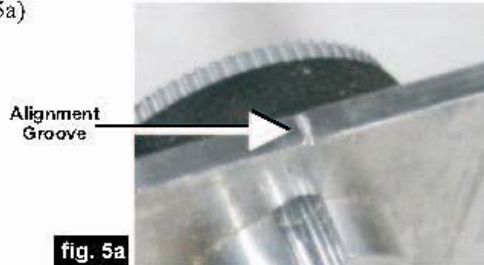
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Rotary Jig and Material Setup

(cont.)

Aligning the Jig

With the jig properly placed (the jig side panels are elevated slightly ABOVE the guide plates of the machine) crank down the head of the machine to hold the jig securely. You will notice a groove on top of each side panel of the jig. These are alignment references. (fig. 5a)



Insert a bit into the chuck. To check alignment, carefully lower the chuck/bit to each mark on both sides of the jig by hand. The tip of the bit should be in alignment with both grooves. (fig. 5b)



If the bit doesn't line up with the marks, take note of how much it is "off" and remove the jig. Adjust one or both of the metal tabs on the side panel(s) by loosening the screws and repositioning the tab(s). Reinsert the jig into the machine and check alignment again. Repeat the process, if necessary, until the jig marks are aligned with the tip of the bit. (fig. 5c)



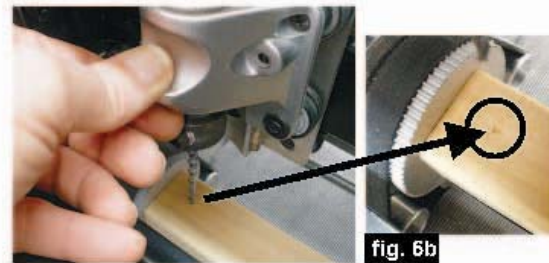
Calibrating the Jig

The jig must be calibrated before each rotary carve. Load your stock into the jig and insert the jig into the machine, check alignment, then follow these steps:

- Insert the carving bit and close the cover.
- Turn on the machine and press "0" on the keypad to access the Options Menu, then press "6" to access the Configuration Menu, then press "7" to access the Rotary Cal
- To begin calibration, press the green "Enter" button (there will be a brief Homing routine, then the Jog To Touch menu appears on the LCD panel)
- Use the arrow keys on the keypad to jog the bit to your chosen location on the stock. The side-to-side arrows rotate the stock. The up/down arrows move the bit across the stock. (fig. 6a)



- Now, open the cover, then "jab" the chuck/bit up and down by hand into the stock to create a visible divot mark. After a clear divot mark is made, raise the chuck/bit back up out of the way of the jig. (fig. 6b)



This divot mark will be used for the next step of the calibration.

(cont.)

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Rotary Jig and Material Setup

(cont.)

Calibrating the Jig (cont.)

- Now that you've made your reference divot mark and raised the bit up out of the way, go ahead and press the green "Enter" button. The machine will rotate the stock three times and then stop. You should see your divot mark. Lower the chuck/bit by hand to see whether the tip of the bit is still centered with your mark. (fig. 6c)



fig. 6c

If they do not line up, use the arrow keys to reposition the bit to match the reference mark (and lower the bit by hand, to confirm alignment). Once aligned, press the green "Enter" button again. The LCD screen will now display the "old" and the "new" settings, and the option to 1) Keep or 2) Abort. You want to press "1" to keep the new setting. The stock will rotate again and you can observe if the bit aligns with the mark this time. (6d)



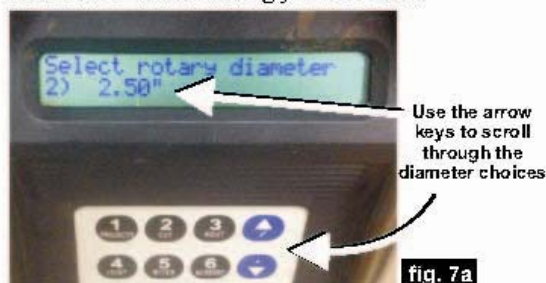
fig. 6d

It is advised to run the calibration at least twice in order to ensure a consistent result. If the results are still inconsistent (i.e., the bit and mark won't align), then it's most likely the machine's head pressure is too low or the jig is not positioned properly. Sometimes a little extra "push" with your hand while cranking down the head can increase the head pressure enough to get a good calibration, so try that first.

Once calibrated, you are now ready to run your project.

Running A Rotary Project

- From the Project Menu, select your rotary project, then press "Enter"
- The machine will measure the length of your stock to make sure it is long enough for your project
- Next, the machine will prompt you to input the stock's diameter (the initial number displayed is simply the minimum diameter required for the project). The stock's OUTER diameter is what you need to specify. (see pg. 1, fig. 2b)
- Use the up/down arrow keys to select the stock's OUTER diameter. Select the next higher diameter if there is no exact match. Aside from the initial diameter display, the diameter choices are in .25" increments. Press ENTER after making your selection.



Use the arrow keys to scroll through the diameter choices

fig. 7a

- You will then be prompted for the bit, as usual. Insert the bit and press ENTER. The machine will proceed with Homing/Bit Find and then run your rotary project!



For additional information and resources, please visit: <http://www.carviewright.com/support-page/getting-started/tutorials/>

There are also several Rotary sections available at the CarveWright Community Forum you may find helpful. Please visit: <http://forum.carviewright.com/forum.php>

(cont.)

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Flip Within Jig

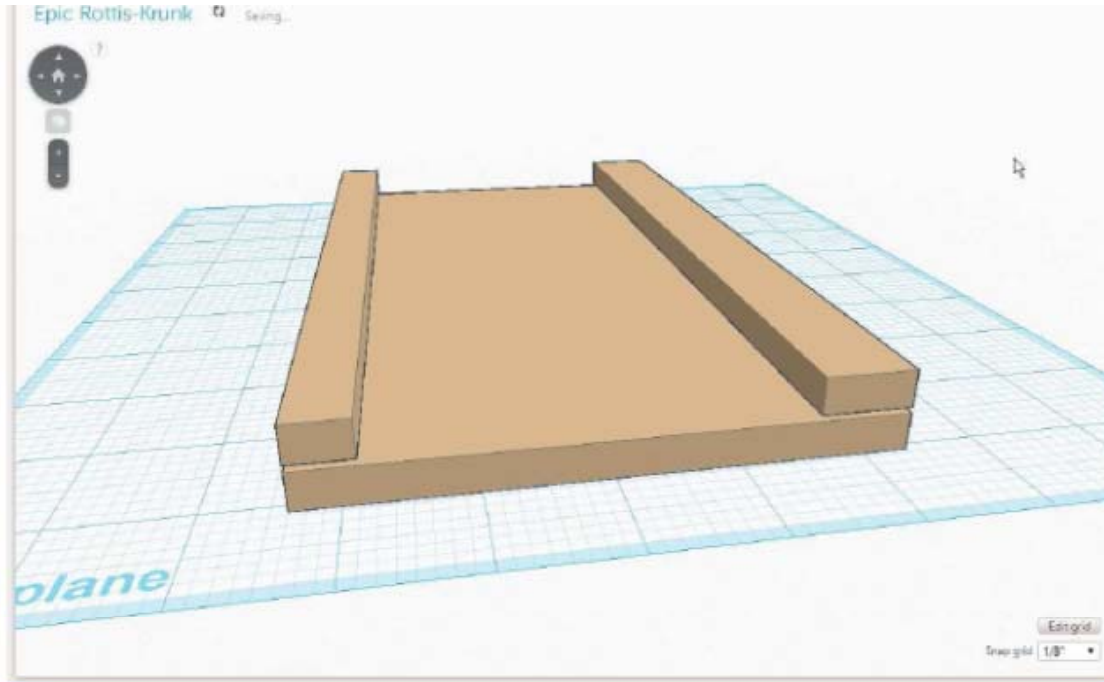
Software version 2.005 or newer is required.

Although the CarveWright system was designed to securely hold and track a board while carving, carrier boards, or jigs, as they are usually referred to, are used in an effort to minimize waste of expensive wood. Jigs can be build to “stay under rollers” all the time, making tracking and head positioning more consistent. Jigs are especially useful as they can provide a smoother tracking surface for carving boards that may not be ideally suited for the machine, such as slices from a tree trunk, or wood that would lose its character if it were planed & squared.

CarveWright firmware version 2.005 introduced a new feature for double-sided curves. Previously, double-sided projects did not work well with jigs, because they require the entire board to be flipped along the board’s width. In this case, most users split projects in two – the front, and the rear. With this software release, the jig can now be accounted for when a board is flipped.

Previously, the firmware would calculate the position of the board after a flip, based on the dimensions of the board on the first side. This new feature requires the user to jog to position on both the front and back side of the board. No calculation is performed.

Here we have our jig. It’s not very straight. The edges are different sizes. It’s just like I would build it.



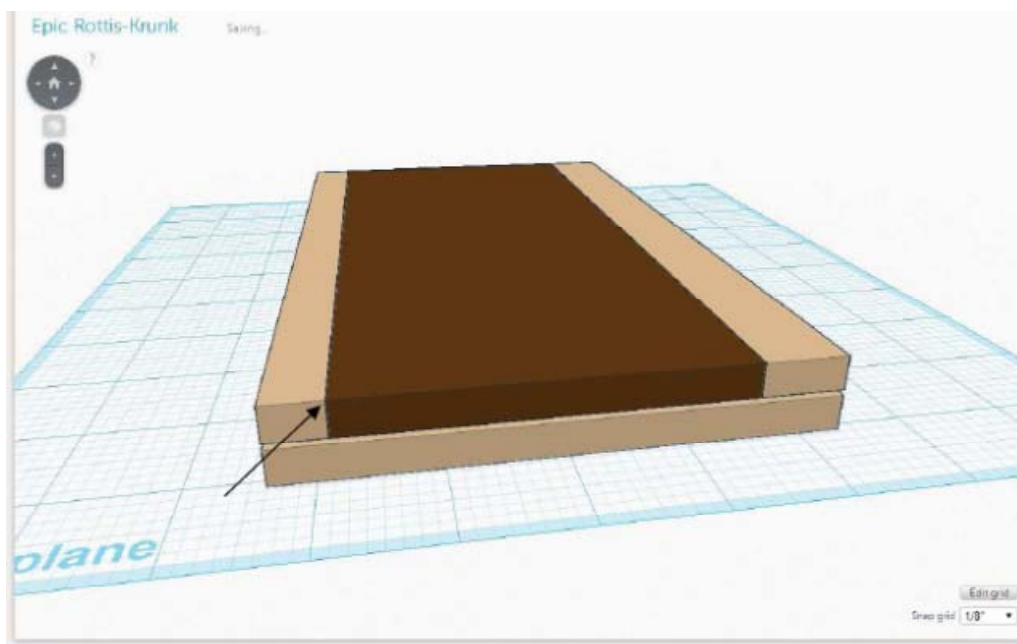
In the CarveWright Designer software, lay out your double-sided pattern, sized to the same size (or smaller) as the wood you will be carving. Upload your project, and take it to the machine.

Load your board into the jig, the jig into the machine, and start the project. It will ask to load the back of the board, just like all double-sided projects do.

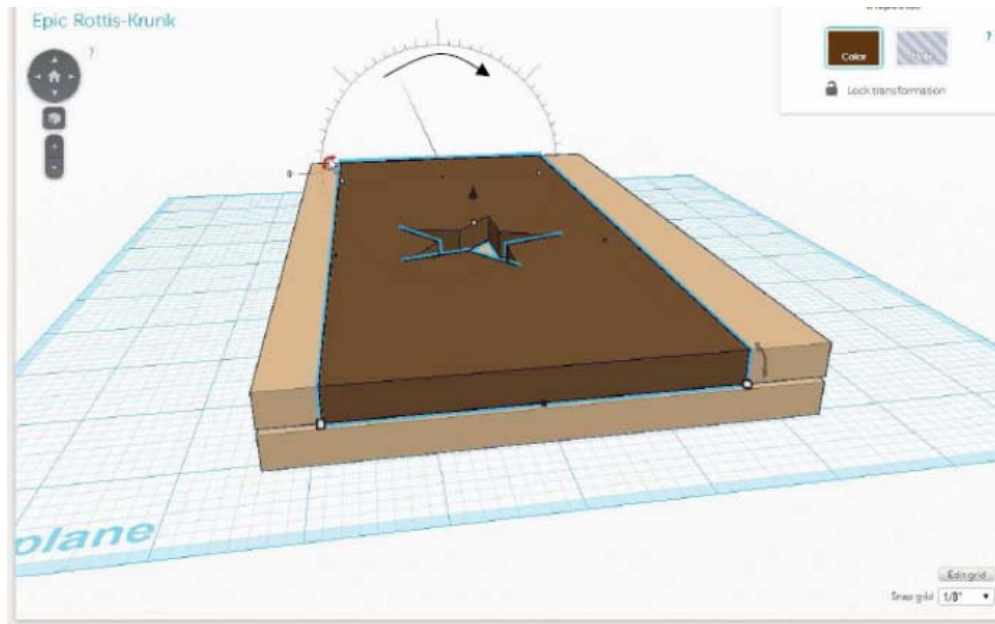
After it measures the board, if the size of the board is larger than the project board, the machine will ask:

Is this board in a jig?	
1) Yes	2) No

To flip the board within the jig, answer "Yes". The machine will ask you to jog to the corner, or the center. Select the "Corner" option. If you were looking at the machine from the front, it would be the left corner of the wood, closest to you, as noted in the picture.



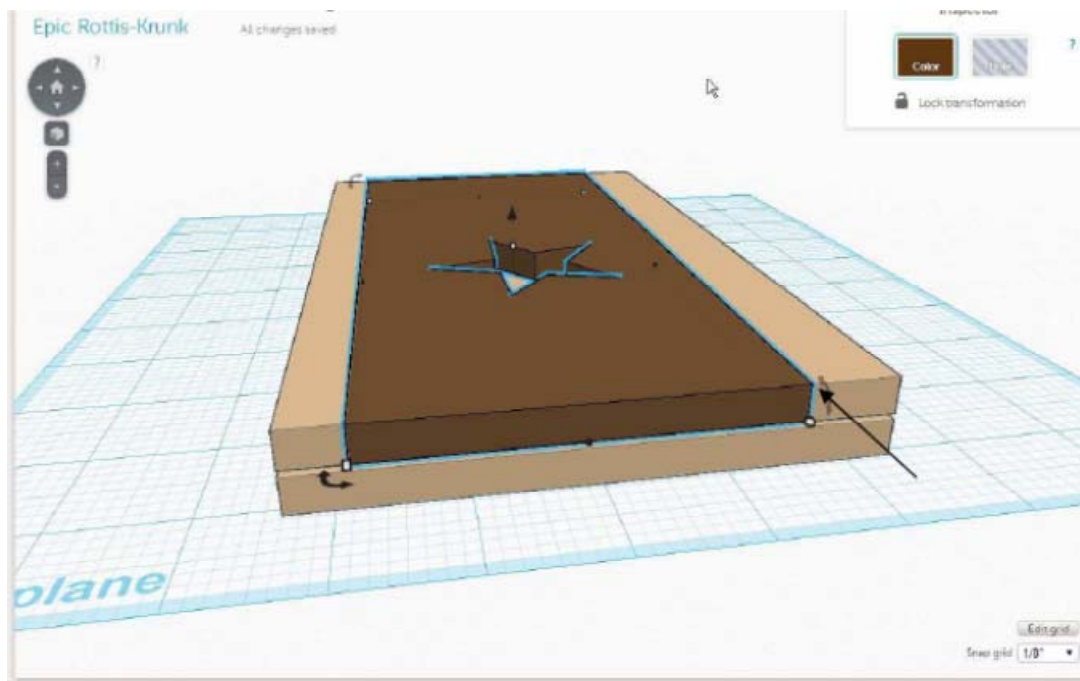
When the machine has carved your pattern, it will ask for you to flip the board to the "front" side. Raise the head, slide out the jig, and flip the board within the jig.



Reload the jig into the machine. The machine measures the jig again to make sure of its dimensions, then asks:

Jog to far front corner

Jog to the far corner, as shown in the picture. Finish the carve.



Designer 2 Frequently Asked Questions (FAQs):

Go here to see Designer 2 FAQs at www.carviewright.com under SUPPORT > CarveWright FAQs > SOFTWARE ADD-ONS > DESIGNER 2.0 UPGRADE FAQs
<http://www.carviewright.com/designer-2-0-faq/>

Other Resources for Designer 2

- Designer 2 Tutorials at www.carviewright.com under SUPPORT > TUTORIALS > SOFTWARE > PROJECT DESIGNER 2: <http://www.carviewright.com/project-designer-2-0-tutorials/>
- CarveWright Community Forum at www.carviewright.com under SUPPORT > COMMUNITY FORUM or at forum.carviewright.com under CarveWright Software > Designer (Upgrade) [http://forum.carviewright.com/forumdisplay.php?123-Designer-\(Upgrade\)](http://forum.carviewright.com/forumdisplay.php?123-Designer-(Upgrade))
- LHR Customer Support:

9:00 AM to 12:30 PM & 1:30 PM to 6:00 PM Central Standard Time
Monday through Friday
713-473-6572