

Project Tutorial

Featuring compatibility with nearly all CNC Machines

It is our pleasure to provide our customers with fun and useful projects to enjoy!

Vetric Project Tutorial
www.vetric.com

Created with:
Aspire v3

Sample Carved with:
ShopBot Buddy
PRSalph BT48

ShopBot
www.shopbottools.com

The Shoe Butler

Designed for Vetric™ by Michael Tyler

The Shoe Butler provides an attractive and organized way to store your shoe polishing items! I normally would store shoe polish, brushes, and rags in a zip-storage plastic bag but decided enough was enough, and it was time to design something nicer to keep my shoe care supplies in.



The container features a rotating up/down handle and two dowel-hinged lids for convenient access to either side. I hope you will find this Shoe Butler “tote box” as handy as I do!



The overall finished dimensions of the project (handle folded down) are about 13½" w x 8" h x 10"d.

Main items you will need:

1) The Project Files (included):

- Bottom-Front-Back Layout.crv3d
- Divider Layout.crv3d
- End Panel Layout.crv3d
- Lids-Top-Hinge Layout.crv3d

2) Boards with the following dimensions:

- Bottom Layout:** 0.75 "x 11 "x 22 "
- Divider Layout:** 0.25 "x 7 "x 12 "
- End Layout:** 0.75 "x 11 "x 22 "
- Lid Layout:** 0.75 "x 11 "x 24 "

3) Dowels...¼" dia., 5/8" dia. and 1" dia.

4) Wood glue, CA glue, clamps, drill, four ¼" hole x 5/8" dia. washers, blue painters tape, sandpaper, wood stain and/or paint and clear finish

5) A Dremel-type rotary tool with assorted sanding wheels and bits to sand small details and speed up preparation for finishing.



CNC Bits used for the Sample:

- V-Carves: 60° V-Bit*
- Finishing: 1/4" BN
- Cuts/Pockets/Drills: 1/4" Down-Cut EM

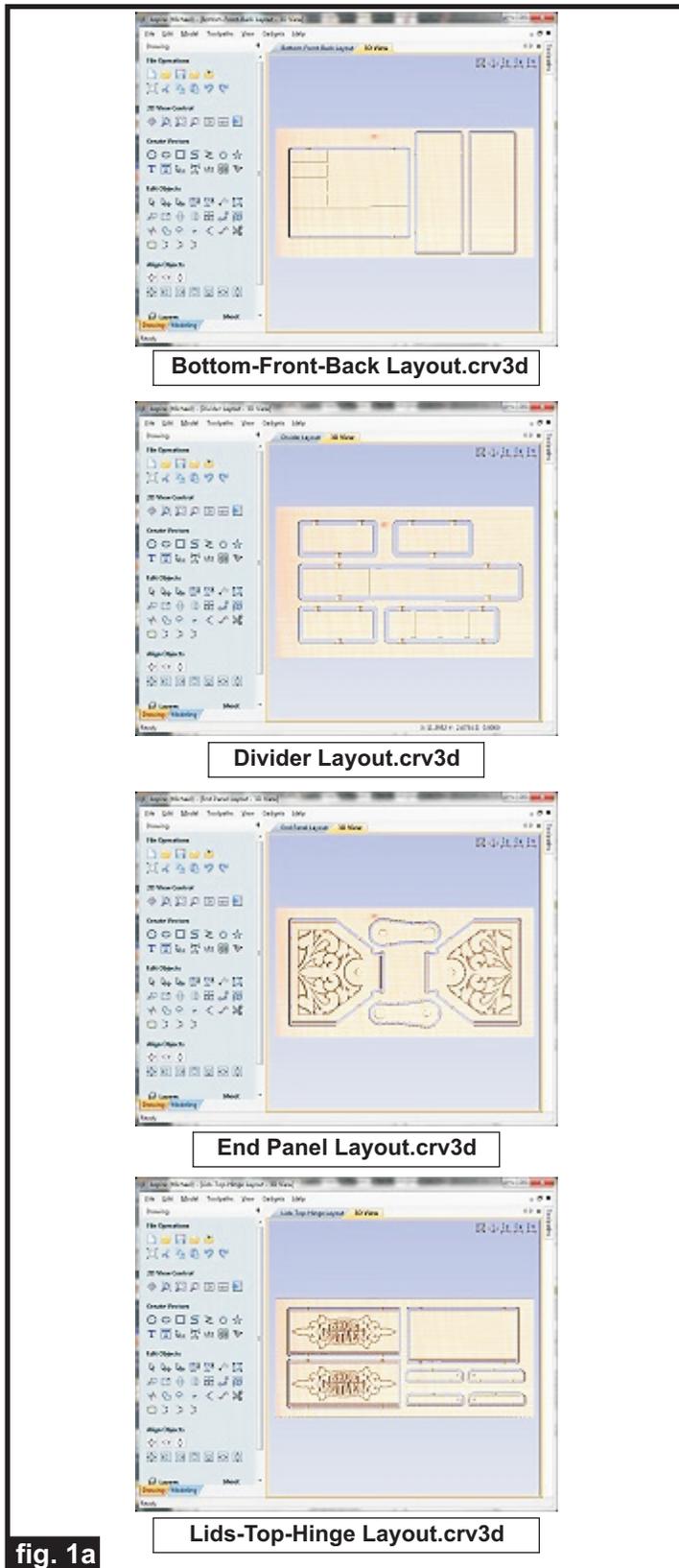
*CMT-brand “laser-point” 60° V-Bit was used to create the sample

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(cont.)

STEP 1 - Open and Review the Project Files

Start your Aspire software and open the project files.
(fig. 1a)



Carefully review all the toolpaths and make any necessary changes to suit your particular bits and machine. The toolpaths are currently set with feed and speeds that were used in creating the original sample. Please don't use them directly until you review them for your own setup.

You can edit the tools and change the settings to your own preferences and requirements. **It is very important to recalculate all toolpaths after making any edits/changes.** Once you have recalculated for your own machine and bits, reset the preview, then preview all toolpaths again to visually verify the project outcome on-screen.

The project is designed with tabs to hold parts in place during the final part cut outs. You may delete the tabs if you use some other reliable hold-down method.

- QUICK TIP -

You may have noticed dowels purchased from home center outlets and other stores may not always have perfectly accurate diameter dimensions.

This project has several pockets and drill holes with preset dimensions for the dowel inserts. Naturally, you can go ahead and run the project as-is, or you can customize the dimensions in the layout itself, to suit the particular dowels you have on-hand.

Measure your dowels with digital calipers then compare their size with the applicable areas in the project layout. If there is a difference between the two, you can offset the vectors to accommodate your own dowel sizes. Be sure to recalculate your toolpaths after any modifications, of course.

Before making changes, please save a duplicate of the project file with a different name. That way, you'll always have the original "safe copy" to return to.

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(cont.)

STEP 2 - Run the Project

When you are satisfied with your tool settings, save the toolpaths to the appropriate Post Processor for your machine, place your material on your machine bed and proceed to run the project. (fig. 2a)



fig. 2a

Your finished parts will look something like this. (fig. 2b)



fig. 2b

STEP 3 - Release and Sand Parts

Separate all the parts from the boards with a utility knife or small saw and sand off the tab remnants. Use a Dremel-type tool with various abrasive wheels/tips to make detail sanding go faster. (fig. 3)



fig. 3

STEP 4 - Assembly

Glue the four hinge strips to the lid panels and clamp until dry. Remove clamps and sand to blend rounded edges. (fig. 4a)



fig. 4a

Glue the sides, front/back and bottom together. Use the top panel as a 'spacer' while the glue dries, if you don't want to glue it in place yet. (fig. 4b)



fig. 4b

It's a little easier to apply the finish to the inside of the box *before* gluing the top in place. If you choose this method, after the glue dries, remove the clamps and top panel 'spacer', then apply your finish to the box. After the finish is dry, center the top panel between the ends and glue and clamp in place until the glue cures.

NOTE: I did not do this for the sample...I went ahead and glued the top in place *before* finishing the interior, but it's your choice.

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(cont.)

STEP 4 - Assembly (cont.)

Sand the dividers so they fit snugly in the pre-cut slots, then glue them in place. (fig. 4c)



fig. 4c

Lay the box on one side. Place a lid centered on the angled box edges, letting the lid's top edge rest against the bottom edge of the top panel. Use blue painters tape to hold the lid **firmly** in place. (fig. 4d)

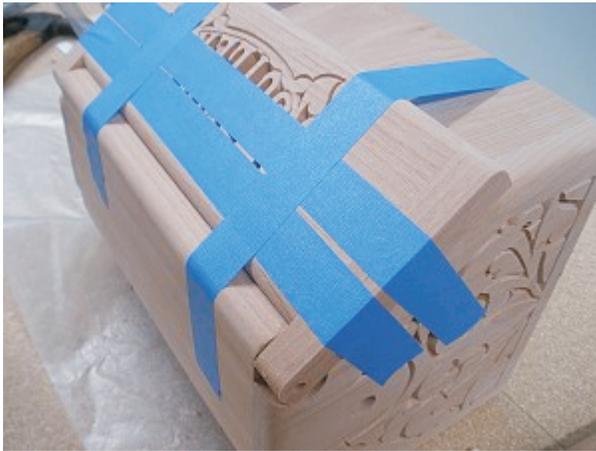


fig. 4d

Using the hinge strip holes as a guide, drill $\frac{1}{4}$ " holes into the ends of the top panel so that a dowel will insert about $\frac{1}{2}$ " into the top. Put a tape "flag" on the bit to control depth of the drill. Repeat for the other side of the box. (fig. 4e)

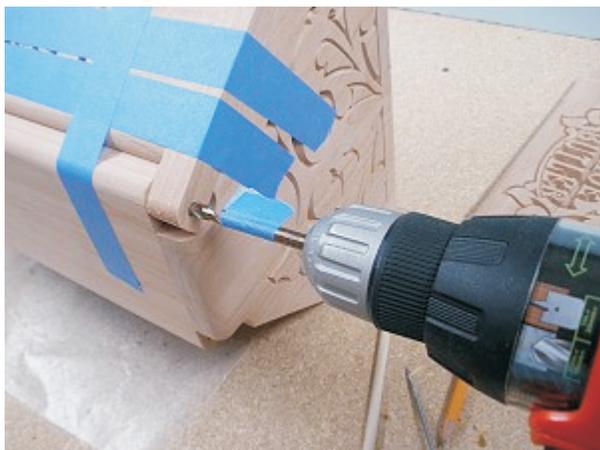


fig. 4e

Temporarily insert a couple dowels and test the hinge action for each lid. Sand any areas that might be binding/rubbing against each other. (fig. 4f)



fig. 4f

Cut your 1" dowel to a length of $12 \frac{7}{8}$ " long.

Now apply your choice of finish to the entire box and all components. Here's what I used on my Shoe Butler sample made from Alder wood:

- One coat of thinned Zinnser Bulls Eye Seal Coat (*50% denatured alcohol and 50% Seal Coat*)
- One coat full-strength Bulls Eye Seal Coat (*Seal Coat is actually clear, de-waxed shellac*)
- 4 coats of Krylon Crystal Clear Acrylic gloss spray

STEP 5 - Final Assembly

Cut your $\frac{5}{8}$ " dowel into two lengths of $1 \frac{1}{4}$ ".

Cut your $\frac{1}{4}$ " dowel into four lengths of $1 \frac{1}{8}$ ".

Test fit all the dowels to make sure they rotate freely in the hinge holes and the box round pockets. 'Ease' the dowel ends with sandpaper if necessary. (fig. 5a, 5b)



fig. 5a

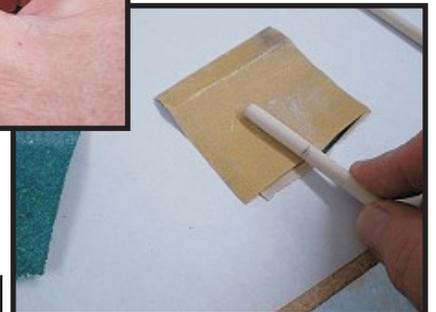


fig. 5b

(cont.)

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STEP 5 - Final Assembly (cont.)

Affix a $\frac{5}{8}$ " dia. washer to the inside of each hinge strip with a tiny drop or two of CA glue (fig. 5c)

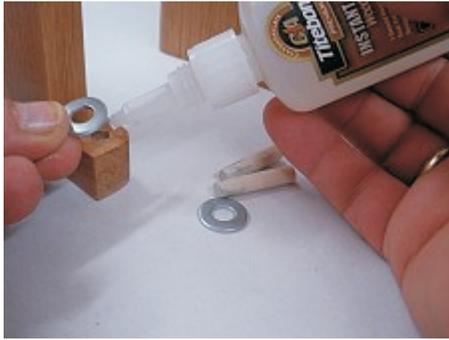


fig. 5c

Place a lid onto the box and tape in place. Apply wood glue to the $\frac{1}{4}$ " dowels *only* on the end that will contact the hinge strip holes (the other end must rotate freely in the top panel hole.).

Insert the dowels until flush with the hinge strip outer surface and wipe off excess glue. (fig. 5d)



fig. 5d

Dry fit the swinging handle using the $\frac{5}{8}$ " dia. and 1" dia. dowels. Test swing action, then apply wood glue inside the handle round pocket recesses and install the handle components to the box. *No glue* goes into the pockets on the box itself...this is so the dowel/handle assembly will be able to swing up/down freely. (fig. 5e)



fig. 5e



IN CONCLUSION

Fill your Shoe Butler with supplies and go polish some shoes!

Happy Carving!

Michael



Materials Source Page

- **3M Radial Bristle Discs** from www.mcmaster.com
(stack 3 discs at a time on your rotary tool mandrel)

80-grit: part # 4494A19
220-grit: part # 4494A18



Miscellaneous Items Purchased at Home Depot™

- Zinnser Bulls Eye Seal Coat
- Wood Dowels
- Denatured Alcohol
- Paint Rags
- Blue Painters Tape
- Zinc Washers



Krylon Clear Gloss Acrylic
from WalMart™

Additional Resources

RESOURCES...

There are numerous resources for Vectric software owners to make their experience with their products more enjoyable. The Vectric website includes videos and tutorials to provide a good overview of the software products and how to use them. (http://www.vectric.com/WebSite/Vectric/support/support_vew_tutorials.htm)

As well as the resources available from the Tutorial page, please also visit the 'FAQ' and 'How To' pages for more support information...

'How To' webpage

http://www.vectric.com/WebSite/Vectric/support/support_how_to.htm

'FAQ' webpage

http://www.vectric.com/WebSite/Vectric/support/support_faq.htm

Vectric User Forum

Every owner should join the Vectric User Forum (<http://www.vectric.com/forum/>) where fellow users share their experience and knowledge 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. There are Gallery sections as well, where you can post and view photos of projects created with Vectric software.

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