Project Tutorial

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Compatible with Current Version of:

VCarve PRO
and
Aspire

Sample Carved with:
ShopBot Buddy
PRSalpha BT48

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Hinged Spoon Rest
Designed for Vectric™ by Michael Tyler

Here is an easy Spoon Rest project with a twist - this Vectric version features a hinged frame that swings up and over the main spoon bowl area to provide a built-in spoon handle support! Swing back over for compact storage.

The slight angle of the handle support helps keep drips from your spoons where they belong - in the spoon rest and off your counter top.

The sample was sealed and finished with a food-safe salad bowl finish. A light washing after each use is all that should be required to keep your Spoon Rest in good shape. Mineral Oil can be substituted for the salad bowl finish and re-applied periodically. Either finish you choose should have a minimum of 3 coats applied.

Main items you will need:

1) The Project Files (included):
• Hinged_Spoon_Rest.crv

2) Board with these dimensions:
0.75 " x 5 " x 12 "

3) Four 1.5 " lengths of 0.25 " dia. wooden dowels, two to four 0.5 " dia. thin nylon washers with 0.25 " dia. center hole

4) Drill with a 0.25 " bit and a 0.2656 " (17/64 ") bit, Salad Bowl Finish (recommended) or Mineral Oil.

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

Closed dimensions are about:
4.875 " W x 5.25 " L x 1 " T

Open dimensions are about:
4.875 " W x 8.875 " L x 1 " T

CNC Bits used for the Sample:

0.5 "	Ball Nose (BN)
0.25 "	Up-Cut End Mill (EM)
0.25 "	Down-Cut End Mill (EM)

Designed by Michael Tyler - January 2016

STEP 1 - Open and Review the Project Files
Start your VCarve Pro or Aspire software and open the project files. (fig. 1)
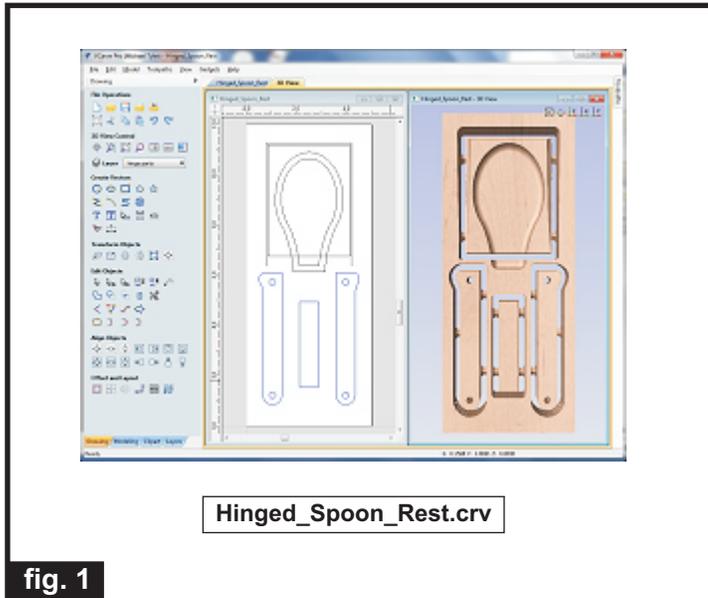

Hinged_Spoon_Rest.crv

fig. 1

fig. 2a

fig. 2b

Carefully review all the toolpaths and make any necessary changes to suit your particular bits and machine. The toolpaths are currently set with feeds, speeds and pass depths 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.

Your board will look something like this. (fig. 2c)

fig. 2c

STEP 2 - Run the Project
When you are satisfied with your settings, save the toolpaths to the appropriate Post Processor for your machine. Place your material on your machine bed and proceed to run the file(s). (fig. 2a, 2b)
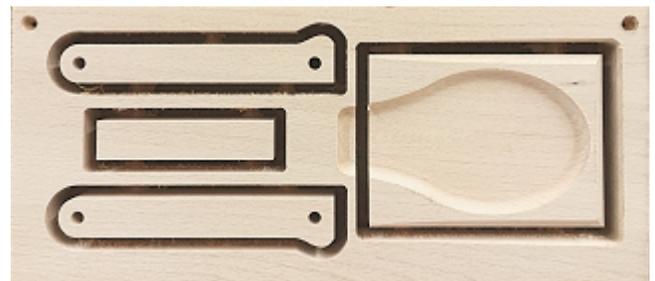
STEP 3 - Separate Parts from Material and Sand
Separate the parts from the boards with a utility knife or hobby saw. Sand the components to remove the tabs and undesirable toolmarks. (fig. 3)

fig. 3

(cont.)

STEP 4 - Assembly

Place the front edge of the spoon bowl panel against a straight edge. Place the rounded ends of the hinge arms against the same straight edge but with 3 business cards inserted at each rounded end. This provides a small gap offset from the front edge of the spoon bowl panel. Tape and clamp the hinge arms to the sides of the main spoon bowl. (fig. 4a, 4b, 4c)

Use business cards for spacers between the front edge of the spoon bowl panel and the rounded ends of the hinge arms

fig. 4a

Tape and clamp the hinge arms securely in position to the sides of the main panel

fig. 4b

Drill through the existing holes of the hinge arms (as a guide) into the sides of the spoon rest panel to a depth of about 0.5 ". Remove the clamps and use a 17/64-inch bit to enlarge the panel holes to allow 0.25 " dowels to rotate freely. (fig. 4c, 4d)

Use a 0.25" drill bit to drill through the existing hinge arm holes into the sides of the main panel to a depth of about 0.5" into the panel

fig. 4c

Enlarge the panel holes using a 17/64" bit. This allows the 0.25" dowels to rotate freely within them.

fig. 4d

Glue 1.5 " lengths of 0.25 " diameter dowels into the hinge arms with slightly less than 0.5 "protruding through the inside surface of the arms. Wipe away excess glue. Trim the dowels flush with the outside arm surface and sand smooth. (fig. 4e, 4f)

Glue dowels into the hinge arms with a little less than 0.5" extending from the inside surface of the arm.

fig. 4e

Trim and sand the excess dowel flush with the outside surface of the hinge arms.

fig. 4f

Rub some candle wax on the dowels for lubrication. Slide one or two nylon washers onto each dowel. (fig. 4g, 4h)

Rub some candle wax onto the dowels for lubrication

fig. 4g

Slide one or two nylon washers onto the dowels. I used two washers per dowel because the washers were so thin.

fig. 4h

(cont.)

STEP 4 - Assembly (cont.)

Insert the hinge arms/dowels into the spoon rest holes ("bumped" end facing up). Place the cross brace between the arms and clamp in position. (fig. 4i)

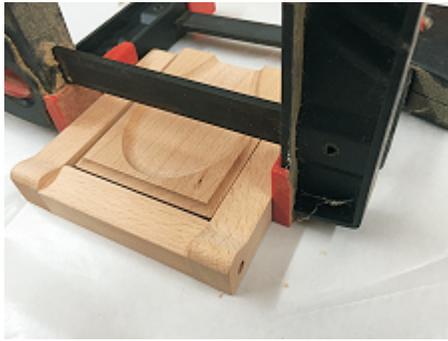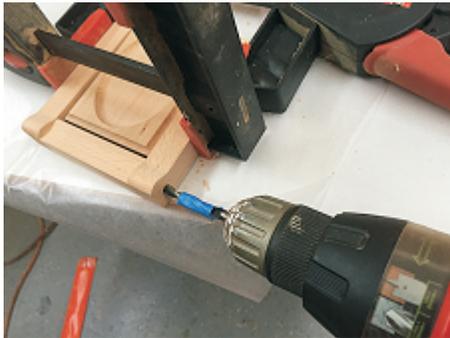Clamp the cross brace and hinge arm assembly in position

fig. 4i

Drill through into the ends of the cross brace using the "bumped" end holes as a guide with a 0.25 " bit. Drill into the ends about 0.5 " deep. (fig. 4j)

Drill 0.25" holes through the hinge arms and into the ends of the cross brace

fig. 4j

Apply glue inside the holes. Insert 0.25 " dowels into the holes. Remove clamps when dry. Trim and sand the excess dowel flush with the outside surface of the hinge arms to complete the assembly. (fig. 4k, 4l)

Apply glue inside the holes and insert the dowels

fig. 4k

Clamp until dry, then trim and sand the excess dowel flush to the hinge arm surface

fig. 4l

STEP 5 - Finish Application

Apply your choice of finish. Here's what I used on the sample made from Beech wood:
(fig. 5a, 5b):

• Three coats of food-safe Salad Bowl Finish wiped on with a soft cloth, allowing several hours to dry between coats.

fig. 5a

fig. 5b

IN CONCLUSION

I hope you enjoyed making your Hinged Spoon Rest!

The project is a great one for using up miscellaneous hardwood scraps around the shop. The sample is made from Beech, but there are many other hardwood candidates for this project, such as Maple or Birch. A nice touch would be to make the project in two contrasting woods...I think Walnut and Maple will look nice! Just split the components of the project over two files - one for the light wood and one for the dark.

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
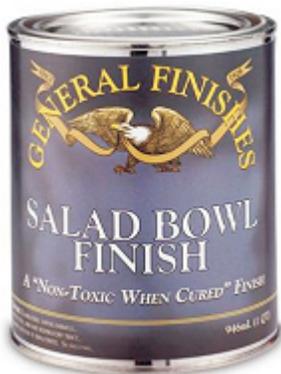   **220-grit: part** # 4494A18

Items Purchased at Home Depot™ or Lowes™

• **0.25 " dia. Wood Dowels**
• **0.5 " dia. Nylon Washers with 0.25 " dia. Center Hole**
• **Disposable Brushes and Paint Rags**

Items Purchased Online from WoodCraft™

• **General Finishes Salad Bowl Finish**
http://www.woodcraft.com/product/125375/general-finishes-salad-bowl-finish-quart.aspx

NOTE: Direct weblinks and prices were valid at time of this writing, but can change at any time. If links don't work, then try visiting the website's home page and do a Search for the item to get directed to a current/valid page.

RESOURCES...
There are numerous resources for Vectric software owners to make their experience with their products more enjoyable. The Vectric website includes video tutorials and more, to provide a good overview of the software products and how to use them. Please visit the Support page for a complete listing of available resources for you.

Vectric Support: http://support.vectric.com/

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.

IMPORTANT: Before outputting any toolpaths you should carefully check all part sizes and the material setup to make sure they are appropriate for your actual setup.You should also check and re-calculate all toolpaths with safe and appropriate settings for your material, CNC machine and tooling.

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