

Project Tutorial

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Vectric Project Tutorial
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Created with:
Aspire v3

Sample Carved with:
ShopBot Buddy
PRSalph BT48

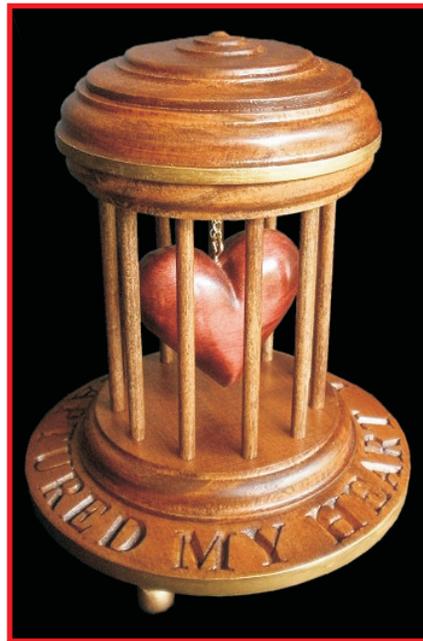
ShopBot
www.shopbottools.com

You've Captured My Heart

Designed for Vectric™ by Michael Tyler

Here's a fun project that expresses to a loved one how he/she has captured your heart! This project was originally created with Valentine's Day in mind, but it is perfectly suitable for many other special occasions such as a wedding proposal, a wedding anniversary celebration, a birthday, or simply "just because"!

This unique decorative item features a 'captured heart' suspended from a golden chain inside a wooden cage structure with the V-carve lettering phrase "You've Captured My Heart" encompassing the circular base.



The overall finished dimensions of the assembled project are about 7" round x 8½" tall.

Main items you will need:

1) The Project File (included):

- Youve_Captured_My_Heart_Layout.crv3d

2) Board with the following dimensions:

- 0.75" x 11.2" x 22"

3) 1/4" dia. dowel (eleven 5" lengths), glue, 2 small screw eyes, decorative 'gold' chain, four decorative 'feet' for bottom platform

4) Clamps, drill, 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:

- Drill Holes: 1/4" Up-Cut
- Roughing: 1/4" Up-Cut
- Finishing: 1/8" Ball Nose
- V-Carve: 60° V-Bit
- Cut Profiles: 1/4" Down-Cut

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(cont.)

STEP 1 - Open and Review the Project File

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

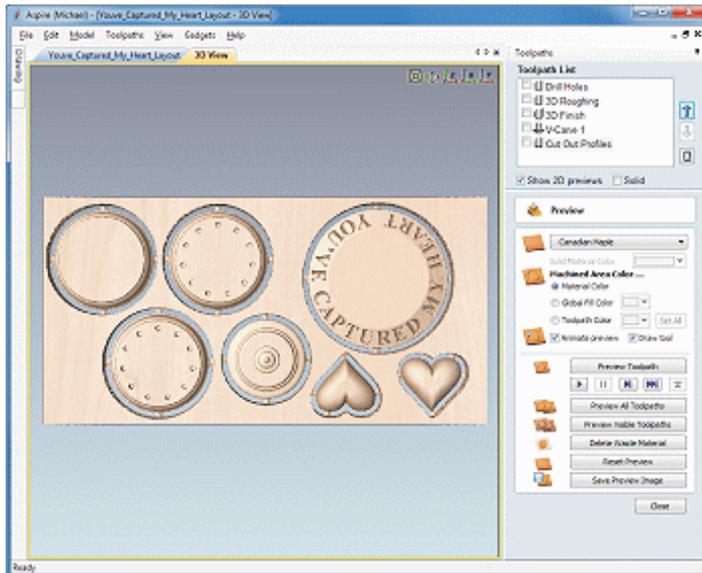


fig. 1 Youve_Captured_My_Heart_Layout.crv3d

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. Also, the drill holes are set to 1/4" diameter. I prefer it that way and taper the dowels on the ends to make assembly easy. However, you may prefer to drill the holes a little oversize as an alternative, so feel free to adjust the project to suit your style!

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 project. (fig. 2a)

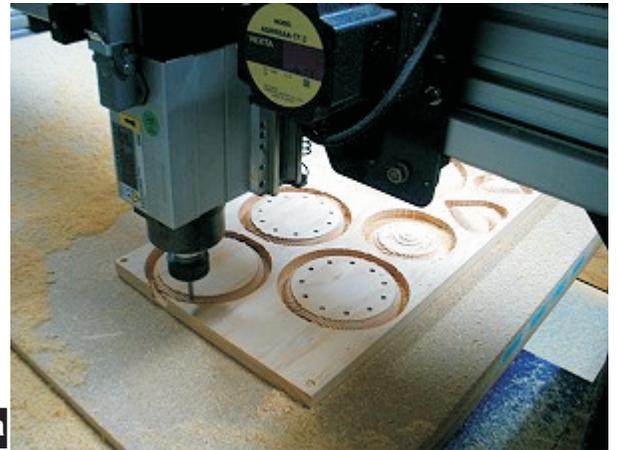


fig. 2a

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



fig. 2b

STEP 3 - Release and Sand Parts

Separate all the parts from the board with a utility knife or small saw. (fig. 3a)



fig. 3a

(cont.)

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(cont.)

STEP 3 - Release and Sand Parts (cont.)

Sand off the tab remnants and any undesirable tool marks. Use a Dremel-type tool with various abrasive wheels/tips to make the job go faster. (fig. 3b)



fig. 3b

STEP 4 - Part Assembly

Glue the top 3 parts together - the top 'dome' onto the plain round, then onto one of the drilled rounds with the drill holes facing down. Do final sanding after these parts are joined. (fig.4a)



fig. 4a

Glue the bottom two parts (the remaining drilled round onto the beveled lettered base) and glue the heart halves together. (fig. 4b, 4c)



fig. 4b



fig. 4c

Cut eleven 5" lengths from the 1/4" diameter dowel. Slightly taper about 1/2" of each dowel end by holding against a sander while rotating the dowel. (fig. 4d) The taper will ease assembly.



fig. 4d

Dry fit the top and base assemblies with the dowels and make adjustments if necessary. (fig. 4e)



fig. 4e

Disassemble the top and base, and set aside.



fig. 4f

Do final sanding and shaping of the heart assembly.

Insert a small screw eye in the center/top of the heart. (fig. 4f)

(cont.)

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(cont.)

STEP 5 - Apply Finish Now

Apply your choice of finish to the parts. Here's what I used on the sample "You've Captured My Heart" project made from Select Pine: (fig. 5a, 5b, 5c, 5d)

The Heart:

- Minwax Sedona Red stain #222
- 5 coats of Krylon Crystal Clear Gloss Acrylic spray
- 2 coats of Finishing Wax (paste wax)



fig. 5a



fig. 5b

The Top, Base and Dowels:

- 1 light coat of thinned Bullseye SealCoat (2 parts sealer/3 parts Denatured alcohol)
- Minwax English Chestnut stain #233
- 3 coats of Krylon Crystal Clear Gloss Acrylic spray
- 2 coats Minwax water-base Satin polycrylic (brushed)
- Gold Rub-n-Buff to accent portions of top and base (after final assembly)



fig. 5c

The Four Wooden Feet and Screw Eyes:

- Krylon Metallic Brilliant Gold spray paint



fig. 5d

STEP 6 - Final Assembly

Attach a short length of decorative gold chain to each screw eye - the one on the heart and the one that will be screwed into the top. (fig. 6a, 6b)



fig. 6a



fig. 6b

Adjust the length so the heart will hang in the center of the enclosure. It may be helpful to temporarily dry fit three or four dowels into the top and base to determine the appropriate length. Insert the screw eye into the center of the underside of the top assembly. (fig. 6c)



fig. 6c

Glue the dowels into the top assembly, making sure they are fully seated into the holes. (fig. 6d)



fig. 6d

(cont.)

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(cont.)

STEP 6 - Final Assembly (cont.)

Glue the feet onto the underside of the base. Now is also a good time to sign and date your project! (fig. 6e)



fig. 6e

Apply glue into the holes of the base and glue the top assembly onto the base. The taper of each dowel should allow you to easily guide each dowel into the holes. Make sure all the dowels are fully seated before setting aside to dry. (fig. 6f, 6g)



fig. 6f



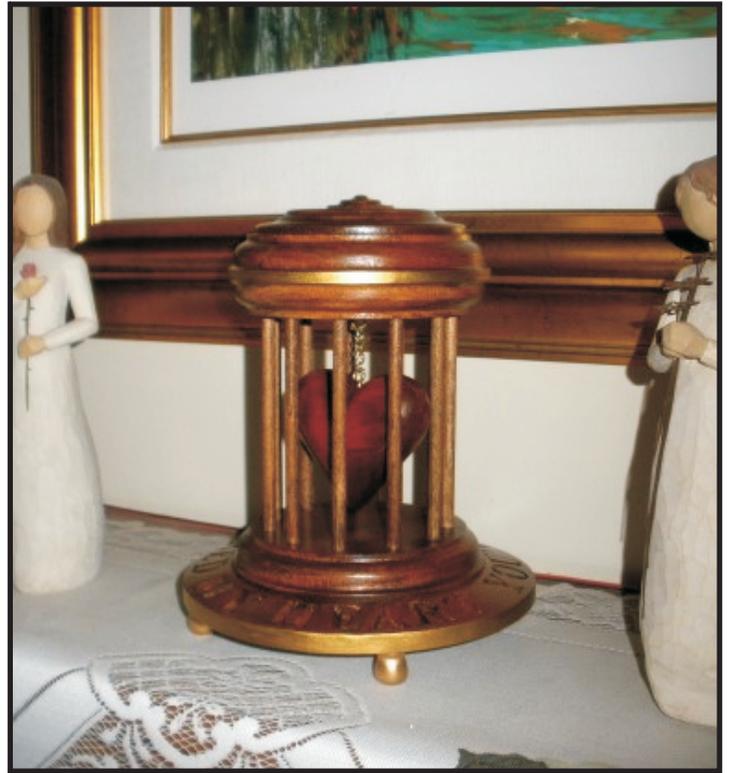
fig. 6g

IN CONCLUSION

I hope you and your sweetheart enjoy this project for many years to come!

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 Michael's Arts & Crafts™

- **Gold Rub-n-Buff**
- **Wooden “candle cups”** for use as decorative feet
- **‘Gold’ decorative chain and small screw eyes**



Miscellaneous Items Purchased at Home Depot™

- **Minwax Sedona Red Stain #222, English Chestnut Stain #233**
- **Minwax Water-based Clear Satin Polycrylic (quart can)**
- **Bullseye SealCoat and denatured alcohol**

Miscellaneous Items Purchased at Lowe's™

- **Select Pine boards and 1/4-inch Diameter Dowel**
- **Disposable Brushes and Paint Rags**



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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