Vectric

Passionate About CNC

Project Tutorial
Featuring compatibility with nearly all CNC Machines

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

Compatible with Current Version of:

VCarve Pro
or
Aspire

Sample Carved with:
ShopBot Buddy
PRSalpha BT48

ShopBot ®
www.shopbottools.com

The Divine Clock
Designed for Vectric™ by Michael Tyler

This project has a "3D" as well as a chip carved appearance but is machined completely from 2D vectors (no 3D raster carving at all). It's a fun "weekend warrior" project that can easily be completed in a couple of days.

While pondering what to name this project, my wife commented she thought the design looked "divine". So, here it is - The Divine Clock!

Main items you will need:

1) The Project Files (included):
• Divine_Clock_FRONT.crv
• Divine_Clock_BACK.crv

2) Material with these dimensions:
FRONT: 0.75 " x 11 " x 11 "
BACK: 0.75 " x 11 " x 19 "

3) Klockit 5 7/8 " round clock insert
(I used model #15344 from www.klockit.com)

4) Two screw eyes and picture wire, wood glue, sandpaper, wood stain and/or paint and clear finish

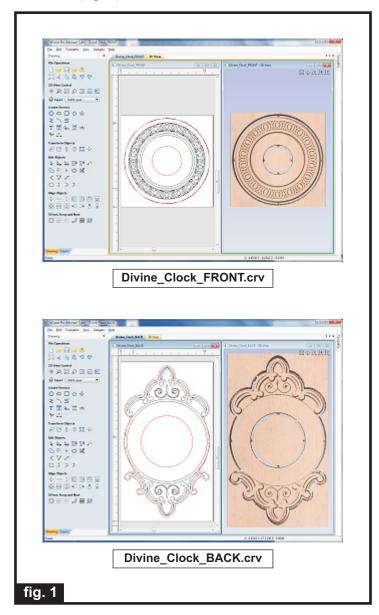**5) A Dremel-type rotary tool with assorted sanding wheels and bits**

Dimensions are approximately
1.25 " D x 10.15 " W x 18 " T.

CNC Bits used for the Sample:

90°   V-Bit (0.75 " diam.)
0.25 " Up-Cut End Mill (EM)
0.25 " Down-Cut End Mill (EM)

STEP 1 - Open and Review the Project Files

Open the file(s) in your V-Carve Pro or Aspire software. (fig. 1)

Divine_Clock_FRONT.crv

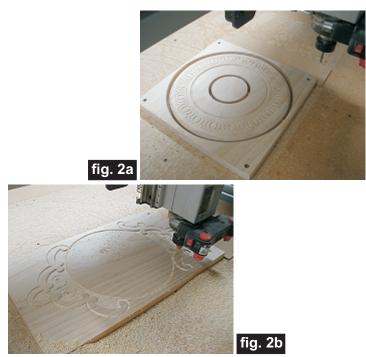Divine_Clock_BACK.crv

fig. 1

Carefully review all the toolpaths and make any necessary changes to suit your particular bits and machine. The toolpaths are currently set with ordering and 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.

It is VERY IMPORTANT to recalculate all toolpaths after making any edits/changes. Preview all toolpaths again to visually verify the project outcome on-screen before running the files.
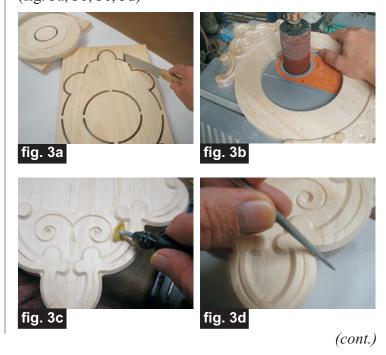
STEP 2 - Run the Project

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 files. (fig. 2a, 2b)

fig. 2a

fig. 2b

STEP 3 - Release Parts from Material

Separate the parts from the material, then sand off any tab remnants and undesirable toolmarks. (fig. 3a, 3b, 3c, 3d)

fig. 3a

fig. 3b

fig. 3c

fig. 3d

(cont.)

STEP 4 - Assembly

Mark the center (vertically) on both the front and back parts using a pencil and straightedge. (fig. 4a)

fig. 4a

Glue the front and back panels together lining up your marks, then clamp until dry. (fig. 4b, 4c, 4d)

fig. 4b

fig. 4c

fig. 4d

When dry, remove the clamps. Sand the edges to blend, and final sand overall to prepare for finishing.

STEP 5 - Finish Application

Apply the finish of your choice. Here's what I used on the sample Divine Clock made from Select Pine: (fig. 4a, 4b, 4c)

• Rust-Oleum Ultimate stain - American Walnut

• Several coats Zinnser Bulls Eye spray Shellac for final topcoat

• Several coats Krylon Clear spray (gloss then flat)

Brushing on the Stain

fig. 5a

Apply Spray Shellac

fig. 5b

Apply Krylon Clear Gloss and Flat

fig. 5c

(cont.)

STEP 6 - Install Hanger and Clock Insert
After the finish is dry, install the 2 screw eyes into the top area of the center cavity on the back. Twist/fasten a short length of picture wire to the screw eyes. The wire should be taut across. (fig. 6a)

fig. 6a

Install the clock insert by pushing it into the front center hole - it's a friction fit. (fig. 6b, 6c)

fig. 6b

fig. 6c

IN CONCLUSION
I hope you enjoyed making your very own Divine Clock!

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

Krylon Clear Gloss and Flat Acrylic
from WalMart™

Miscellaneous Items Purchased at Lowes™

• **Sandpaper**
• **Rust-Oleum Ultimate American Walnut Wood Stain**
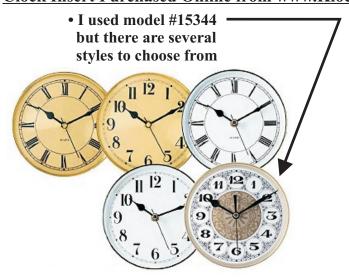• **Disposable Brushes and Paint Rags**

Miscellaneous Items Purchased at Home Depot™

• **Zinsser Bullseye Spray Shellac (100% wax-free)**
• **Small Screw Eyes and Picture Hanger Wire**

Clock Insert Purchased Online from www.Klockit.com

> • **I used model #15344
> but there are several
> styles to choose from**

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.

Additional Resources

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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