

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

Vetricron Chroniker

Designed for Vetric™ by Michael Tyler

Compatible with:

VCarvePro 6.5
(or greater)

and

Aspire 3.5
(or greater)

Sample Carved with:
ShopBot Buddy
PRSalph BT48

ShopBot®
www.shopbottools.com

The “Vetricron Chroniker” project presents an interesting way to house a simple battery operated clock insert in an “industrial-looking” genre! The pseudo-Victorian mechanical appearance is enhanced by the use of metallic paints for the finish, but you can choose whatever finish you prefer.

The overall dimensions of the finished project are about 14¾" x 10½" x 4¼" deep.

Main items you will need:

1) The Project Files (included):

- Vetricron_Back-Bracket.crv
- Vetricron_Base.crv
- Vetricron_Front-Middle.crv

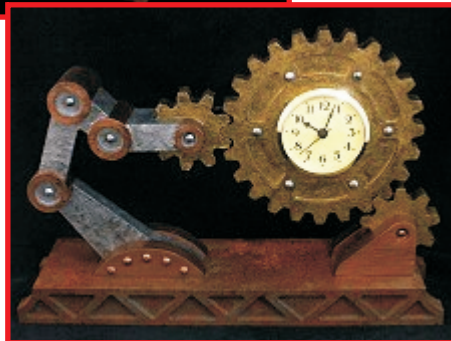
2) Boards with the following dimensions:

- Back-Bracket: 0.75" x 9" x 15"
- Base: 0.75" x 9" x 17"
- Front-Middle: 0.75" x 9" x 20"

3) A 3¼" clock insert (we used model #15559 from <http://www.klockit.com>)

4) Sandpaper, four #6 wood screws, wood glue, epoxy, ¼" dia. wooden dowels and dowel buttons, stain 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 EM
Pockets, Cut Profiles: 1/4" Down-Cut EM

STEP 1 - Open and Review the Project Files

Start your VCarve Pro or Aspire software and open the project files. (fig. 1)

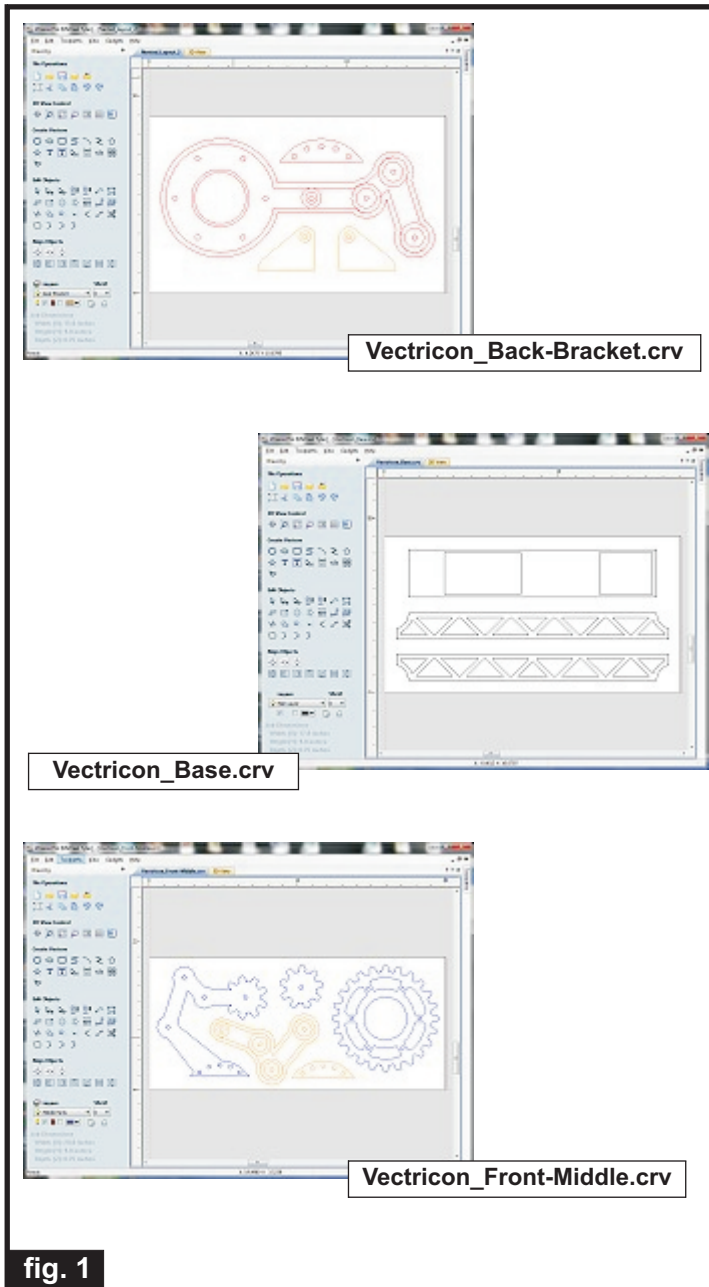


fig. 1

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

Special Note: The pocket cuts have a 10% stepover assigned to the toolpaths. You can change this if you wish, but I found the pocket surfaces have a very smooth finish with this setting!

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.

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, 2b)



fig. 2a



fig. 2b

(cont.)

Vetricon Chroniker

(cont.)

STEP 3 - Release and Sand Parts

Mark the top tooth of the two gears with a pencil, for future reference. (fig.3a) Separate all the parts from the material. (fig. 3b)



fig. 3a



fig. 3b

Sand off the tab remnants and any undesirable tool marks. (fig. 3c)



fig. 3c

Layout the parts and dry-test fit. You may need to slightly “ease” the one left horizontal big gear tooth using sandpaper to allow for paint thickness so it will mesh well with the smaller “fixed” gear on the arm. (fig. 3d)



fig. 3d

STEP 4 - Part Assembly

Cut ten 1/4" dia. dowels to a length of 1 1/2". Cut six 1/4" dia. dowels to a length of 1". (fig. 4a)



fig. 4a



Glue the base parts together and clamp until dry. (fig. 4b)

fig. 4b

Glue the back, middle and front arm sections together using four 1 1/2" dowels.

(fig. 4c) NOTE: Make sure the dowels are recessed in the holes on both sides to allow for the dowel buttons to be glued in later. Clamp until dry.



fig. 4c

You may want to apply your finish to the parts before continuing the glue up (that's what I did).

Glue the big gear to the arm assembly, using the six 1" dowels. Glue the rest of the parts together using the remaining dowels then glue in the dowel buttons. (fig. 4d, 4e, 4f)



fig. 4d



fig. 4e

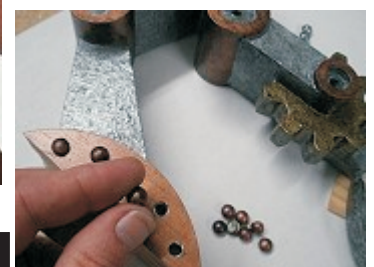


fig. 4f

(cont.)

Vectricon Chroniker

(cont.)

STEP 4 - Part Assembly (cont.)

Position the arm assembly and the right-bracket-gear assembly, then glue the parts to the base using epoxy. (fig. 4g)



fig. 4g

After the epoxy is cured, drill four countersunk holes in the underside of the base into the assembled bracket parts, then screw in four #6 wood screws to complete the assembly. (fig. 4h)

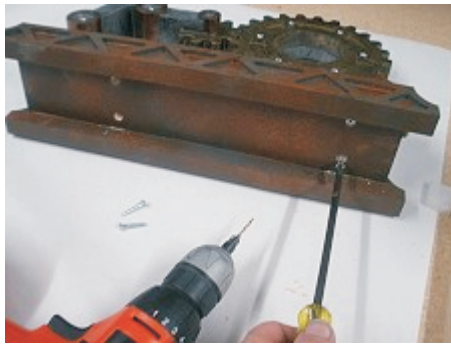


fig. 4h

Finish Application Details

I used a metallic finish on my Vectricon Chroniker project made from Select Pine. Here are some details of the process I used.

First, I made a sketch and decided on a color scheme for all the parts. (fig. 5a)

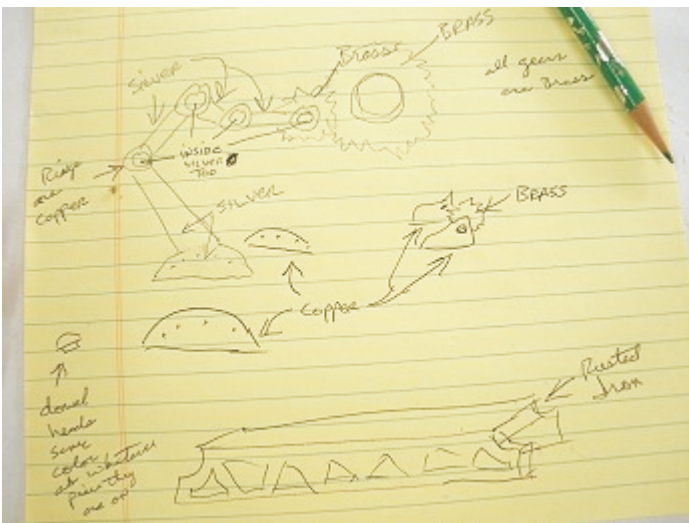


fig. 5a

Then I proceeded to apply the finish:

- 2 coats of thinned Bullseye SealCoat, sanding between coats (2 parts sealer/3 parts Denatured alcohol) (fig. 5b)



fig. 5b

- Painted the parts with Sculpt Nouveau finishing products. (fig. 5c)



fig. 5c

Base - Iron B formula. Sprayed on some Tiffany Green and Vista Rust patinas while the second coat was still wet to make the base look old and rusty.

Arm Assembly - Silver B, Brass B, Copper B

Gears - Brass B

Brackets - Copper B

Dowel Buttons - 12 buttons Copper, 20 buttons Silver

I "grunged" all the parts after applying a coat of clear Smart Coat. I applied thinned Smart Stain Black (3 parts Smart Coat/1 part stain) by "pouncing" it on with a disposable chip brush. After all the parts were dry, I completed the glue-up final assembly as described in Step 4.

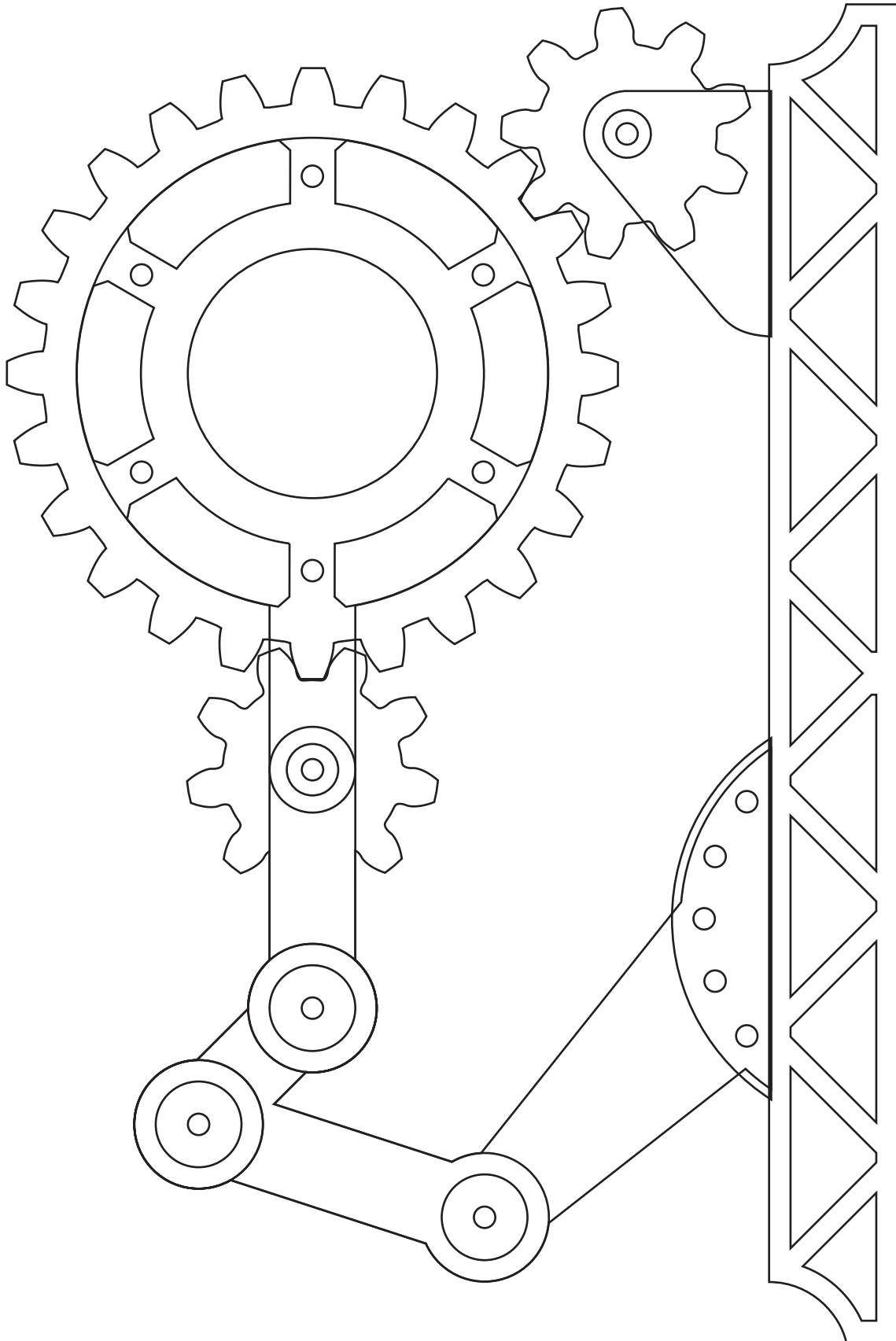
IN CONCLUSION

I hope you enjoyed making your own Vectricon Chroniker project!

Happy Carving!

Michael

(cont.)



ASSEMBLY GUIDE

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



3/4" Clock inserts from www.klockit.com
We used the Creme Arabic Dial
part # 15559

Items Purchased from Woodworks Ltd. at www.craftparts.com

- **Wooden (maple) 1/4-inch dowel “buttons”**

Miscellaneous Items Purchased at Home Depot™

- **Bullseye SealCoat and Denatured Alcohol**

Miscellaneous Items Purchased at Lowes™

- **1/4-inch Diameter Dowels**
- **Disposable Brushes and Paint Rags**

Metallic Paint & Finishing supplies
ordered from www.sculptnouvea.com



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 Vectric software 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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