

Project Tutorial

Featuring compatibility with nearly all CNC Machines

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

Vectric Project Tutorial
www.vec tric.com

Compatible with
Current Version of:



Sample Carved with:
ShopBot Buddy
PRSalph a BT48



Home Cheer Hanging Plaques!

Designed for Vec tric™ by Michael Tyler

This cheerful and encouraging wall decor item is a nice addition for your own home or as a gift for friends and loved ones.

The project features five v-carved word plaques with a background texture created by the Vcarve Pro software and machined with a small ballnose bit.

The sample is finished as “old barn wood” to mimic a rustic-reclaimed appearance. Of course, you can apply any finish you like -

it’s a good candidate for a cool Sculpt Nouveau metallic patina finish too!

The project can easily be customized as a Christmas-themed item (i.e., paint or stain with holiday colors), if desired. It can be assembled using 10 wood screws to enable disassembly for storage, or glued together as a permanent structure, as you wish.

Besides normal indoor use, it can be a nice and inviting decorative item for your outside entry door as well!



The assembled dimensions are about:
12" W x 22" T x 1.125" D

Main items you will need:

1) The Project Files (included):

- Back_Panel.crv
- Plaque_Set.crv

2) Boards with these dimensions:

Back Panel: 0.75 "x 5 "x 24 "

Plaque Set: 0.75 "x 9 "x 35 "

3) Ten #8 x 0.75 " wood screws, drill and bits, glue, sandpaper, stain/paint and clearcoat

4) 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:

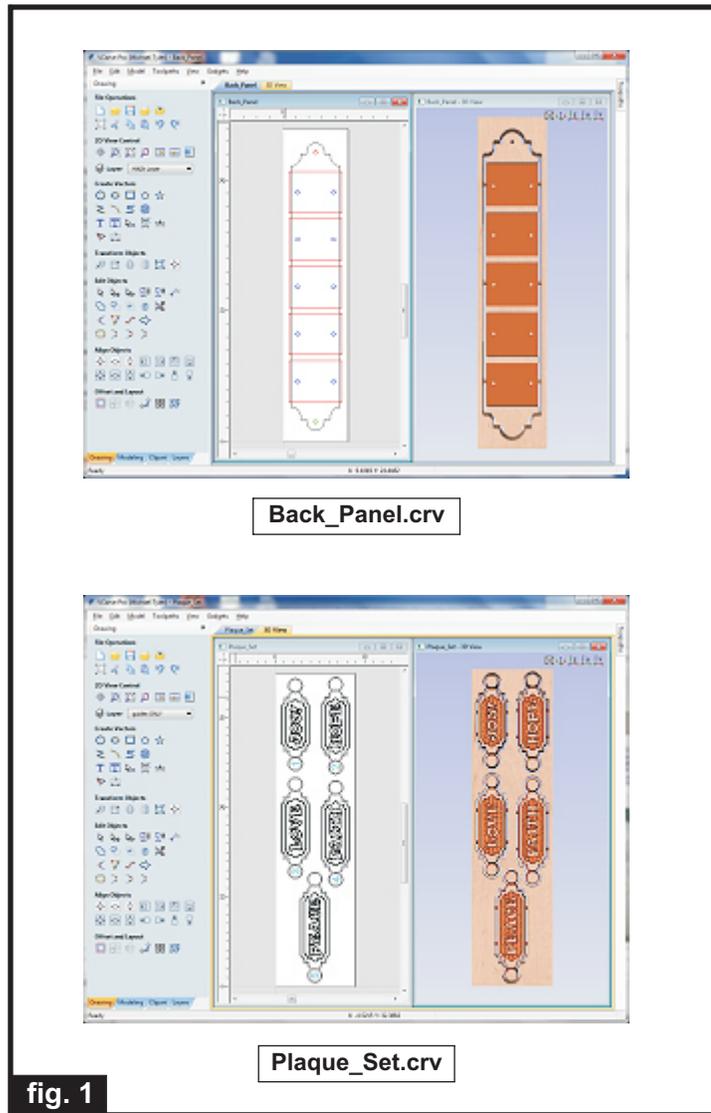
- 0.5" dia. 60 degree V-Bit
- 0.25" Up-Cut End Mill (EM)
- 0.25" Down-Cut End Mill (EM)
- 0.125" Ball Nose (BN)

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(cont.)

STEP 1 - Open and Review the Project Files

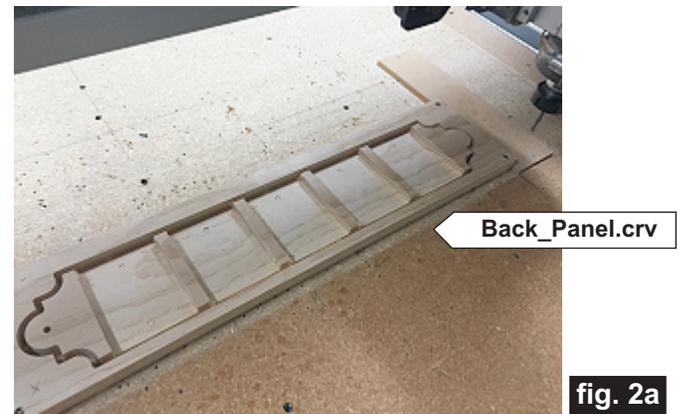
Start your VCarve Pro or Aspire software and open the project files. (fig. 1)



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.

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, 2c, 2d)



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.**

(cont.)

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(cont.)

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. 3a, 3b, 3c)



fig. 3a



fig. 3b

STEP 4 - Assembly Prep

Drill ten small pilot holes in the back panel using the round shallow “markers” as a location guide. (fig. 4a)

Drill pilot holes in center of the round “markers” in the pockets



fig. 4a

Flip over the panel and drill countersinks just deep enough for the #8 screwheads to be slightly recessed below the surface. (fig. 4b) **NOTE:** You can glue the panels permanently instead of using screws if you want to forgo the ability to disassemble later.

Drill countersinks on backside. Use a masking tape “flag” as a depth guide.



fig. 4b

Test fit the parts. Sand the edges of the panels, if necessary, to allow for finish thickness. The pockets have a small allowance already, but if you are applying a thick finish, you may need to sand the edges to create a looser fit prior to finish application. (fig. 4c)



fig. 4c

STEP 5 - Finish Application

Apply your choice of finish. Here’s what I used on the sample made from Select Pine (fig. 5a, 5b, 5c, 5d, 5e, 5f, 5g):

- One coat of thinned Bulls Eye Sealcoat, sanding when dry (50/50 sealer and denatured alcohol)
- Rust-Oleum Ultimate stain - Driftwood color
- Two light coats of Krylon Clear Acrylic spray
- Applied thinned black acrylic craft paint on the panels (applied and wiped off, leaving some in the carve recesses to accentuate details)
- Lightly dry-brushed black acrylic craft paint on the panels to resemble old barn wood
- Several coats Krylon Clear Acrylic spray overall

(cont.)

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(cont.)

STEP 5 - Finish Application (cont.)

Applied thinned SealCoat, then sanded when dry



fig. 5a

Wipe off all the black paint right away, leaving some in the recesses.

Lightly dry-brush black paint overall to enhance the "old" appearance.



fig. 5e



Applied Driftwood color stain

fig. 5b



All components after dry-brushing completed

fig. 5f

Applied clearcoat to seal stain



fig. 5c

Apply final clearcoats



fig. 5g



Brush black paint onto the entire surface, working into the v-carves

fig. 5d

STEP 6 - Final Assembly

Place each plaque centered in their corresponding pockets (goes from the shortest width plaque at the top progressively to widest at the bottom...use the photo as a guide. (fig. 6a)



fig. 6a

(cont.)

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(cont.)

STEP 6 - Final Assembly (cont.)

Flip over the assembly and drill pilot holes for the wood screws into the backs of each plaque using the pre-drilled panel holes as a guide. Use care not to drill too deeply. Use the ten #8 x 0.75" wood screws to secure the plaques to the back panel. **NOTE:** You can glue the plaques permanently in place instead of using screws, if desired. (fig. 6b, 6c)

Drill pilot holes into backsides of plaques using the pre-drilled holes as a guide.



fig. 6b



Secure the plaques to the back panel with wood screws (or glue them in place)

fig. 6c

IN CONCLUSION

I hope you enjoyed making your Home Cheer Hanging Plaque Project!

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 Home Depot™ or Lowes™

- **Zinsser Bulls Eye SealCoat and Denatured Alcohol**
- **Rust-Oleum Ultimate Stain - Driftwood color**
- **#8 x 0.75" wood screws**
- **Disposable Brushes and Paint Rags**



Acrylic Craft Paint
from Michael's Arts & Crafts™
(Apple Barrel Black #20504)

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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