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!

Created with:

VCarve Pro

Also Compatible with:

Aspire

Sample Carved with:
ShopBot Buddy
PRSalpha BT48

ShopBot ®
www.shopbottools.com

The Paradise Box
Designed for Vectric™ by Michael Tyler

This month's Vectric project features a highly decorative "chip carve" motif and can be enjoyed by VCarve Pro owners and Aspire owners alike! The design is a blend of elaborate detail along with the mortised contemporary side panels to make a nice addition to any decor.

The Paradise Box can be used to stow any number of personal "treasures" or perhaps even drafted for use in the kitchen as a 3x5 recipe card holder by incorporating a center divider in the interior.

The overall finished dimensions of the assembled project are about 13½ "W x 9½ "D x 5½ "H.

Detailed V-carving works best when using a very sharp bit and a close-grained hardwood. The sample was made from Maple.
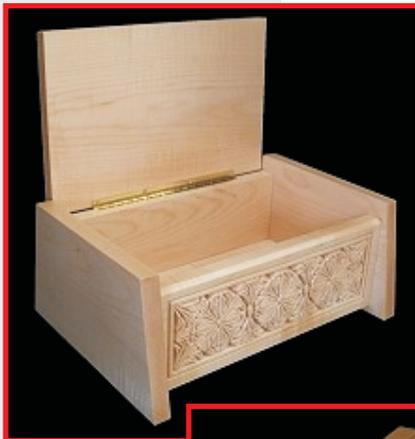
Main items you will need:

1) The Project Files (included):
• Paradise_Box_TOP.crv
• Paradise_Box_FRONT_Panel.crv
• Paradise_Box_BACK_Panel.crv
• Paradise_Box_SIDE.crv
• Paradise_Box_BOTTOM.crv

2) Boards with the following dimensions:
• TOP: 0.75 "x 11.2 "x 14 "
• FRONT: 0.75 "x 5.5 "x 15 "
• BACK: 0.75 "x 5.5 "x 15 "
• SIDE: 0.75 "x 7 "x 12 " (two of these)
• BOTTOM: 0.75 "x 7.5 "x 14 "

3) Box hinge (I used Brainerd hinge # 1268XC ¾" x 8" piano-style)**, 4 felt or nylon pads for bottom, self-stick felt for box interior, if desired**

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:

Chamfer V-Carves: 90° V-Bit
Main V-Carves: 60° V-Bit*
Cut Profiles: 1/4 "Down-Cut

*CMT-brand "laser-point" 60° V-Bit was used to create the sample

STEP 1 - Open and Review the Project Files

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

Paradise_Box_TOP.crv

Paradise_Box_FRONT_Panel.crv

Paradise_Box_BACK_Panel.crv

Paradise_Box_SIDE.crv

Paradise_Box_BOTTOM.crv

fig. 1
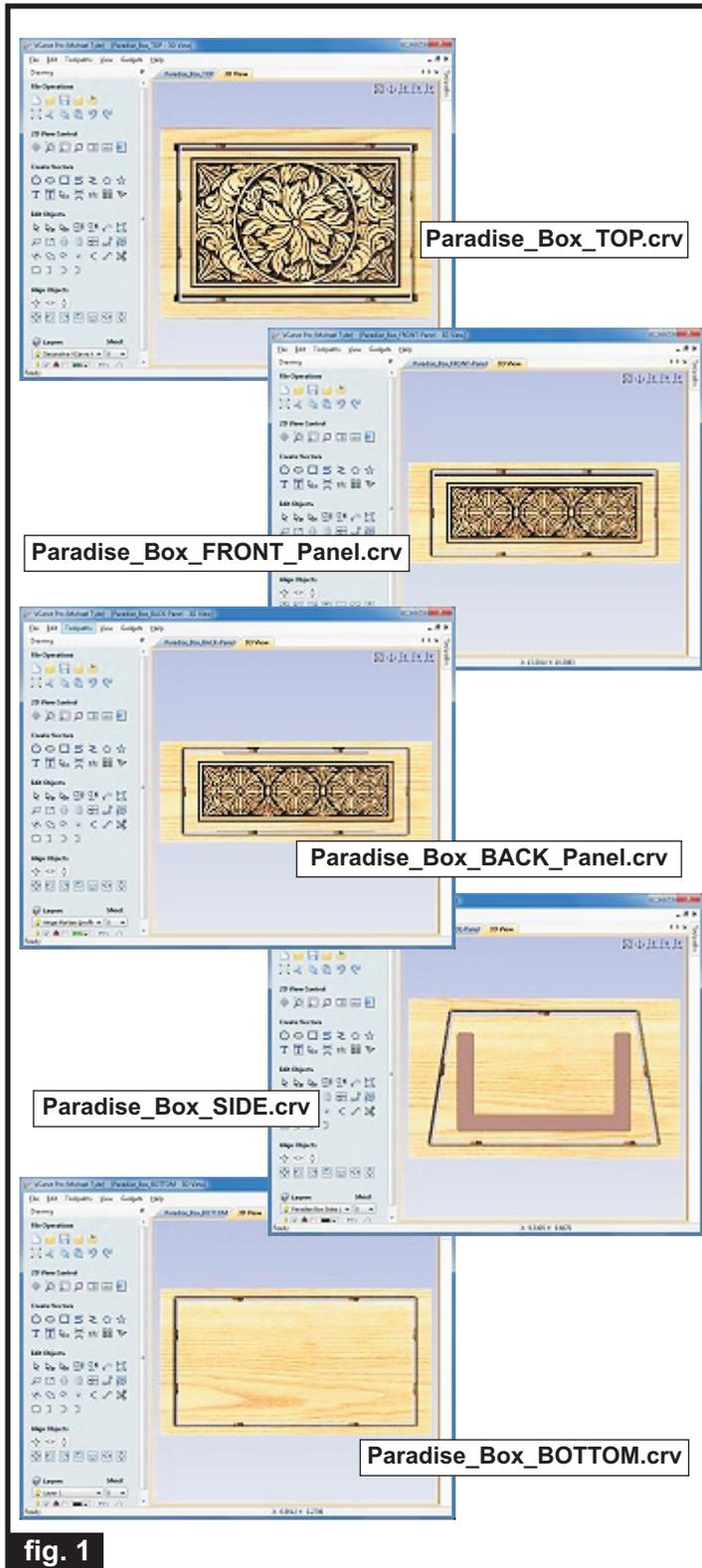
Carefully review all the toolpaths and make any necessary changes to suit your particular bits and machine. The toolpaths are currently set with feed and speeds that were used in creating the original sample. Please don't use them directly until you review them for your own setup.

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.

I received a tip from my good friend Tim Merrill for carves of this type. He mentioned that he sometimes likes to run V-carve toolpaths **twice** to yield the cleanest result. I took his tip to heart and that's what I did when creating the sample. This is an option you may want to consider, as well. Thanks for the great tip, Tim!

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. 2

(cont.)

STEP 3 - Release, Sand and Prep Parts
Separate all the parts from the boards with a utility knife or small saw. Sand off the tab remnants and any undesirable tool marks. Use a Dremel-type tool with various abrasive wheels/tips to make the job of detail sanding go faster. (fig. 3a)

fig. 3a

I also made my own handy home-made sanding sticks to get into some of the really tight nooks and crannies. I sanded popsicle sticks to a thin taper and glued on some sandpaper scraps with CA glue (super glue). (fig. 3b)

fig. 3b

Using a sharp hand chisel, square-up the rounded corners in the side mortises, EXCEPT the front-top of each side where the front panel's bevel fits into. (fig. 3c)

fig. 3c

Likewise, square-up the hinge mortise on the back panel, then position your hinge. Mark and drill pilot holes for the hinge screws. (fig. 3d)


fig. 3d

Dry-fit your box together and make adjustments, if necessary. If you need to widen the side panel mortises, sand the INSIDE edges only. (fig. 3e)
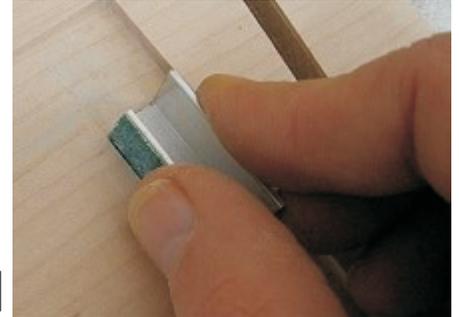
fig. 3d

STEP 4 - Part Assembly
Glue the box together and apply clamps until set. (fig.4a)

fig. 4a

Remove the clamps and test fit the lid. Make any necessary adjustments (sand the edges) until it fits evenly between the side panels without any binding.

(cont.)

STEP 5 - Apply Finish Now
Apply your choice of finish to the parts. Here's what I used on the sample "Paradise Box" project made from Maple: (fig. 5)

• Minwax Natural stain #209
• 4 coats of Krylon Crystal Clear Gloss Acrylic spray
• 2 coats of Minwax water-based Clear Satin polycrylic (brushed on)

fig. 5

Before applying the clearcoat, you may want to reinstall the hinge on the box, then line up the box lid, mark and drill pilot holes and check lid action.

TIP: Put a few small dabs of hot melt glue on the hinge before lining up and placing the box lid on top of it. Allow the glue to set, then carefully open the lid to mark your pilot hole locations.

"Break" the glue dabs after marking, then install the screws to check the lid action.

Of course, you'll want to remove the hinge before applying your clearcoat. (fig. 6a)

fig. 6a

STEP 6 - Final Assembly
After the finish is completely dry, reinstall the hinge and line the box interior with self-adhesive felt or flocking, if desired. You may also want to put four round felt, cork or nylon pads underneath boxes to protect the surfaces they will be placed upon.

IN CONCLUSION
I hope you have enjoyed making your Paradise Box. Feel free to customize your own box with creative finishes, interior dividers, trays or whatever suits you!

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™

• **Self-stick felt sheets**

Miscellaneous Items Purchased at Home Depot™

• **Minwax Natural Stain #209**

Miscellaneous Items Purchased at Lowes™

• **Nylon round surface protection pads**
• **Disposable Brushes and Paint Rags**

Brainerd hinge # 1268XC
¾" x 8" piano-style
from www.hardwareworld.com

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_vcw_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.