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Neptune's Soap Dish!
Designed for Vectric™ by Michael Tyler

I'm not sure Neptune actually uses a soap dish, but the name fits and the dish will make a nice addition to an aquatic decor! This is an easy project, carved and cut from 1x6 PVC trim board material found at any home center store.

The sample imitates a thick-cast bronze metal block with a shallow shell motif dish and a seahorse ornament complimenting the oceanic theme. It is coated with thick-bodied metallic paints and a patina applied to yield an aged appearance. Hidden weight (BB's) inside the block assembly gives a "heft" to add to the illusion it is made of cast metal.

The finished dimensions of the sample Neptune Soap Dish are about:
6.4 " W x 4.4 " D x 1.45" T

Main items you will need:

1) The Project File(s) (included):
• Neptunes_Soap_Dish.crv3d

2) Material with these dimensions:
PVC 1x6 Trim Board : 0.75 " x 5.5 " x 14.5 "

3) Clear PVC Cleaner and Clear PVC Cement, sandpaper, metallic paints and finishing supplies *(I used products from www.sculptnouveau.com)*

4) BB's for weight, quick-set epoxy to secure BB's (optional)

5) A Dremel-type rotary tool with assorted sanding wheels and bits to sand small details and speed up preparation for finishing.
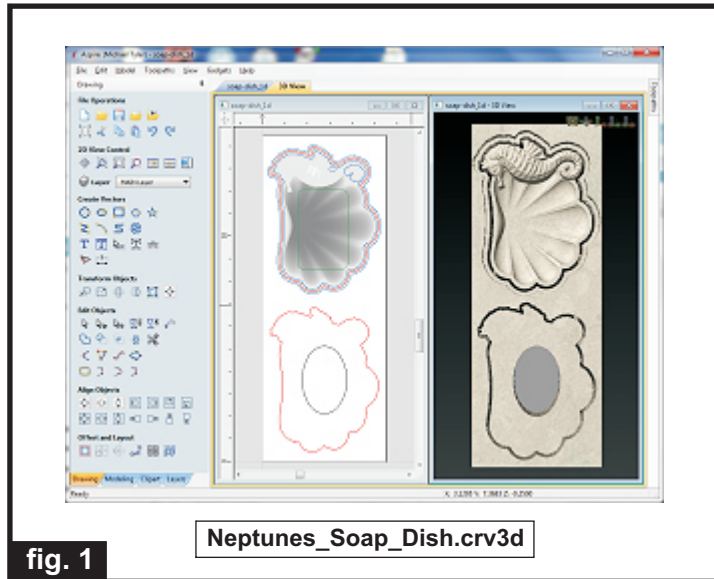

CNC Bits used for the Sample:

0.25 "	Down-Cut End Mill (EM)
0.125 "	End Mill (EM)
0.0625 "	Tapered Ball Nose (BN)

STEP 1 - Open and Review the Project File(s)
Start your Aspire software and open the project file(s). (fig. 1)

Neptunes_Soap_Dish.crv3d

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.

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 wanted some "heft" to my soap dish, so I made provision for weight to be added inside the assembled dish. However, the weighted base (the pocketed component) is optional. If you wish, you can make your soap dish with just the top shell/seahorse component alone. You can even delete the base component and copy/paste another top component to fit two soap dishes on your material, if desired.

STEP 2 - Run the Project Files
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 file(s). (fig. 2a)

fig. 2a
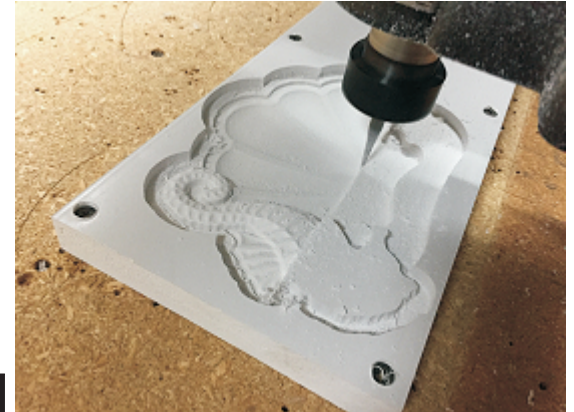
Your finished machined material will look something like this...(fig.2b)

Neptunes_Soap_Dish.crv3d

fig. 2b
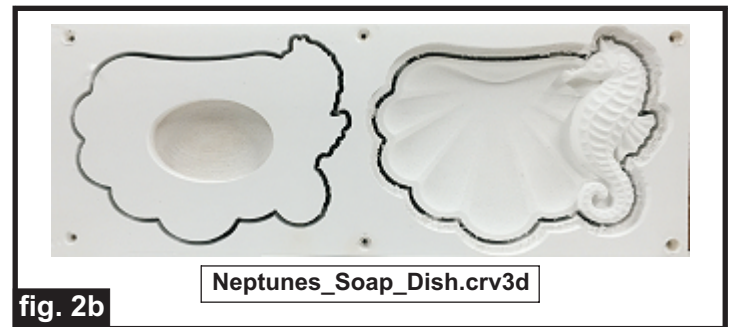
STEP 3 - Separate Parts from Material and Sand
Separate the parts from the boards with a utility knife or hobby saw. Sand the flat mating surfaces so no "fuzzies" will interfere with assembly later. (fig. 3a, 3b)

fig. 3a

Separate parts from material

Lay a sheet of sandpaper on a flat surface and rub the components along the paper to remove "fuzzies" from the flat areas

fig. 3b

(cont.)

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STEP 4 - Finish Prep and Assembly
Use a rotary tool with assorted attachments for lightly sanding details along with hand sanding of larger areas. You will notice the carved PVC has a finely textured surface. After applying a faux "aged" metallic finish, the texture will help the piece resemble cast metal all the better! (fig. 4a)

fig. 4a

Fill the pocket cavity with BB's making sure they all rest below the surface so they won't interfere with the top section component sitting flush. (fig. 4b)

Fill pocket with BB's

fig. 4b

OPTIONAL: Mix up some quick-set epoxy and pour over the BB's to eliminate "rattle". (fig. 4c)

Optionally pour some quick-set epoxy over the BB's to eliminate "rattle". Don't overfill - make sure the epoxy rests below the surface.
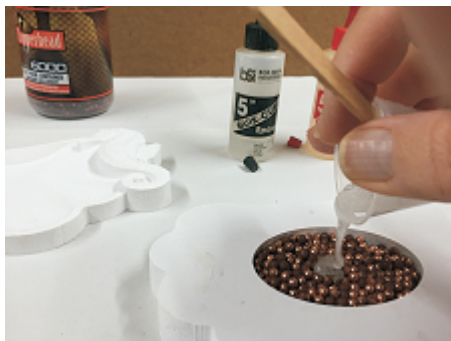

fig. 4c

Apply Clear PVC Cleaner to the flat mating surfaces to prepare the surfaces for the cement application. (fig. 4d)

Apply a thin coat of Clear PVC Cleaner to the flat surfaces

fig. 4d

Apply an even coat of Clear PVC Cement to <u>both</u> mating surfaces, then press the top onto the base using a slight twisting motion to "mesh" the softened PVC . Align the parts and press down for a minute or so until the initial weld holds the parts together. Wipe off any excess cement squeeze out and lightly clamp together for two hours. (fig. 4e, 4f, 4g)

Apply PVC Cement to both surfaces

fig. 4e

"Twist" parts together, align and press down for a minute or two.

fig. 4f

Lightly clamp the assembly for two hours until the weld has fully cured (avoid excessive clamping pressure)

fig. 4g

STEP 4 - Finish Prep and Assembly (cont.)

Remove the clamps and final sand all edges and details using a rotary tool and hand sanding. fig. 4h)

Final sand edge seams and details

fig. 4h

STEP 5 - Apply Finish

Here's what I used on the Neptune's Soap Dish sample made from PVC trim board (fig. 5a,5b,5c,5d,5e,5f,5g):

• Applied Clear PVC Cleaner overall and let dry
• Two thick coats Sculpt Nouveau Brass B as a base
• One coat Sculpt Nouveau Bronze B over the Brass base coat (stippled and brushed, then wiped off high points with a paper towel)
• Applied Sculpt Nouveau Tiffany Green Patina while the bronze paint was still wet
• Allowed the patina chemical to react overnight with the metal in the paint
• Buffed the highlight spots with a fine abrasive pad (artificial steel wool)
• Two coats of Sculpt Nouveau Smart Coat Clear

Applied Clear PVC Cleaner overall and allowed to dry

fig. 5a

Applied two generous coats of Sculpt Nouveau Brass B metallic paint overall

fig. 5b

Applied Bronze B over the base coat of Brass paint

fig. 5c

Strategically wiped off the Bronze paint from areas I want to highlight

fig. 5d

Applied Patina chemical and let react overnight

fig. 5e

Buffed highlights with fine artificial steel wool

fig. 5f

Applied Clearcoats

fig. 5g

IN CONCLUSION

Apply three or four silicon self-adhesive feet under the dish to complete the project.

The seahorse ornament is borrowed from an earlier Vectric project called "Seahorse Corbels". The soap dish project was created to be a nice companion to the Seahorse Corbels. The corbels will support a wall shelf and the same aged metallic finish could be applied to the corbels to match the soap dish for a very nice, coordinated look.

The dished shell portion is a stock clipart 3D model included with the current version of Aspire. You can customize this project with a shell model you create yourself, if you wish. I've left all the components available in the project file so you can see how they were merged together to form the final composite layout and observe how certain special components were added for bit-limiting and machining purposes.

PVC was used for the dish for its waterproof properties and is an interesting material to carve. It is quite easy to machine - somewhat similar to High Density Foam (HDU). If you've never used PVC trim material before, you may want to try incorporating it into some of your own projects where appropriate (weather resistant signs and lettering are possible applications).

I hope you enjoyed making your Neptune Soap Dish!

Happy Carving!

Michael

The Seahorse Corbel Project available for Free Download from vectric.com, makes an excellent companion project to the Neptune Soap Dish!

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

BB's
from WalMart™

Items Purchased at Home Depot™ or Lowes™

• **1 x 6 PVC Trim Board**
• **Disposable Brushes and Paint Rags**
• **Clear PVC Cleaner and Clear PVC Cement**

**Metallic Paint & Finishing supplies
ordered from www.sculptnouveau.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 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.

Terms of Use: This Project and artwork is provided on the understanding that it will only be used with Vectric software programs. You may use the designs to carve parts for sale but the Files and/or Vectors, Components or Toolpaths within them (or any derivatives) may not be converted to other formats, sold to, or shared with anyone else. This project was created by Michael Tyler and is Copyright 2016 - Vectric Ltd.