

# Vector Art 3D – ShopBot PartWorks Project Files

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## Introduction

Vector Art 3D, Inc. (VA3D) are supplying a selection of their 3D clipart for distribution with the Partworks suite of software. In addition to the 3D models VA3D have also created some PartWorks (CRV) projects which utilize a combination of 2D and 3D data and have toolpaths calculated that are ready to output and run on ShopBot tools. Before using any of the files you should carefully read and make sure you understand the contents of this document and view the videos supplied. If you have any questions or concerns then please contact ShopBot support.

**ShopBot Support** email: [support@shopbottools.com](mailto:support@shopbottools.com)

Phone - Monday through Friday 9-5 Eastern Time: (919) 680 4800 or Toll Free on (888) 680 4466

In addition to this document there are a selection of Video files supplied which you can find in the folder named "Videos". The videos describe general information about all the files, an overview for each project on how to customize the data, a video on general toolpath creation for the 3D files using Partworks 3D and also a video on how to use the Vector Art 3D website to get free resources and to purchase additional 3D models and collections.

## Disclaimer

All CNC machines (routing, engraving, and milling) are potentially dangerous and because Vector Art 3D, Inc. have no control over how the models described in this manual might be used. Vector Art 3D, Inc. ShopBot Tools, Inc and Vec tric Ltd. cannot accept responsibility for any loss or damage to the work piece, machine or any individual, howsoever caused while using the models and project files. Extreme care should always be taken and the output from your CNC toolpath software thoroughly checked before sending it to a CNC machine.

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Web: <http://www.vectorart3d.com>

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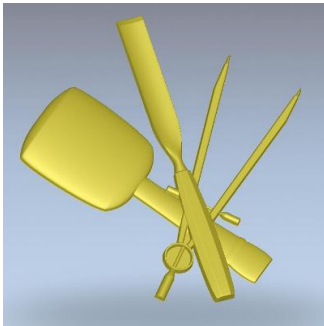
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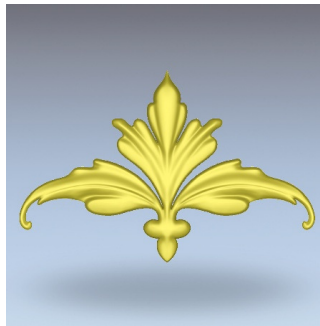
## Overview

Vector Art 3D, Inc. supply 3D models for the purposes of machining dimensional carvings on a CNC machine. Their full range of files and collections can be viewed at their webpage <http://www.vectorart3d.com>. Vector Art 3D Collections can also be purchased from ShopBot directly <http://www.shopbottools.com>.

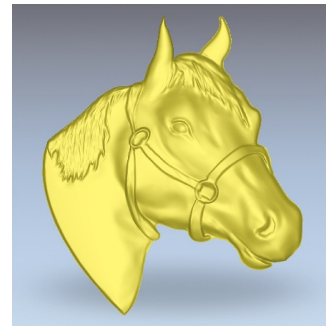
With the PartWorks suite of software Vector Art 3D are supplying 6 of their models in all 3 of their styles (raised, dished and hand carve recess). These models are supplied in a V3M format which will load directly into PartWorks3D. The following 6 models can all be found in the folder "3D-Models".



**Carvers Tools**



**Flourish 2**



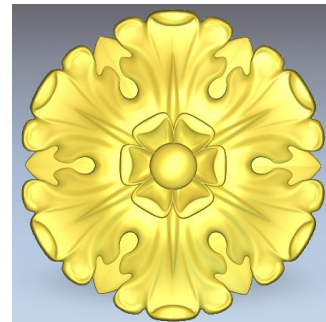
**Horse Head**



**Kids Blocks**



**Rope Border**



**Rosette**

All these models can be loaded into PartWorks3D, scaled, oriented and then roughing, finishing and cut-out toolpaths calculated to carve them individually on your ShopBot tool. The toolpaths can also be saved and imported into PartWorks to make complete projects using 2D and 3D data.

In addition to the 3D models the 2D vector outlines of each model are supplied in a folder named: "EPS-Outlines". These outlines can be used to layout files in PartWorks to get the correct size and position for 3D toolpaths you plan to import from PartWorks3D.

NB. Vector outlines (eps) can be downloaded for FREE from the Vector Art 3D website ([www.vectorart3d.com](http://www.vectorart3d.com)) for all their models, as with these examples these can be used to help layout projects before purchasing the 3D data.

In addition to the 3D files there are 5 "ready to use" PartWorks CRV files which are a combination of 2D and 3D data combined to make parts you can customize to make samples and salable parts with your ShopBot tool. These can be found in the "Projects" folder and are discussed in detail below.

## Project Files

The 3D models supplied here have been used along with some additional 2D data to create 5 separate projects in the PartWorks format (CRV). These projects are ready to use to create finished salable products and samples to help sell products to your customers. All the files for the projects can be found in the sub-folders relating to a particular project in the folder names "Projects".

All these design are created to be easily customizable so you can edit key information in them to make them personal to you or your customers. Each file is briefly described along with some general notes on all the files.

### General Notes Applying To All Project Files

All the files have the same general setup. That is YZ zero in the lower left hand corner and Z zero on the top of the block of material. You should check the sizes of the parts when you open them to see the size of the material which has been specified.

The speeds and feeds used for all the toolpaths are optimized for a PRS series machine and the ShopBot "Starter Bit Set" but all files and toolpath parameters should be checked carefully before you output the toolpaths to ensure they are appropriate for the material you are cutting and the tooling you plan to use. If you are not sure that the settings are safe for your particular setup then call ShopBot Support to discuss it with them.

These additional notes were supplied by ShopBot to include in this section:

#### Toolpath Notes

- 1.) Speeds as high as 9"/sec for 3d carving can be obtained when using an alpha machine.
- 2.) The speeds set in the example project files do not apply to machines without the V4G or Alpha control board. Please slow to 2"/sec. for any other ShopBot machine series.
- 3.) Set move ramp speed (VR) to .6 and move ramp rate to .1 to reduce the effects of ramping and speed up your file in the ShopBot control software.

Review all the videos before you start cutting any of these files as there is useful information on how the parts are setup, editing the data to customize the files and the best way to save the individual toolpaths into the fewest possible number of files.

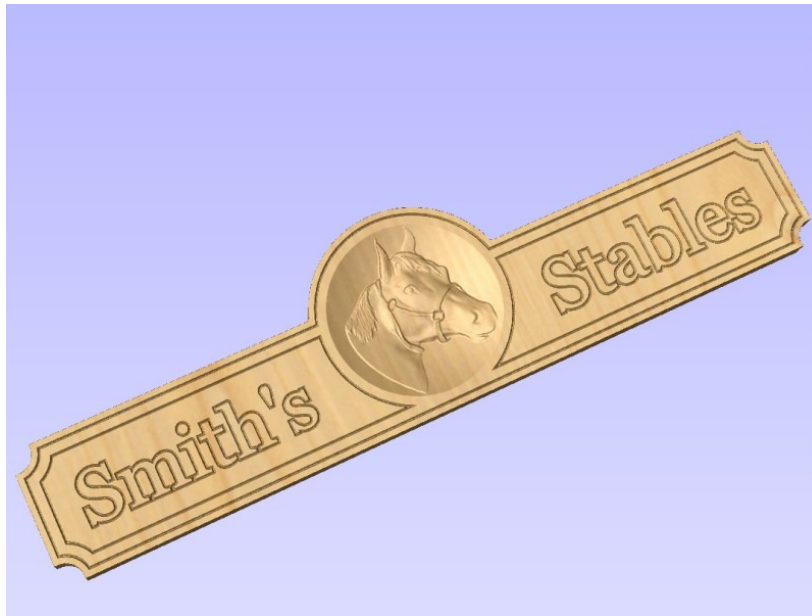
## Individual Project Descriptions

### 1-Corner-Block



This is a simple design for a corner block which uses the B style (dish) of the Rosette model. The same tool is used to cut the 3D part and also the decorative groove then a separate tool is used for the cutout toolpath. This is a good project to practice with especially if you want to test different Profile toolpath options on the Cut-Out, such as tabs, ramps or leads.

## 2-Stables-Sign



This sample sign shows uses a combination of simple Vcarved text and decorative lines along with a dished 3D model toolpathed in PartWorks3D with a simple cut-out border. The Video shows how the text can be easily edited to change the wording on the sign. You could also easily substitute a different 3D part in the middle as long as it was in a circular dish.

## 3-Birth-Plaque



This project is a great part to create for samples and gifts as well as a very sellable item. You can use it to commemorate the birth of a child with personalized name, birth-day and birth-weight. The video shows how easily these can be edited in the file. Once you have made a couple of these as samples then you can easily price it as you would know the material cost, time on the machine and finishing time. Just factor in standard business running costs and a profit margin to get your complete sale price. The design time to change the information on it is literally less than 5 minutes.

#### 4-Business-Card-Holder



This example can be used to create your own business card holders to give to important clients or to create personalized corporate gifts. You could even sell them to other people to hold their business cards perhaps on their desks. The file is designed to hold a standard 2" x 3.5" business card and also display a company name and website information. The videos shows how this complex set of toolpaths can be output in a few files and also how to edit the text.

#### 5-Business-Sign



This last project is a great way to make your businesses first sign – simply edit the text to reflect your business name and you're ready to carve it. The video shows how easy it is to edit the text. If you are not a woodcarvers then you may be able to find an alternate motif on the Vector Art 3D site for your business type. Of note in this file is the fact it combines two separate Vector Art 3D models, the rope border and the carving tools. Again the video has useful info about how the file is setup which will help to understand how important it is to set the 3D toolpaths up correctly before importing them into PartWorks.