

Compatible with the Current Version of



Welcome everybody to this month's project, The Bottle Tote.



This project includes two-sided machining and the carving.

The samples were made using Walnut, Maple and Butternut however, you might use woods of your own choosing. We recommend using any suitable hardwood. This is a nice project to give as a gift or

make for yourself.

The Instructions, crv. files and videos are found on Nextwave's Automation Website [nextwaveautomation.com](http://nextwaveautomation.com)

This project is aimed at the woodworker with moderate to intermediate skills. You will need access to the current version of V-Carve with updates, the tools and Supplies are listed below.

The main topics today are:

- Designing
- Machining
- Two-Sided Machining
- Finishing and Assembly

Project material list for Bottle Tote:

3- 9"x19"x.50" Hardwood Blanks

1- 9"x19"x.25" Hardwood Blank

Various grade of sandpaper

#### Project Tool List:

This is a 1/4" straight spiral up-cut bit.



It is used for the majority of my profile cutting. This is a spiral straight cut bit that ejects the chips upward. Gives a smooth finish with some surface chip out on some veneer plywood.



1/4" dia. 60° V-Carve bit

This bit is used for lettering and engraving. Can be used for slight chamfering on edges.

This is a 1/8" straight spiral up-cut bit.



It is used for the profile cutting. This is a spiral straight cut bit that ejects the chips upward. Gives a smooth finish with some surface chip out on some veneer plywood.

Sanding and finishing tools.

#### Project CNC Files:

- Bottom and Back.crv
- Dividers.crv
- Side and Front.crv
- Side and Handle.crv

#### See Video Files: [found on nextwaveautomation.com](http://nextwaveautomation.com)

- Bottle Tote Design.mp4
- Bottle Tote Machining.mp4
- Bottle Tote Finishing.mp4

#### Creating the Tap Files:

With the V-Carve software, open the project CNC files. Carefully review all the toolpaths and make necessary changes to suit your tools and machine. The toolpaths are currently set with tool, feeds and speeds that were used in designing the original project. Be sure to review them for your machine. Edit the tools and change the settings to fit you own machine and requirements. It is very important to recalculate all toolpaths after making any changes. Once having made the necessary recalculations for your own machine and tools, reset the preview, and then preview all toolpaths again to visually verify the project outcome. Create the tap files for your machine by using the correct post processor. Once satisfied with your settings, save the tool paths using the appropriate Post Processor for your machine. Check tool paths by air cutting the project or use rigid foam board to run a sample tool path. Now you're ready to make your own **Bottle Tote!**

#### Milling the Stock:



Mill all of you stock according to the material list. Clamp down to your blank to the spoil board. You will need a spoiled board for this project for the very fact we are going to drill through and have alignment holes for two-sided machining. Now, you are ready for machining.

#### Steps to Machining your project

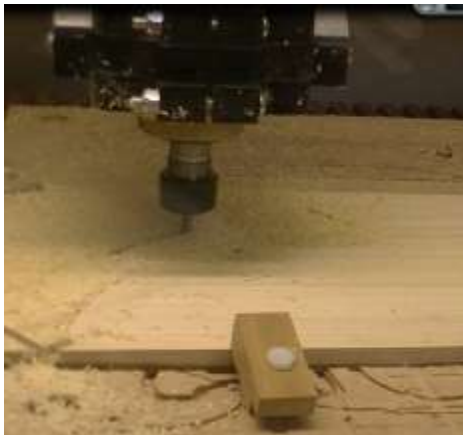
Now that you have all the files to machine the tote, Install the v-carve bit and then make sure it is firmly clamped in the spindle. Index the bit so the center of the bit is over the 0 x-y axis. The following is presented in stepwise progression.



**Step 1**, V-Carve or engraved the lettering using a 60°V bit. We set the Z Heights by using the touch plate as an illustration of the left. Load the program. We are now ready to run the V-Carve program.



**Step two**, now we load the VCarve program. Run the VCarve program. At about 17,000 RPM



**Step three**, load and zero out the z-height for the quarter inch spiral up cut bit. Load the profile program for the Side and handle. Run the program. At about 14,000 RPM.

**Step four**, load and zero out the z-height for the quarter inch spiral up cut bit. Then run the program for the side alignment pins.



**Step five**, zero out the z-height for the quarter inch spiral up cut bit. load the alignment holes spoiled board program. drill the alignment holes in the spoiled board. Flip over and secure our material to cut pockets on the backside.



**Step six**, Load And secure your quarter inch stock, Load your 1/8 inch Up-Cut bit, Zero out the z-height, load the divider program, run the program at 18,000 RPM .



**Step seven**, load your 1/4 inch stock securely, load your 1/4 inch spiral Up-Cut bit. Zero the Z axis on the top of the stock for your 1/4 inch spiral Up-Cut bit. Load the bottom and stretcher program, and run at 14,000 RPM.



#### Step eight

For the opposite side. Load your 1/4 inch stocks securely, load your 1/4 inch spiral Up-Cut bit. Zero the Z axis to the top of the stock for the 1/4 inch spiral Up-Cut bit. Loaded the side and front program. Run the program at 18,000 RPM.

We have now completed all the machining.

### Steps to Finishing and Assembling your project

#### Step one

With a trim router cut out all the tabs on all of your parts. Sand up all of your parts starting with 120 grit sandpaper going up to 320 grit sandpaper. Be careful not to sand away the details. Dry fit all your parts before final assembly.



#### Step two

After you've done all the sanding of all the parts now is the time to put finish on all of your parts. Be sure to mask off any area that is going to be glued, so that the glue adheres well. You want to get your finishing done at least on the inside before assembly otherwise it's too difficult to do after. We used CrystaLac topcoat for this project.





#### Step three

Assemble your dividers and install them to one side



#### Step four

Install the handle and the bottom to the dividers.



#### Step five

Glue, clamp and pin nail the stretchers to the sides.

Finish the outside of the tote. I spray 3 coats of CrystaLac finish. Sanding in between coats with 320 grit sand paper and wiping down with a damp lint free towel between coats.

There you have your finished tote to give to your friends or keep for yourself again you can personalize with any graphics or any types of woods this is a nice project for a weekend. See you in the next project.

Until then happy carving, thanks and make sure you support all of our sponsors and visit my website [silverbackwoodworking.com](http://silverbackwoodworking.com).



# Projects

## The Bottle Tote

Rick Frazier

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