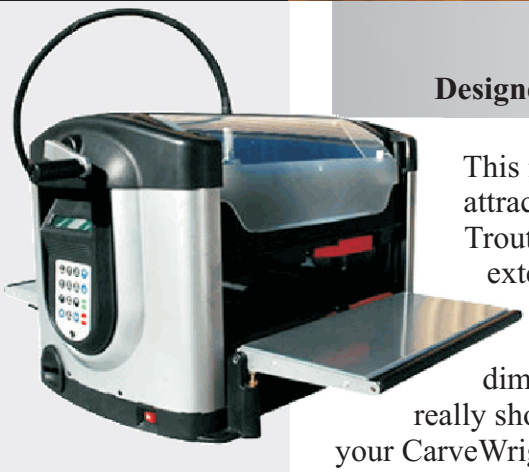
CARVEWRIGHT™ WOODWORKING SYSTEM

PROJECT TUTORIAL

June 2008

Trout Clock Project

Designed for CarveWright™ by Michael Tyler - www.carvebuddy.com



This is a project that is both attractive and functional. The Trout Clock project makes extensive use of double-sided carving techniques and yields a true, multi-dimensional appearance that really shows off the versatility of your CarveWright™ machine. The project is carved and cut out using just the two bits that were included with your machine. No other bits are required.

The finished piece makes a wonderful gift or a very nice addition to your *own* home decor! The project consists of eight pieces that are produced from a single board. The parts are assembled using common wood glue and fast-setting epoxy.

Main items you will need:

1) The Project File (included):
Trout_Project_1.mpc

2) Board with the following dimensions:
0.75" x 9.25" x 30.5"
(nominal 1 x 10 x 30.5" long)
NOTE: Do not use a board that is shorter in length than specified above.

3) 2" diameter clock kit insert

4) Wood glue and 6-minute Epoxy

5) Wood stain (or paint) and clear finish

Optional suggested items...

• A Dremel-type rotary tool with an assortment of abrasive bits, and 3M sanding wheels for minor shaping of parts and speeding up the surface preparation before applying the stain and final finish.

• An economical, hobby-type wood burner for adding and accentuating design details of your trout carvings is another option.

STEP 1
Start your Designer software and open the .mpc entitled **Trout_Project_1.mpc**. (Fig. 1a)

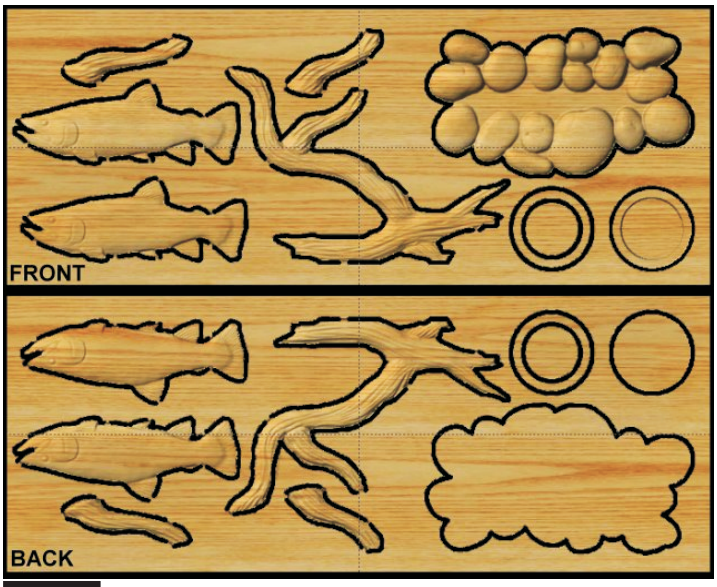


fig. 1a

All you need to do at this point is upload the project to your memory card. (File/Upload). When you upload, you may or may not get a pop-up window with an "Auto-Jig" warning message (Fig. 1b)

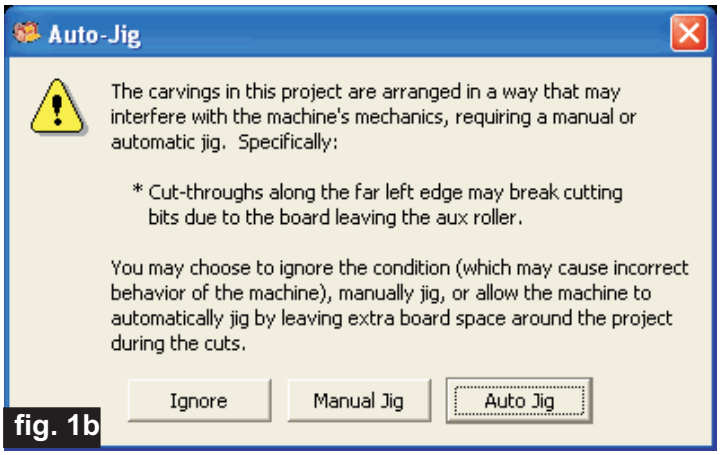


fig. 1b

If you do see the message, you may safely click on "Ignore" because our actual board will be large enough that it won't cause any problems at all. After the project is compiled, select "Best" for the File Quality setting The carve time will be a little over 6 hours...yes, this is a long carve since we are producing all the pieces on one board and carving on both sides. Click "OK" to upload the project to the memory card. Take and insert the card into your machine and load a board that measures **0.75" x 9.25" x 30.5"**. Turn on your machine and proceed with the standard project setup in Step 2...

STEP 2
You will see "Project Menu" on your LCD display. Press "1" ***or*** the green ENTER button for the Trout project. Then follow the additional prompts....

• **Stay Under Rollers** - press 1) YES

• Press **ENTER** to Proceed: Board (Back)

• **How to place on Length** - press 1) Center On Length

• **Cut Board to Size?** - press 2) NO

• **Select Carving Bit: 1/16" Carving** - Press the green ENTER button. The machine will move the bit holder to the center of the machine in preparation for the bit installation.

• **Load Bit:1/16" Carving** -Insert your 1/16" carving bit, then press the green ENTER button. The machine will go through a series of homing steps and then proceed with the carving process for the BACK of the board. (The back carving is always performed first.)

• **After it is done carving the back, you will be prompted to "Please Flip Piece".** Raise the head of the machine to remove the board.

• **Please Load Piece: Board -** Brush off the board and flip the board over width-wise, top-to-bottom (**NOT** end to end! see Fig. 2a). Put the board back into the machine (blank side up) and crank down the head.

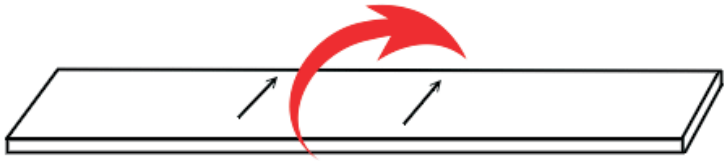


fig. 2a **Flip the board over width-wise**

• Press **ENTER** to Proceed (will measure board again)

• **Select Vector Bit: 1/8" Cutting** - Press the green ENTER button. The machine will move the bit holder to the center of the machine in preparation for the cutting bit installation.

• **Load Bit:1/8" Cutting** -Remove the 1/16" carving bit, and insert your 1/8" cutting bit, then press the green ENTER button. (continued next page...)

STEP 2 (cont.)

• **Select Carving Bit: 1/16" Carving** - Press the green ENTER button. The machine will move the bit holder to the center of the machine in preparation for the bit installation.

• **Load Bit:1/16" Carving** - Remove the Cutting Bit and insert your 1/16" carving bit, then press the green ENTER button. The machine will go through a series of homing steps and then proceed with the carving process for the FRONT of the board.

• **After it is done carving, you will be prompted to load your 1/8" cutting bit.** Take out the 1/16" carving bit, then load your 1/8" cutting bit, then press the green ENTER button. (Cutouts are always performed on the front of the board and occur last, after all raster carving is completed.)

• The machine will now proceed to cut out each part, in several passes as it moves around the outlines of every component. It leaves little tabs to hold each part in the board. NOTE: There will be a series of pauses, homing operations and resuming of cutting throughout this sequence of the cutouts. This is normal.

• When the machine is finished, remove your board. Turn off your machine - wait several seconds for the LCD to go blank, then remove your memory card.

NOTE: When we made our Trout clock project, I would stop every half hour or so, by simply lifting the clear cover. Then I vacuumed out as much of the accumulated sawdust as I could, closed the lid then pressed the green "Enter" button to resume carving exactly where it left off. Some folks don't like to use a shop vac because of fear of static electricity. If that's you, then just use a small sand box shovel and an old paintbrush and sweep out some of the sawdust buildup periodically, if you wish.

Here is what your actual board will look like at this stage...(Fig. 2b)

fig. 2b

• Now separate all the pieces free from the board using a utility knife or razor blade.

STEP 3

Now is the time to sand all surfaces and get the project ready for assembly and finishing. A rotary tool will speed-up the process, using a variety of abrasive wheels and bits as required. You can also use small files, sandpaper scraps, homemade ScotchBrite "wheels" and 3M sanding wheels (80 and 220 grit). I like to remove any excess material around the cutouts and blend the edges a little with my Dremel. That's optional and entirely up to you. Sand or buzz off the little "tab-nodes" left on the edges of each cutout part. You can use your rotary tool and various bits to touch-up and round-over each piece and add "grain" to the blank parts of the wood branches (top and bottom). Finish up by sanding and smoothing out any stray "fuzzies" left in tight crevices. (Fig. 3)

fig. 3

STEP 4

After sanding all the components, lay them out to prepare for assembly (Fig. 4a). I only used one of the small branches, but there are two available.

fig. 4a

Figure out how you want to place the branches and the trout in your composition prior to assembly. You can tweak the main branch and accessory branches by hand or with your rotary tool to make them "mate" together in practically any position you choose. Dry fit as you work to refine the small branches to fit nicely against the main branch. (Fig. 4b)

fig. 4b

Glue the clock holder bottom and top ring together using wood glue. Sand it smooth when dry and test-fit the clock insert, easing the inner cavity by sanding, as needed. (Fig. 4c)

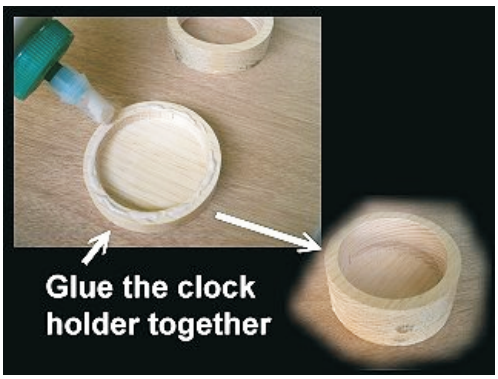


fig. 4c

STEP 5

Once you are satisfied with the fit, you will glue the small branches to the main branch using toothpicks as small dowels.

Drill holes for the "dowels" in the ends of the small branches with your rotary tool or a drill. (Fig 5a).

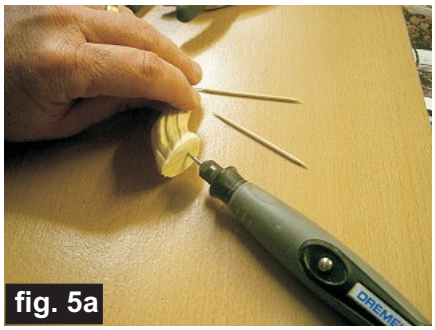


fig. 5a

Then insert short lengths of toothpicks into the holes. Use the points as guides for placing the "receptacle" holes on the main branch, and then drill them. (Fig. 5b).

fig. 5b

Remove the toothpicks, insert some glue into the holes, then reinsert the toothpicks and assemble the branches (Fig. 5c)

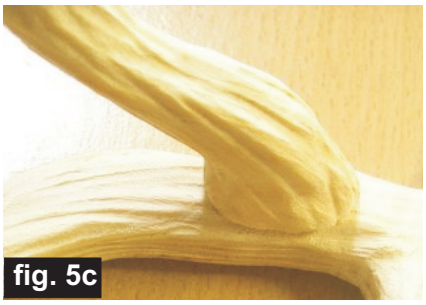


fig. 5c

STEP 6

Decide how you want to finish your project. It will look great stained, painted or a combination of both. I decided to use an inexpensive woodburner to add some details to my trout. I didn't strive to make my trout any particular "breed", but just added some dots, lateral line, and accented the gill, eyes and fins to achieve a sort of "generic" trout. Use your own imagination to create or accent the details!

fig. 6

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STEP 7
I decided to stain all the components with a light, Puritan Pine color to contrast with the wood-burned details. (I have grown quite fond of the Minwax stains and their Wipe-On Poly finishes.) Normally, I'll apply a very light coat of thinned sanding sealer, then sand lightly before staining or painting my projects. As a prep to staining, it evens out the stain absorption...as a prep for painting, it helps make the paint apply more easily. After the stain (or paint) is dry, apply a few coats of poly before final assembly. I placed the pieces on a metal mesh and rack while drying - the top-view almost looks like a BBQ grill! (Fig. 7)

fig. 7

STEP 8
Since all the pieces already have the final finish applied, we'll use quick-set Epoxy instead of wood glue for the final assembly.

Drill holes in the bottom of the main branch and use toothpick dowels to attach to the "rock" base. Use the points of the picks as a guide for drilling holes in the base (Fig. 8a & 8b)

fig. 8a

fig. 8b

STEP 9
Remove the toothpicks and trim to length, then mix up a small batch of Epoxy. (Fig. 9a)

fig. 9a

Insert some Epoxy in the holes, re-insert the picks and attach the branch assembly to the base. Hold in position until set. (Fig. 9b)

fig. 9b

STEP 10
You will attach the trout to the branches in the same fashion. It's just a little trickier to choose the locations for the "dowel" holes and drill them at the appropriate angle - you pretty much just have to eyeball it! Experiment with different locations for your fish, then mark the body where you will drill a hole for the dowel(s). After drilling the holes in the bodies, insert a toothpick, mark the branch using the pick as your guide and drill the holes in the branch. Mix another batch of Epoxy, apply it into the holes and attach the fish, one at a time. Hold until set. (Fig. 10)

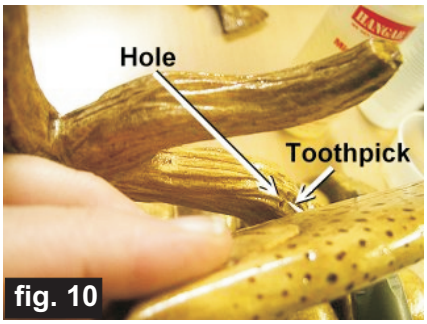

fig. 10

Epoxy the clock holder wherever you wish, and slide in the clock insert to finish the job!

IN CONCLUSION
Feel free to create your own variations of this project... it could become a business card holder by adding a small box, or make it a fancy pen holder. I hope you'll have a great time customizing this project for yourself!