



Building a Morphed Basket Dave Van Ess

I wrote an article about “nested baskets” that was published in a holiday issue of **Scroll Saw Woodworking and Crafts** magazine. I received much feedback from readers, mostly positive and all constructive. The common themes of repeated complaints were:

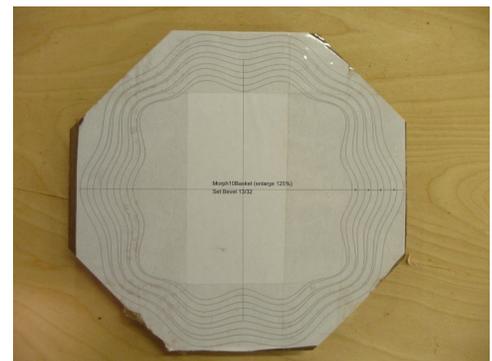
- They required too many angles.
- Cutting the inside to a ring required cutting the cutting through the ring and gluing it back closed.
- The design required you to make three baskets.

Well this is my attempt to deal with these complaints. I call this a morph basket. It is circular at the top and becomes square at the bottom. (*It morphs from a circle to a square.*) There is only a single angle is used and the pattern makes only a single basket and required only a single piece of wood.

All you need to get started is a piece of $\frac{3}{4}$ ” by $10\frac{1}{2}$ ” by $10\frac{1}{2}$ ” piece of knot free hard wood. I used walnut for the basket shown in this article but, cherry would be a good choice and so would oak or rock maple. I figure maybe an hour of cutting, 30 minutes of construction, and 15 minutes of finishing and you have a completed project.

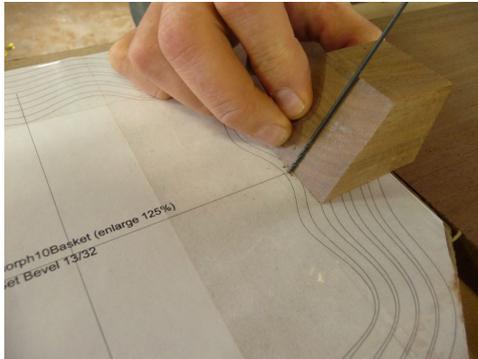
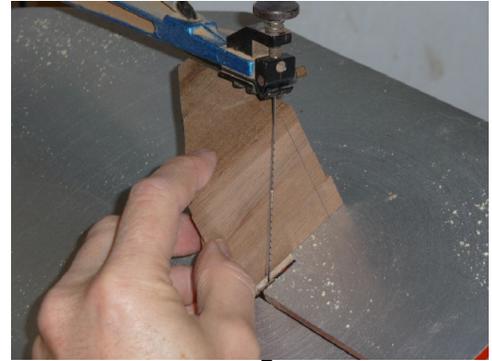
1 Make pattern and attach to the wood

You will need to generate the pattern. It is done as part of the tutorial for **PolyDraw**. **PolyDraw** is a software tool to assist in the design of bowls and baskets. Attach the pattern to the wood with spray adhesive. Cut off the corners to makes an angle block. Applying clear packing tape on the pattern serves as a blade lubricant to help reduce the chance of burning the wood. Use a center punch, scribe, or awl to mark the four drilling locations



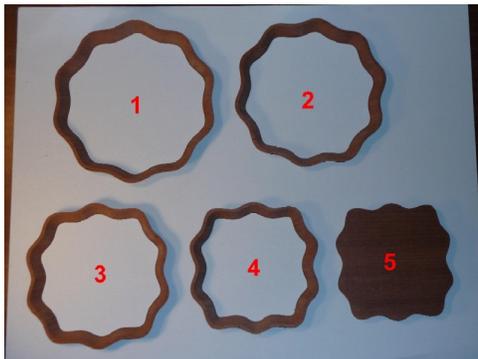
2) Build an angle block and drill entry holes.

Glue up the four corners to make a 3" high block. Measure about 1/4" from the edge and use a square to mark a line perpendicular to the stock. Measure in and make a mark at 1 3/4". Draw a line from the top of the line to this mark and you now have your angle. *(I use a stack four pieces to get high angle accuracy. It would be fine if you used a stack of two pieces with a distance to the angle line of 7/8" or a*

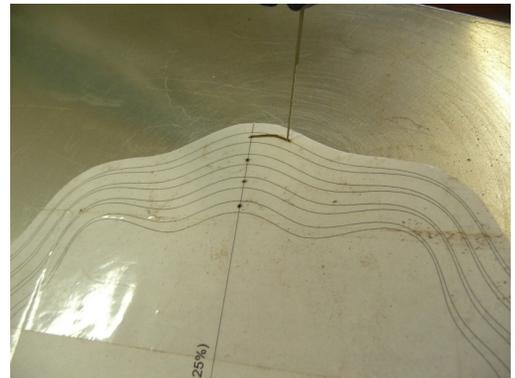


single piece with an angle distance of 7/16".) If necessary, cut the top off the block to fit under the saw arm. Place the block on your saw and use it to set the angle. With the angle set cut a piece of scrap wood and use it to set the entry hole angle on the wood. Use a 1/16" bit to drill the four holes marked on the pattern.

3 Cut the rings



With the angle set start cutting the rings. My choice of blade would be the Olson #9 Precision Ground Tooth (PGT). There are nine cuts to be made that result in four rings and a base.



Viewing all the rings it is interesting to see the subtle transformation from circular to square. Clearly the

first ring is circular and the second is mostly so. By the third it is definitely not circular and it is pretty much square by the base. I call this morphing.

4 glue the rings together

Start by placing the top ring face down. Place the second ring on shifted 90° clockwise and mark where the rings intersect. Briefly set aside the second ring and add drops of thick gap-filling CA glue to the intersection points. *(Not at the actual line but the point where the middle of both rings intersect or about half the thickness of the ring.)* Place the second ring and hold until the glue dries. With a CA glue accelerator this is only about 10 seconds. Shift



the glued rings 90° degrees counterclockwise. Place the third ring on top again with a 90° clockwise shift. Repeat the process until all four rings and the base are all glued. The rings must be shifted 90° degrees because the squarish shape they take on. *(I find when people glue stacks of rings they tend to favor one hand over the other and not get the ring perfectly aligned. If the error is $\frac{1}{64}$ " per ring, gluing four rings could cause a total error of $\frac{1}{16}$ ". By shifting the glued basket while adding rings, the error is equally distributed.)*

5 Apply the finish

An oil finish is the best for object meant to be touched. I suggest a natural oil finish with little or no accelerators. Apply the oil to the basket, wait maybe five minutes, then wipe off the excess finish. Baskets not meant to be touched can be left unfinished allowing a natural patina to develop with age.



Materials:

- $\frac{3}{4}$ " by $10\frac{1}{2}$ " by $10\frac{1}{2}$ " wood of choice
- Spray adhesive
- Thick, gap-filling cyanocrylate (CA) glue
- Accelerator for CA glue
- Tung oil or finish of choice.
- Sandpaper
- Olson #9 PGT skip-tooth blade or blade of choice
- $\frac{1}{16}$ " drill bit and drill