

Segmented Christmas Ornament



This is a simple technique I use for a cool little Christmas ornament. You don't need any fancy math or very special tools. I'll show you the steps I use for this project and you can decide for yourself how they should be modified for your needs.

As always- this is just one way to do it and there are no doubt different and probably better ways. So please feel free to take what you can and use this as a guide to other possibilities.

Step 1- Cut two boards of contrasting color. Here I've used Bloodwood and Maple. Don't forget the veneers if you have them. They really add nice details.



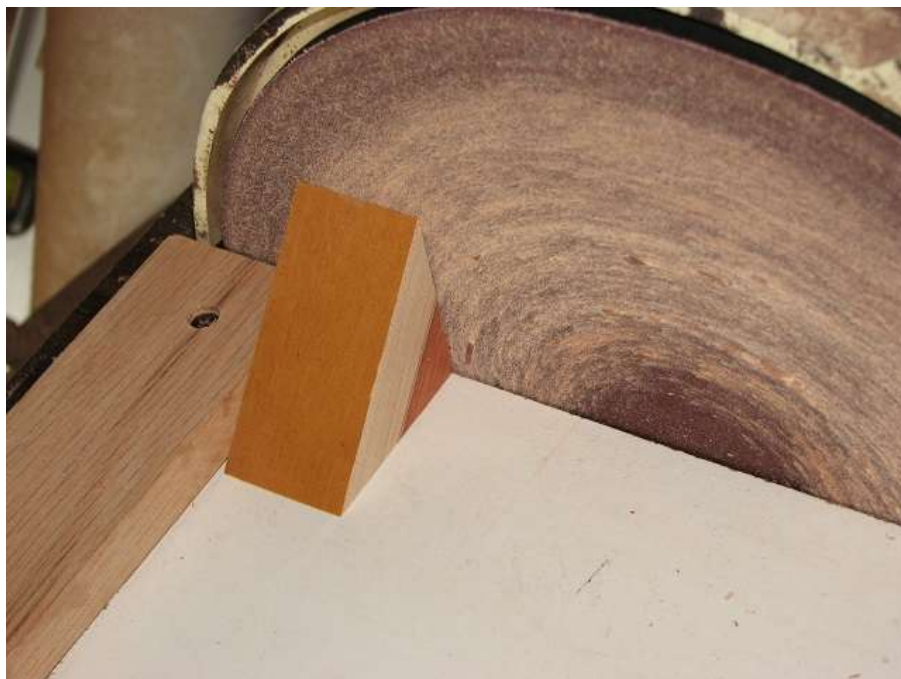
Step 2-Using a miter saw I make 45 degree cuts to give me triangles (each one is a quarter of a block design).



Here are four consecutive cuts placed together.



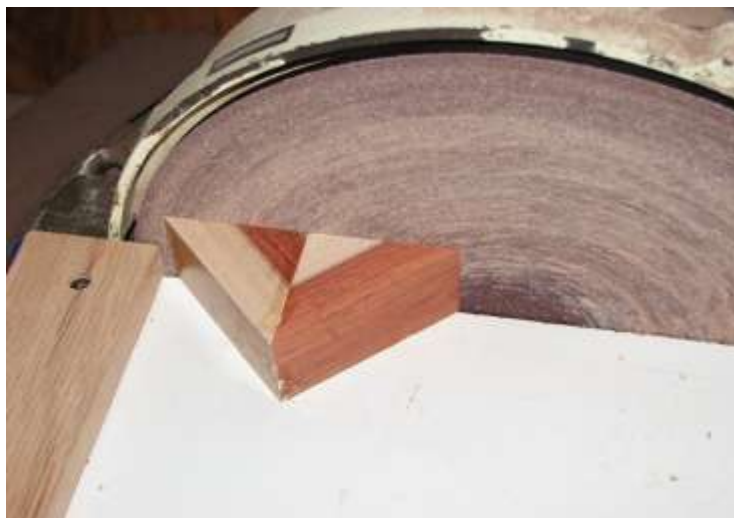
Step 4- The next step is to sand one side of each segment. It is not necessary to sand both sides at this point. I use a disc sander with a bed as close to 90 degrees as possible, but all you really need to do is sand the surface smooth for a good fit.



Step 5- Glue two halves of the four together at the sanded edge, aligning the veneers on BOTH sides of the segments. I use Titebond original glue and apply enough to lightly cover both surfaces entirely and then rub the joint until I feel them start to adhere, then align the veneers and let sit.



Step 6- After the glue has dried sand the two glued segments on the sander to create a smooth flat surface on the open faces. Then glue the two halves together, again, aligning the veneers on both sides.

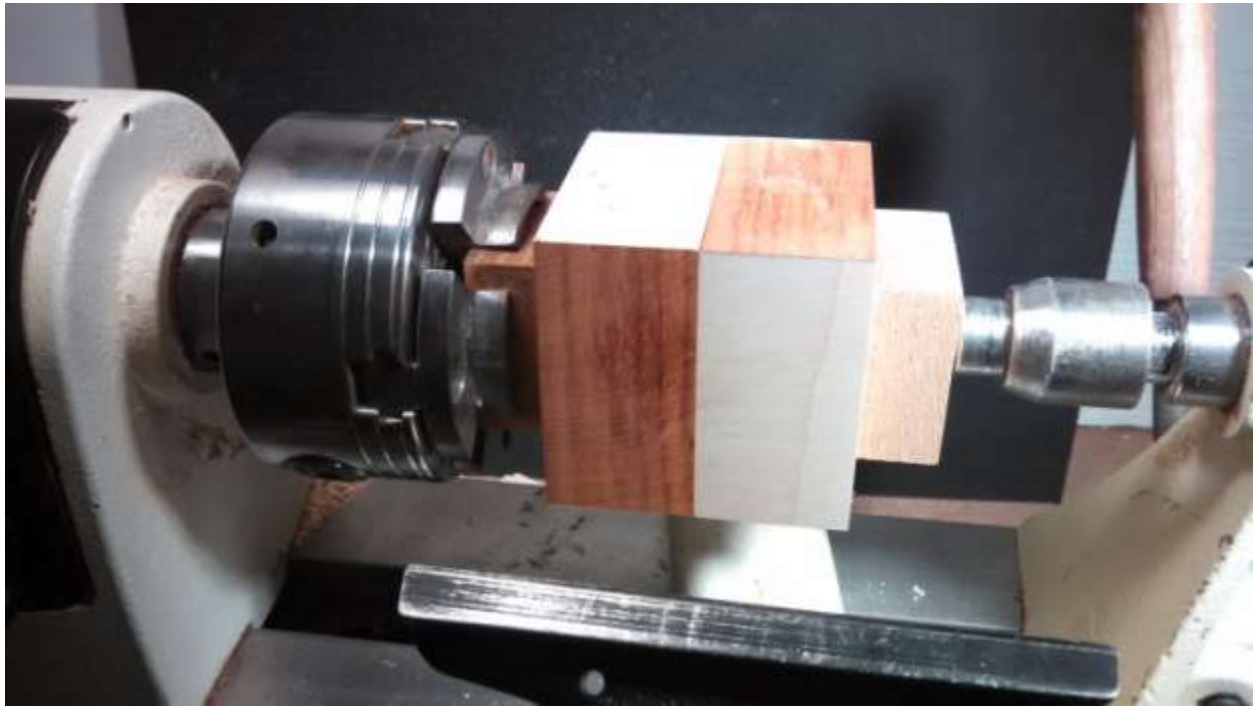


The block on the left has been sanded, glued and is ready for attaching a waste block for chucking. On the right side of the photo you can see I've glued on a waste block to grip that half of the ornament in the chuck. This block is exactly 2" square and lined up with the seams of the segments to insure that I'm perfectly centered on my design. This will be done to both halves. Your waste block should be sized to fit your chuck.



Step- 7

I now have both halves in the lathe and centered. **DO NOT** glue these together yet! They will be shaped between centers and then taken apart for hollowing.



Step 8- Now we can start turning the segments into the shape we want. I turn only the middle to final shape and leave the ends kinda thicker to give me more stability when I hollow the insides.



Step 9- Now that I have the basic outside shape I can hollow each of the halves to the wall thickness I want. I usually go with $\frac{1}{4}$ " to $\frac{3}{16}$ " wall thickness. This gives the ornament sufficient strength and yet is light enough to feel good in the hands and light on the tree. I don't worry too much about the thickness of the top or bottom (you sure don't want to get too thin and if it's a bit thicker there, no one is likely to notice or care).





Step 10- Now that I have both sides hollowed out (see photo below) I cut more veneers to insert in between the halves. If using more than one veneer (example: maple/walnut for contrast), I will keep the grain running the same direction with the veneer sheets. This keeps all the end grain of the veneers on the same sides. The end grain will darken more when the finish is applied and if they are oriented together they will darken together. End grain maple will look the same as face grain walnut so in order to keep the contrast I orient the grains the same.



Be sure to apply good pressure on the veneers and keep them clamped till the glue is good and dry.



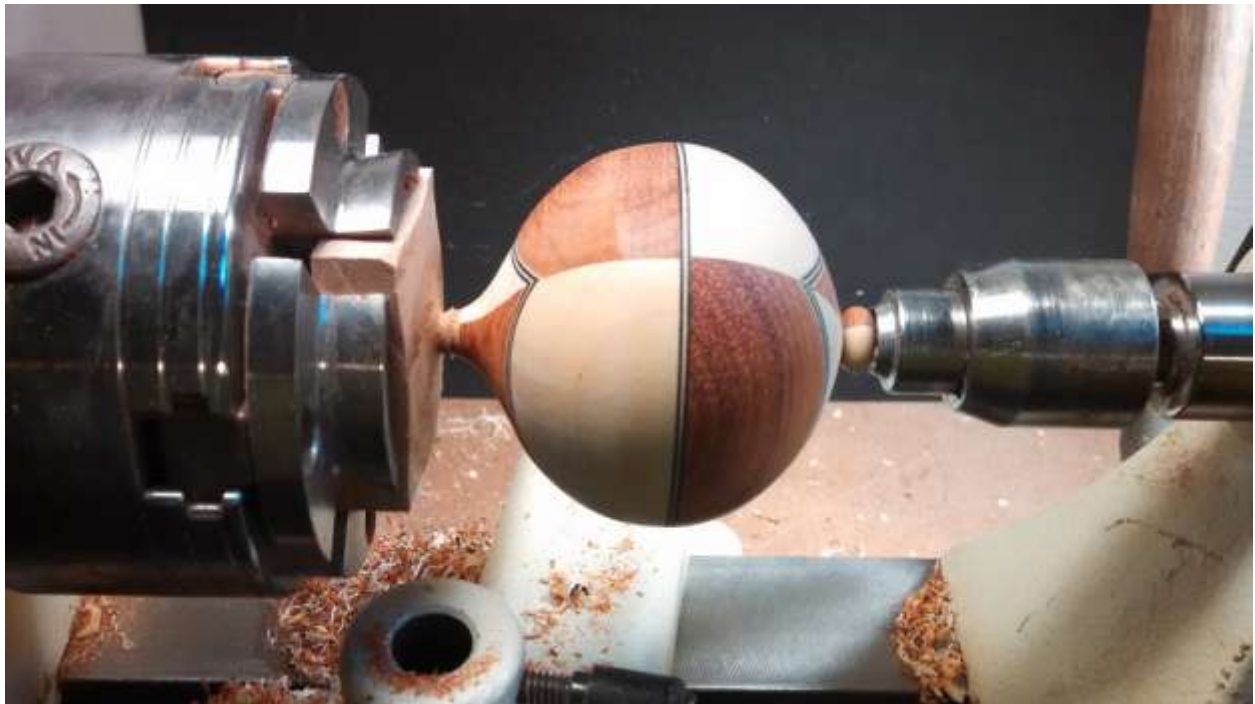


Step 11- After the glue has completely dried turn away the veneers and complete turning the top of the ornament. I don't worry about the veneers on the inside- if anyone notices them they have broken your artwork and should serve jail time.



I would completely sand the upper half of the piece at this time while it's easy to get to.

Step 12- Now you can bring up the tailstock to hold the piece firmly between centers (this will also put a little impression in the top so you can easily drill for a hook). Finish turning the bottom half with light cuts. I usually turn all the way into the waste block and finish the point after rechucking in the next step. You can also sand any areas that you can reach now that you have turned away more wood.



Step 13- I now use a vacuum chuck to hold the piece from the top. If you don't have a vacuum system, you can still use a chuck made with a PVC coupling mounted into a block of wood (see photo below). Just true the edges of the coupling and use masking tape to hold the ornament. We are only using very light cuts at this stage and sanding, so this should be more than sufficient to hold piece.



Here you can clearly see the PVC chuck and tape job. Once the ornament has been taped tightly, the tailstock can be pulled away to provide ample room to finish the bottom.



Here you can see the straight veneers and board edges appear as curved elements in the ornament.



Here's a better shot of the PVC chuck. I cut a round groove in the wood block to accommodate the coupling and attach it in with Polyseamseal- an adhesive caulk that I use for lots of stuff. Very good adhesion. I think the clear has better holding power but have no scientific proof. It's not a bad idea to sink the coupling deep enough to also get a few screws thru the wood and into bottom of the coupling for extra strength.

I hope this helps. It's a very easy way to kinda dabble in segmented woodturning without the math.

Notes: The dimensions of my wood pieces were roughly $3/4''$ x $1\ 1/2''$ x $16''$. The only critical dimension is- both contrasting wood board should be of exact thickness so they align properly when matched together.

Have fun!-Robin