

Strips cut and ready to be mitered
for making the the tubes



Mitering the strips



Some of the tubes glued up



Cut of 48 straight segmentsm for each ring
Not Shown

Then glued to straight segments together in the
proper orientation to create 24 segments to be
miteres later.

Segments for large ring
glued together





Cleaning up the sides after gluing
straight segments together.
Next time I would use a 36 Deg
stop block to keep all sides the
proper angle.



Cutting the first side of the 24 segments the blade is tilted at 7.50 deg



This is how I hold the part when cutting the angles My hand is anchored on the jig



A better look at the jig ..
This method is only good if your ring profile is no higher than what your table saw will cut



This is the second cut the fixture has a 7.5 angle on it to accept the previously cut side of the segment and the blade is still at the 7.5 deg



A closer look at the jig for the second miter cut. Note the 7.5 deg angle on the jig top to bottom



Gluing up segments into 1/2 rings

I didn't get pictures of the rings glued up into halves before turning then flattened and glued together adding a piece of veneer in the joint. below is how I rough flatten them.



This is 1/2 of a medium diameter ring being flattened to the sander



This is how I fine tune the ring halves this is after the ring has been turned and sanded. The same method is used before gluing up the unturned ring halves



Large ring 2 halves glued up with veneer piece in joints



Medium ring halves showing
Veneer piece that goes in the
joints



Here are the small rings being glued up

**Large ring mounted on lathe for turning 3
sides**





Back side of large ring mounted on the lathe.
There is a hub through the center to center it.



Large ring front disk removed
and 4th side turned.
It is hot gluen on the back side



Large ring hot glued for making turning the 4th side

One of the medium size rings mounted for turning 2 sides



Medium ring back side hot glued for turning
third side



Front disk removed for turning 3rd side and as much as possible turn the inside



Ring reversed using Cole Jaws to finish turning and sanding. The sanding should be done complete after each surface is turned on all rings.



Getting ready to turn the small rings



Small ring mounted and ready to turn and sand 3 sides



A look at the back side



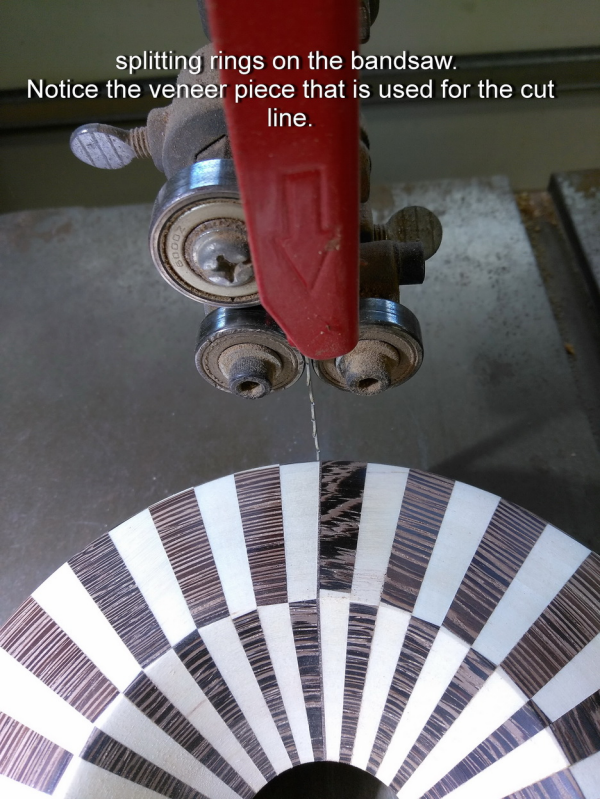
Using Cole Jaws to turn and sand sides 4 & 5



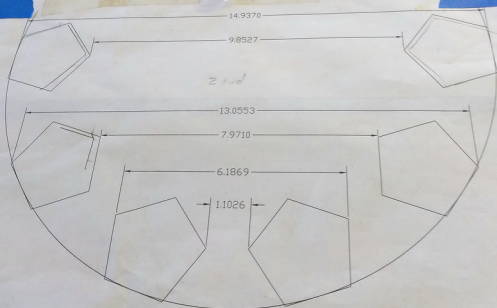


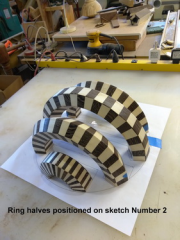
All rings turned and sanded and ready to be cut
into halves in the bandsaw

splitting rings on the bandsaw.
Notice the veneer piece that is used for the cut
line.



Lay out used for determining the diameters of the rings. A second layout should be made based on the final diameter of the large ring this will give you the correct diameters of the medium and small rings makes second layout before turning the medium and small rings. You may want to do this before cutting the segments for the medium and smaller rings especially if you large ring is a lot smaller than you had planed. The Outside Diameters of all rings is critical to make it work.





Ring halves positioned on sketch Number 2



Another look



Another look



Set up for 4 identical glue ups. The fixture holds the parts at 36 deg to each other. Glue small ring to medium ring as shown. You will need 4 of these all the same.



Before gluing on the small half.



4 Sub-assemblies ready for the next assembly



Gluing up large half to
subassembly 2 each the same the
spacer thickness is the same as the
inside diameter of the small ring.
You may have to adjust it a bit for
the best fit.

**Glue on the other sub-assemblies as shown.
You will now have 2 identical half assemblies
which need to be glued together at a 36 deg
angle.**





2 halves ready for final glue up
of 2 joints



First of 2 joints has been glued this is the final joint being glued up using blocks hot glued on either side of joint. You may have to sand the surfaces of the last joint a bit to make them parallel, I use a thin piece of metal with sandpaper stuck on both sides and work it back and forth. the flatter you have your ring halves the less you will have to sand.



All joints will need some sanding and blending. It is best to do this after each glue up process