

## Building a Chevron Feature Ring

### Jim Hokanson

After a couple of unsuccessful attempt at this, I talked with David Gady. In 15 minutes, David got me moving down the correct path. He also recommended Malcolm Tibbetts book, "The Art of Segmented Wood Turning". There is a chapter that describes how to make a chevron ring that also helped with my understanding. Thanks to David for sharing his knowledge!

Now for the steps:

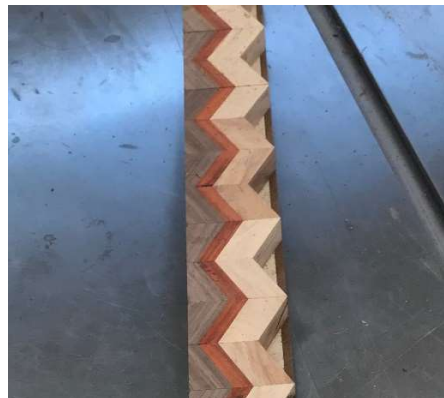
1. I made an assembly of three species of wood, 48" long, glued with Tight Bond II, and clamped with a ton of clamps on a simple jig that I built from aluminum angle stock. The wood and widths were:
  - 3/4" Hickory
  - 3/8" Padauk
  - 3/4" Walnut
2. When the assembly has dried, run it through a planer or drum sander to even out the faces. Then cut the assembly at 30 degrees into strips that are a little wider than half the segment edge length (SEL) of your bowl design. The SEL of My bowl design called for a feature ring with an SEL of 2.3". To give me some room for error, I cut the assembly at 1.25" at 30 degrees.



3. Layout the strips you just cut in pairs. Flip one strip in each pair to make a chevron. Glue two strips to make a chevron. (see picture) Make a few more chevrons than you'll need for your feature ring. Just in case. I made 14 chevrons, but my bowl only needed 12.

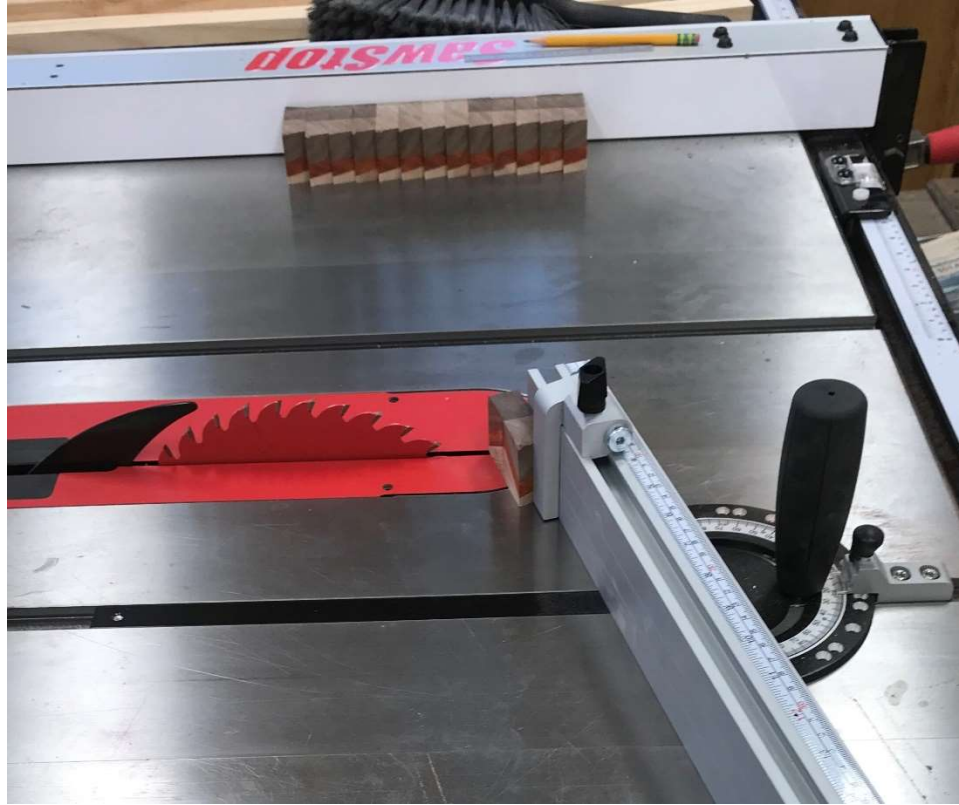


4. Each chevron needs to be trimmed to remove the 'pointed' parts of the chevron assembly. Malcolm Tibbetts suggested a method that produces uniform segments. Get a piece of plywood or MDF that is as wide as your chevron assemblies and long enough to hold all of them side by side. Put two strips of double sided tape running the length of the MDF. Then stick the chevron assemblies side by side on the MDF. To align them well, hold the MDF against your saw table fence, and stick the chevrons with the 2 leg side tightly against the fence. If you do this well, you should see that your chevrons line up.
5. Now cut off the side of the chevrons that has two legs. In my case, the two leg side was walnut. I left about 3/8" of walnut which matched the width of the padauk center.
6. Then flip the MDF around and trim of the single point side of the chevrons. In my case this was the hickory side. Again, I left about 3/8" of hickory. That left me with 14 square chevrons, each about 1-1/8" high and 2.5" wide.



7. Remove the chevrons from the MDF.
8. The chevrons need to be cut to trapezoid segments. For a 12 segment feature ring, I needed to cut 15 degree angles on two sides of each chevron pair. This was not possible or safe on the wedge

sled. So I bought a Wood River production miter gauge. This has a stop that can be used to make sure cuts are repeatable. This gauge has positive stops at 22.5, 430, 45,60, 90 degrees, but not at 15 degrees. So I cut practice segments and used an digital angle gage to establish the 15 degrees. I later took the Wood River mitre gage back to Woodcraft, and they let me trade it (and a few dollars) for a Incra 1000 SE.



9. I needed the finished segment to have a SEL of 2.3". I used the centerline of the chevron as a reference. I made the 15 degree cut on the right edge of all 14 segments, 1.15" from the center line. I flipped them over and adjusted the production stop to make the second 15 degree cut 1.15" from the centerline. This is the most critical step for proper alignment of the chevrons.
10. Dry fit segments and hopefully you will have a nice alignment of the chevrons all around the ring.

