

Creating a LAZY SUSAN

< Having Fun with Triangles >

By Donna Askam

I saw a Lazy Susan similar to this for sale on Facebook Marketplace for \$1,000, and I thought to myself "I think I can make that..." and so I did, and now you can too. For purposes of this session, I will be referring to the parallelograms as "triangles" because it's just easier. Dave says the correct terms are rhombus or rhomboid.

If you don't want your project to be this large or want a different pattern, experiment with dumpster wood to see how big you want your "triangles".

I began by ripping boards into strips at 1-1/2" wide, and used 5 different kinds of wood. I suggest drawing up a plan to determine how many "triangles" will be needed of each wood.

Next, bring your 1-1/2" strips of wood to the chop saw. Set the angle at 45- degrees. You will want to set up a stop using a clamp and piece of scrap wood. Again, using dumpster wood first, cut a sample "triangle" and adjust the stop as necessary to achieve the desired length. Once you have it where you want it, start cutting your 1-1/2" strips of good wood into the number of "triangles" needed for your design. Be sure to hold the wood strip flat against the chop saw fence so the cut angle is consistently at 45-degrees. Do not lift the chop saw until the blade comes to full stop – lifting it while the blade is turning may cause the piece to come flying out.

Once you have all your "triangles" cut, you can take them to the glue room. Take your first 8 pieces pieces and glue them together making a starburst for the center. Secure with a large rubber band and let dry for 20-30 minutes. Remove the rubber band. Glue the next ring of 16 pieces, secure with an even larger rubber band and let dry. Once you get past this, point, the rubber band method no longer works. I glued the remaining pieces and held them in place by hand which is very time consuming. It was at this point I understood why some was selling a Lazy Susan online for \$1,000.

Squares: I added some squares to my design. In this case, a square is really a square and not a misapplied term like "triangle". You should wait to cut your squares until the "triangles" are glued in place so you can measure exactly what size the squares should be. So even if you already know the wood you want to use for the squares, do not cut them into strips or lengths until you reach this point.

Once you have glued your entire board and the glue has dried overnight, sand the board in the TimeSaver. Create wood filler from sawdust and glue and fill in any gaps. Wait for the wood filler to dry overnight.

Now is the time to determine the shape for your Lazy Susan. You may want it to be round or may choose to create an octagon (8-sided stop sign). If you want it to be round, cut the board on a band saw using the #18 jig. Mark the center of the board on the bottom side and drill a hole to fit the width and depth of the "pin" on the jig. Then adjust the jig so that the pin is the desired distance (radius) from the blade. Cut the board slowly by spinning the board 360-degrees.

Perform the finish sanding by hand or using an orbital sander. Apply the desired finish (cutting board oil, polyurethane, etc) at home. Secure a turntable on the bottom with flathead screws and you're set for dinner or game night.

Gluing and Assembly Techniques

By Dave Owen

I saw Donna holding her glued pieces together by hand and I thought "there must be a faster way of doing this".

I had a few existing strips of wood that were 1-3/8" so I used those and ripped a few more on the table saw. I made a stop for the chop saw that provides a larger contact surface and holds the wood tight against the fence. Using the stop, I cut all my pieces 3-1/2" long. I will be referring to these shapes as "rhomboids" because it's more accurate than "triangles".

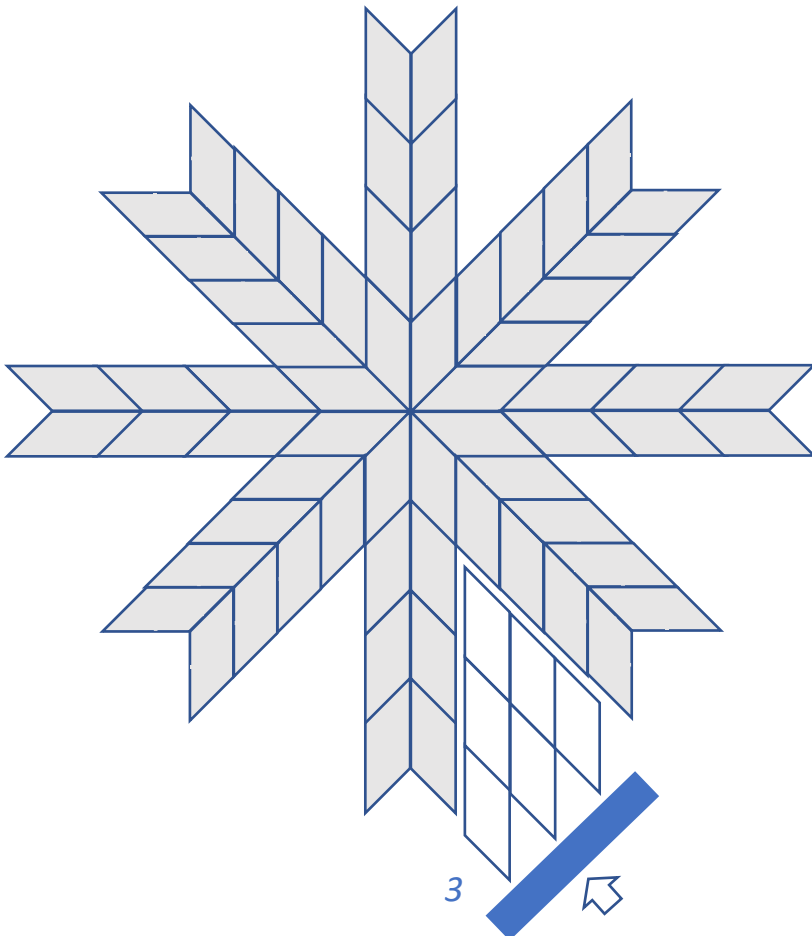
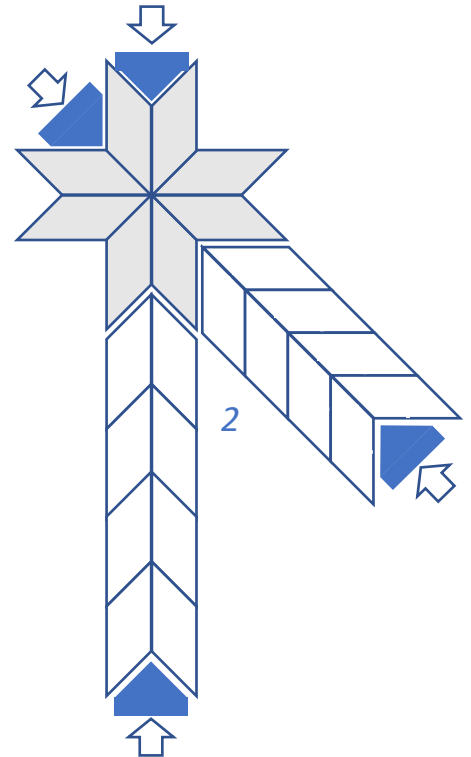
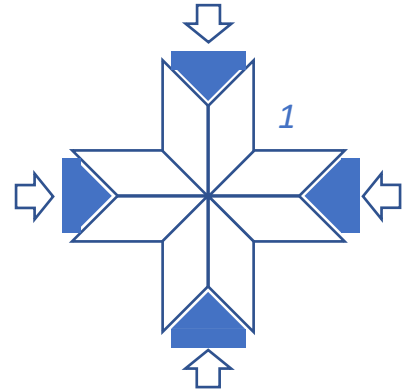
I built a gluing jig that allowed me to glue and clamp 4 pairs of pieces at a time. I waited 30 minutes for the glue to set up, removed the 4 pairs, and then started over with another 4 pairs. I soon discovered that my jig was specifically created to glue side X to side X and did not work for gluing side Y to Y. So I made a second gluing jig for that.

1) I glued 4 of the pairs together making a starburst for the center. The end pieces are used to provide a flat clamping surface and are not glued.

2) After the starburst had dried. I glued and clamped the remaining pairs into arms that extended from the center.

3) After completing the arms, I glued and clamped groups of pieces between the arms in batches using scrap pieces of wood as a clamping surface.

Once you have glued your entire board and the glue has dried overnight, continue with the sanding, shaping and finishing as described by Donna.



Evolution of the Gluing Jigs

By Brian Bell

I watched Dave finish the assembly and sanding of his board and I thought “I’m interested in making one of those too”. So I started asking him questions and he showed me his two gluing jigs. I started making my own jig but soon realized Dave’s jigs were for a specific width of 1-3/8”, a specific length of 3-1/2” and a specific cut angle of 45-degrees. His jigs lacked the flexibility to handle a variety of sizes. I then questioned why he was gluing the pieces into pairs when he could potentially glue 10+ pieces simultaneously into a full arm.

These discussions led to the creation of jig 2.0 which has the flexibility to handle a range of widths and lengths. It can also handle cuts angles other than 45-degrees. The assembly process remains pretty much the same – glue and clamp the arms together forming a starburst at the center, and then glue and clamp the pieces between the arms.

Once you have glued your entire board and your glue has dried overnight, continue with the sanding, shaping and finishing as described by Donna.

Accurate, Clean & Consistent Cuts

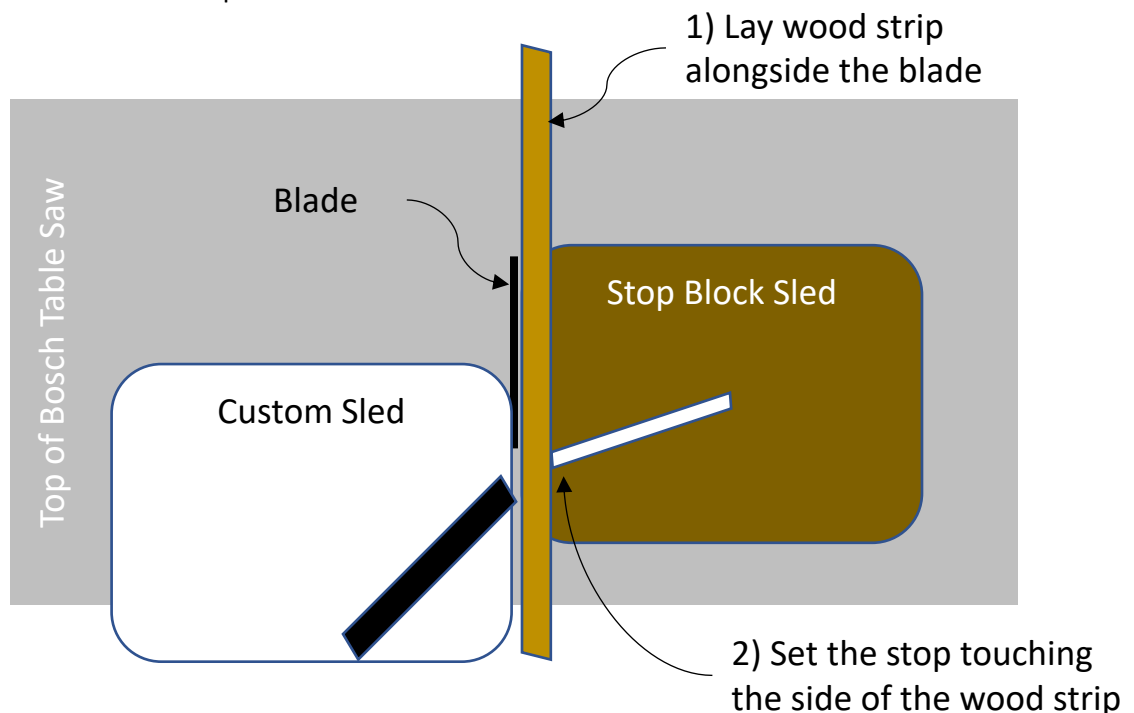
By Brian Bell

Three keys to a great Lazy Susan project are 1) creating clean cuts, 2) creating consistent piece sizes and 3) gluing them with tight seams. We just discussed the evolution of the gluing and assembly process but let’s revisit the cutting process.

Some of the club’s members make segmented bowls on the wood lathe. Most cut their segments on the table saw using a segment sled because of the accuracy and repeatability obtained using that cutting process.

Our current inventory of segment sleds do not support angles greater than 30-degrees, so I built a sled for the Bosch portable table saw that supports a range of cut angles including 45-degrees.

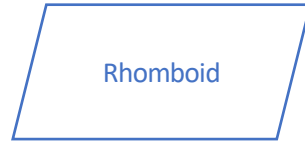
The sled setup to create a Rhombus (slanted square) is simple: 1) lay one of your strips alongside the blade and 2) adjust the stop to touch the side of the strip.



GEOMETRY of a LAZY SUSAN

by Dave Owen

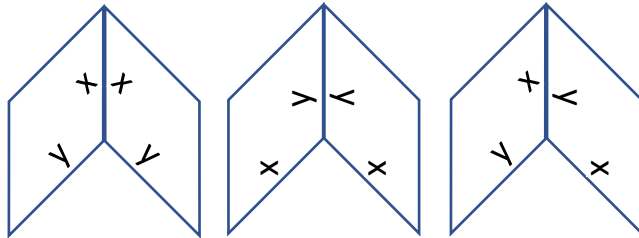
Parallelograms are shapes that have four sides with two pairs of sides that are parallel. The four shapes that meet the requirements of a parallelogram are square, rectangle, rhombus, and rhomboid. A rhombus looks like a slanted square, and a rhomboid looks like a slanted rectangle.



You may use rhombus (slanted square) pieces or rhomboid (slanted rectangle) pieces, cut at a 45-degree angle, for your Lazy Susan. **Either shape can be successful as long as every piece in your Lazy Susan is consistent with identical angles, widths, and lengths.**



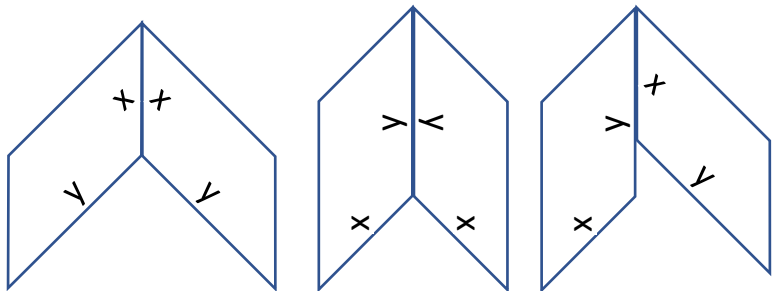
A **rhombus** piece is a slanted square where the length of side X is the same as side Y. The pieces can be glued together with side X to X, Y to Y, or X to Y.



← Made from rhombus pieces



A **rhomboid** piece is a slanted rectangle, so the length of size X is different than side Y. The pieces can be glued together with side X to X, or Y to Y, but not X to Y.



← Made From rhomboid pieces

The final shape of your Lazy Susan can be a circle, octagon or other as shown in the photos above. The woodshop has a Jig to cut large circles on the 14" band saw.