

Dodecahedron

Al Osterman made one a year or so ago. I'm finally getting around to trying it.

Eli Polite has a 3 video series on youtube if you want to give it a try.

It requires 60 isosceles triangles, groups of five are glued together to form a pentagon.

12 pentagons are glued together to create a 60 sided sphere.

The 60 sided sphere is then put in the lathe to form a round sphere.

I will be using $\frac{3}{4}$ " cabinet plywood.

The isosceles triangle has each of the two base angles equal to 56.2 deg

The base is under cut by 8.95 deg. each side is undercut by 13.12 deg

The picture of the sled I made to cut the side angle has a micro adjuster. I used a tee nut and bolt to make the fine tuning before putting in the screws. A nail in each piece and rubber band will hold it tight as you make the cuts. The triangle is made the same way as cutting segments for a bowl. Set a stop on the fence to set the size of the triangle. Make a cut flip it over, make the cut, the slide it out a little to re-trim the end. Then start the next cut. Start out by marking off the 56.2 deg on the sled. Put one screw in the end near the saw blade as a pivot.

Cut your strips use cheaper wood to use as practice pieces to get it dialed in.

Once you have the sides of the pentagon fitting as perfect as you can, then make enough pentagons to test fit the bottom angle. As you start gluing the pentagons together forming the sphere, you will see if the angle is good. I will probably end up making twenty or more as practice to figure out the fit and gluing procedure.

The sled should be dialed in and screwed tight. Record the angle that gave a perfect fit on the bottom of the triangle. This was formed when you ripped the strips, make sure you can duplicate it for the good wood.



Work safe, stay safe

Pete Schuh