

Making a Veneer Compass Rose

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Veneer is a versatile medium that allows the woodworker to create decorative elements that perhaps could not be created in solid wood. While the possibilities are limited only by the veneer worker's imagination, I'm going to describe in this paper how to make a decorative compass rose, similar to the one shown in the tray below.



In describing this, I have to assume that you, the reader, have some level of expertise in working with veneer - it is simply not possible for me to describe all the basics of veneer work here.

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There are two rules of veneer work that I want to remind you about:

1. Always work (cut) from the glue face, and
2. Veneer tape only goes on the show face.

Tools

Let me start by describing some of the tools required for this project - please see the picture below.



Starting from the left, we have a sponge sitting in a container of water. This is used to wet the veneer tape. Next, is the template for cutting the pieces of veneer for the compass rose. This template is for 16 pieces to make up a disk. You can make your own template but describing how to make one, and verify its accuracy, is beyond the scope of this article. Above the template is a brass brush which is used to brush the veneer tape after it's applied to get it to lay smooth.

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To the right of the template is a straightedge used when cutting veneer. You do not want to use a steel straightedge. Your straightedge should be of a soft metal, like brass or aluminum, so that you do not ruin the edge on your knives when cutting veneer. To the right of the straightedge and at the top of the picture is the veneer tape, and next to that is 3/4 inch blue painter's tape. We'll use the blue tape a lot.

Below the tape are a veneer saw and two Japanese marking knives. Two Cherries makes a very good veneer saw, and Woodcraft carries a no-name that is every bit as good as the Two Cherries. The Woodcraft saw is less than \$10. But no matter what saw you buy, it's not ready to use from the store. It requires preparation (sharpening) which is beyond the scope of this article. Search the web and you'll find descriptions of how to prepare a veneer saw for use.

I use the Japanese marking knives for cutting veneer. Other people use different things. Some people use a chisel as a knife, while others use things such as a scalpel. Whatever you use, it should fit your hand well and you should keep it extremely sharp.

Next to the knives is a sanding block. This cannot be your furniture sanding block - it must be very flat. The one I have here is a piece of MDF with some P150 grit sandpaper glued to it. We'll use this a lot.

The other tools are a 6 inch scale and a compass. Also included are pieces of walnut and maple veneer.

Design of the Compass Rose.

The compass rose in the first picture has 16 points, with the major compass points large than the minor. Here, I treat the compass points of N, S, E, W, NE, SE, SW, and NW as major compass points. The

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minor points are NNE, ENE, ESE, SSE, SSW, WSW, WNW, and NNW. It is possible to have three levels of points, with the outermost points representing N, S, E and W, the next level representing NE, SE, SW and NW, and the innermost points representing the remaining minor points. So my design is not the only one possible.

It is also possible to use more than 16 points for the rose. In this case, it is really no longer a compass rose but it can still be used as a decorative element in a table or other piece of furniture. See below for a rose of 24 points.



For this compass rose, however, we're going to use 16 points. The size of the rose will be about 5 1/2 inches in diameter.

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Preparation

Since the rose will be about 5 1/2 inches in diameter, we'll need 16 pieces of veneer about 3 inches long, eight light and eight dark. I'm going to use maple and walnut for this demo. The compass rose in the serving tray is made from maple and wenge but wenge is very hard and difficult to work with. Rather than make things difficult, I'm going to use walnut which is easier to work.

We'll cut some walnut and maple veneer about 2 inches wide, then cut it in 3 inch pieces.



I used my veneer saw to cut the pieces to length. Ideally, you should mark the veneer so that you can maintain its orientation. That is, you want the same side up and the same direction pointing out from the rose. While this is good practice, if the wood is pretty consistent and

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especially on a small rose like this, it doesn't make a lot of difference if the orientation is not maintained.

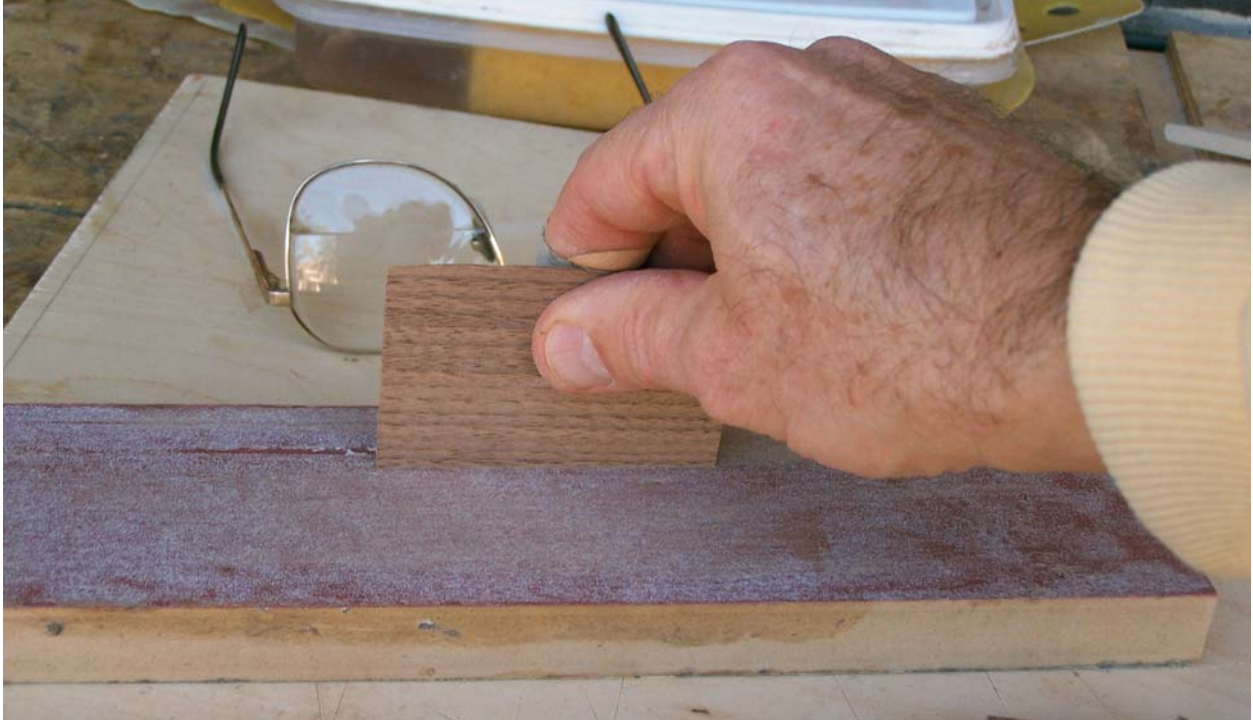
When completed, we'll have eight or more pieces each of walnut and maple.



Cutting the angles

Next, we need to cut the pieces into wedges that will make up the sections of the rose. But before we do that, we need to make sure that one edge is flat. This is easiest to do by sanding the edges flat, as shown in the next picture.

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Next, we'll use the template to cut the wedges. I lay the veneer on the cutting board, against the fence.

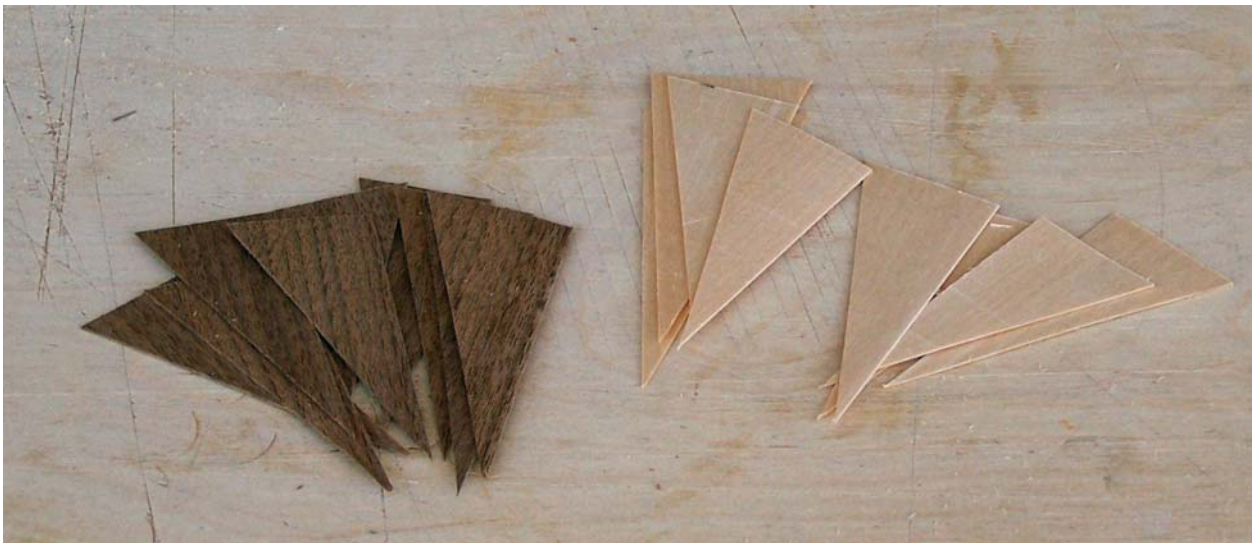


And then put the template over the piece of veneer to cut it. I cut it with the Japanese marking knife.

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The result is 16 (or more) pieces cut into wedge shapes.



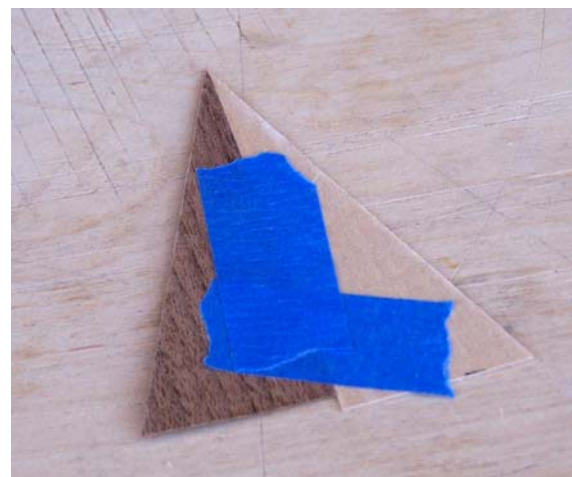
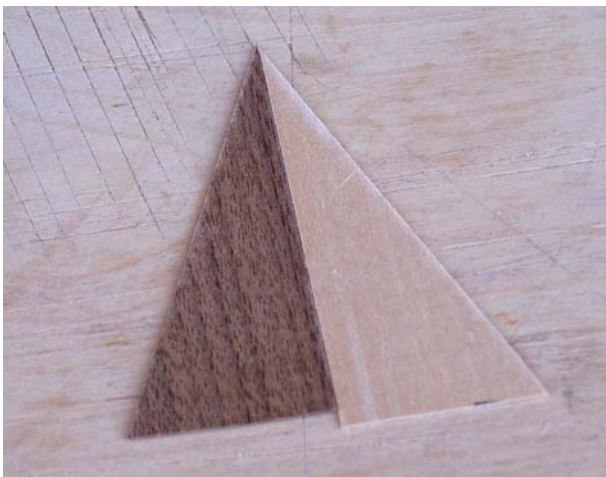
Now, we want to make sure that the edges are straight and the points are really sharp. We can achieve this by sanding the edges on the sanding block.

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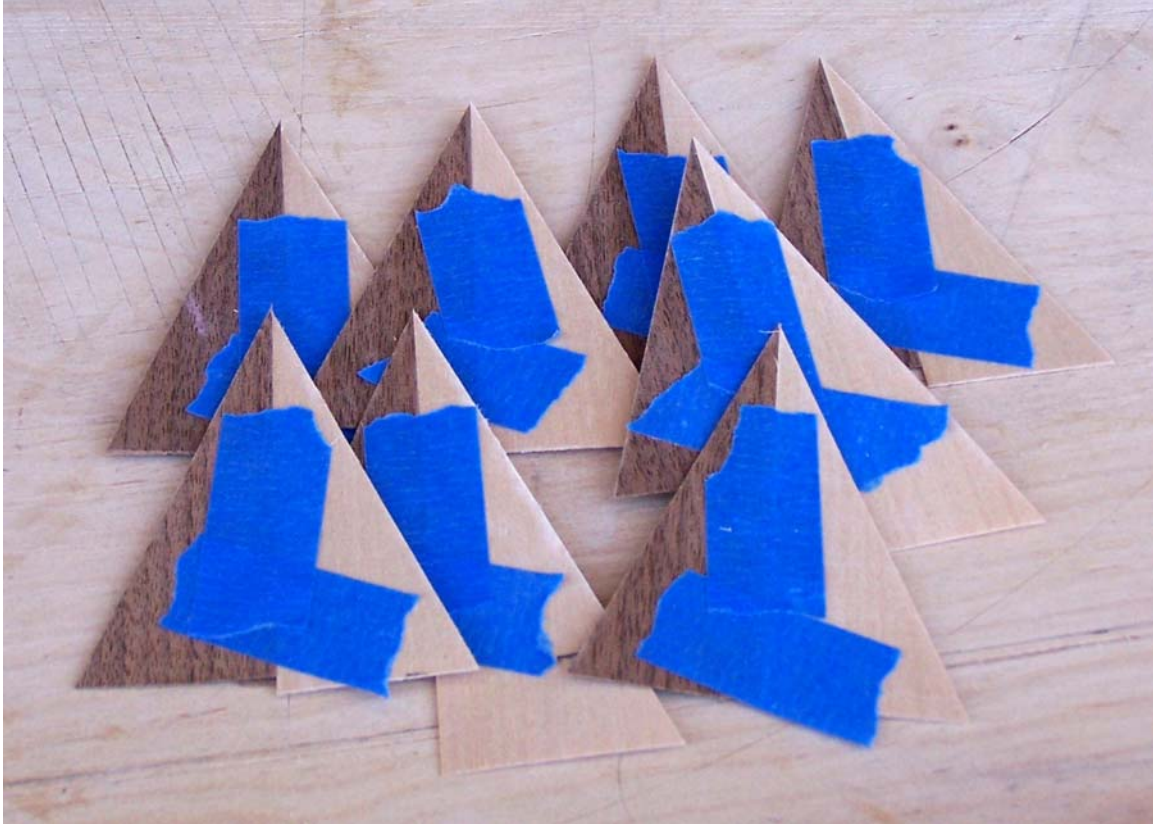


Assembling the Rose

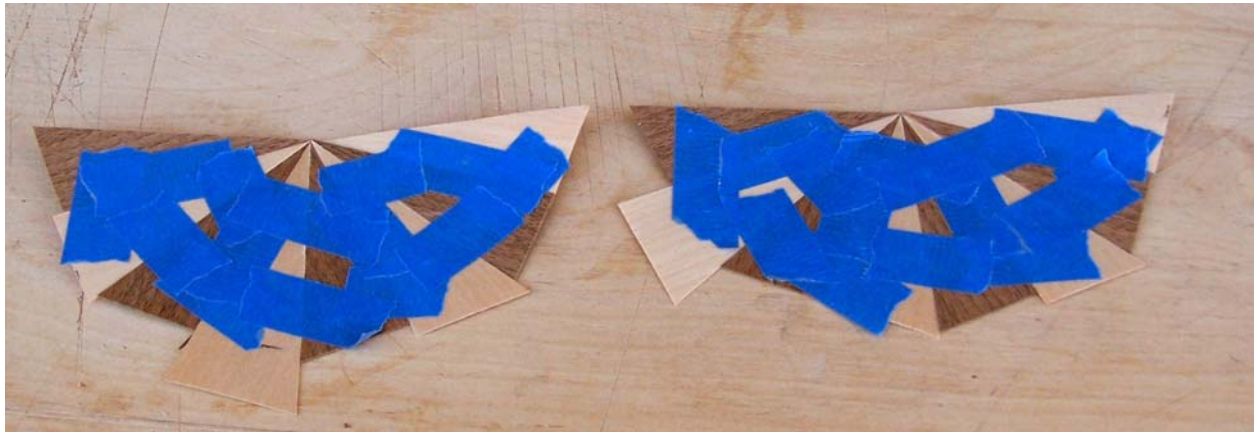
Now that we have all the pieces cut and sanded, we can start assembling the rose. We begin by putting all the dark and light pieces together. Note how the sides that are parallel to the grain are placed together. This looks better than the alternative.



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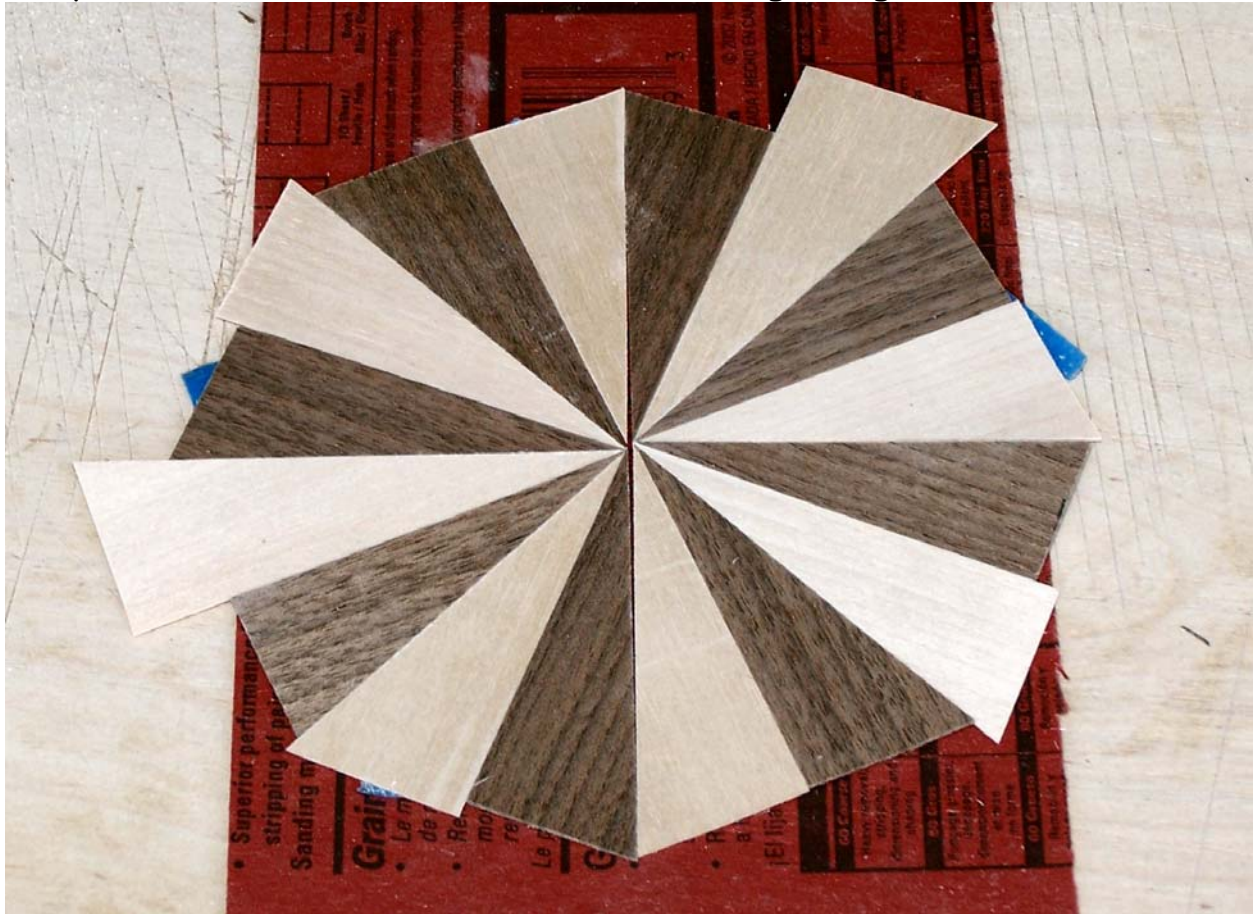
Now that we have our eight pieces of dark and light veneer, we can start assembling them into a disk. We do this in two halves.



Note that the halves are more than halves. The picture makes them look a lot worse than they are because of the perspective, but they are each more than a half (if they were as bad as they appear in the picture, we'd have to start over). No matter what you do, when you piece the sections together, they will come out either over a half or

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under a half. If they're over a half, you can sand them down until they fit, just like we sanded the individual pieces. The picture below shows how the pieces fit together after a bit of sanding. You can see that the pieces are still a bit more than half but getting close.



If your pieces come out less than half, you'll have to re-cut a couple of wedges to make them larger. This can be done by putting a coin, perhaps a nickel, between the template and the fence, as shown in the next picture.

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I was taking this picture just to illustrate this point, and I wasn't careful about the piece of veneer I stuck in. It should be a square piece to be cut.

Anyway, once you cut the larger wedge piece(s), replace the outside pieces of the halves. Replace one and try the fit. If it doesn't fit, replace another.

Either way, over half or under half, the "outage" should be quite small, probably less than 1/8 inch at the largest point (which is the sum of the outage on both halves). It must be small enough that you can add or subtract from a couple of wedges without anyone noticing. If you halves are way out of size, it's a sign that your template is bad and you have to go back and correct that.

Once you get the halves to fit together, tape them together with blue tape.

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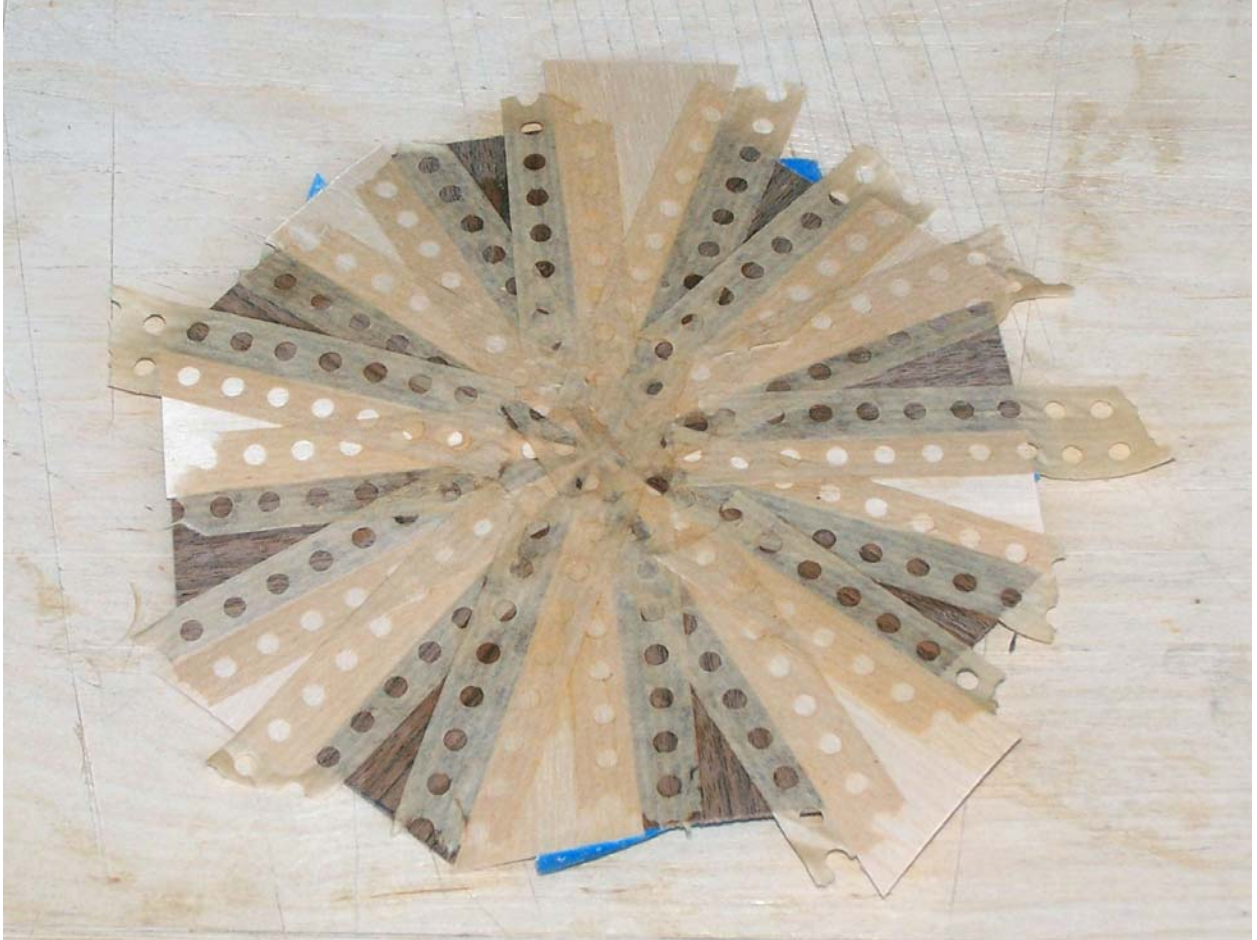


Now, turn it over so that the show face is up and begin putting veneer tape on the seams. Note that we don't want to have more than four layers of veneer tape at any point so you don't want to just run veneer tape across the face of the rose, over and over.

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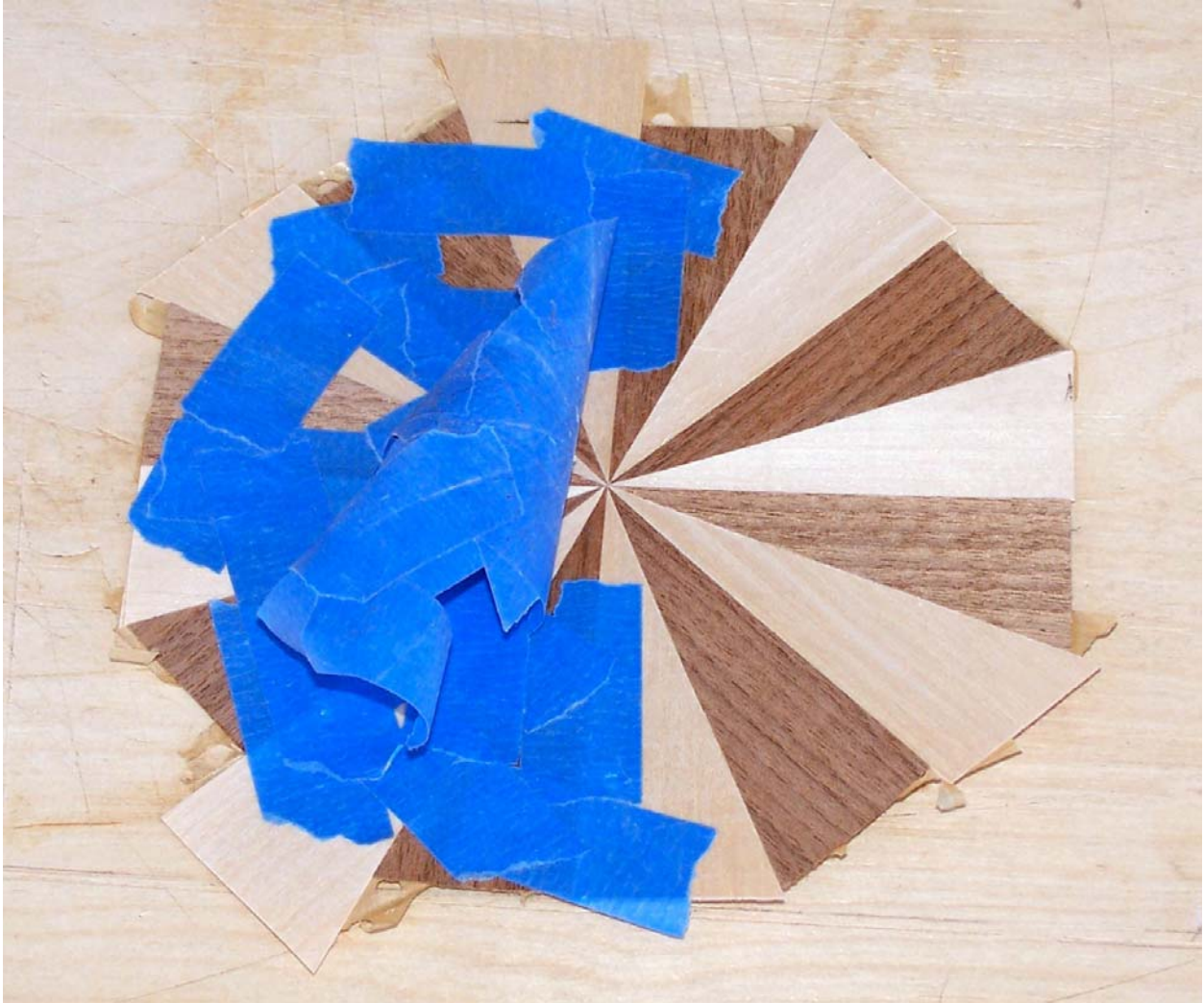


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Set the piece aside and let the veneer tape dry well - perhaps an hour. Next, turn the piece over so that the glue face is up and remove the blue tape.

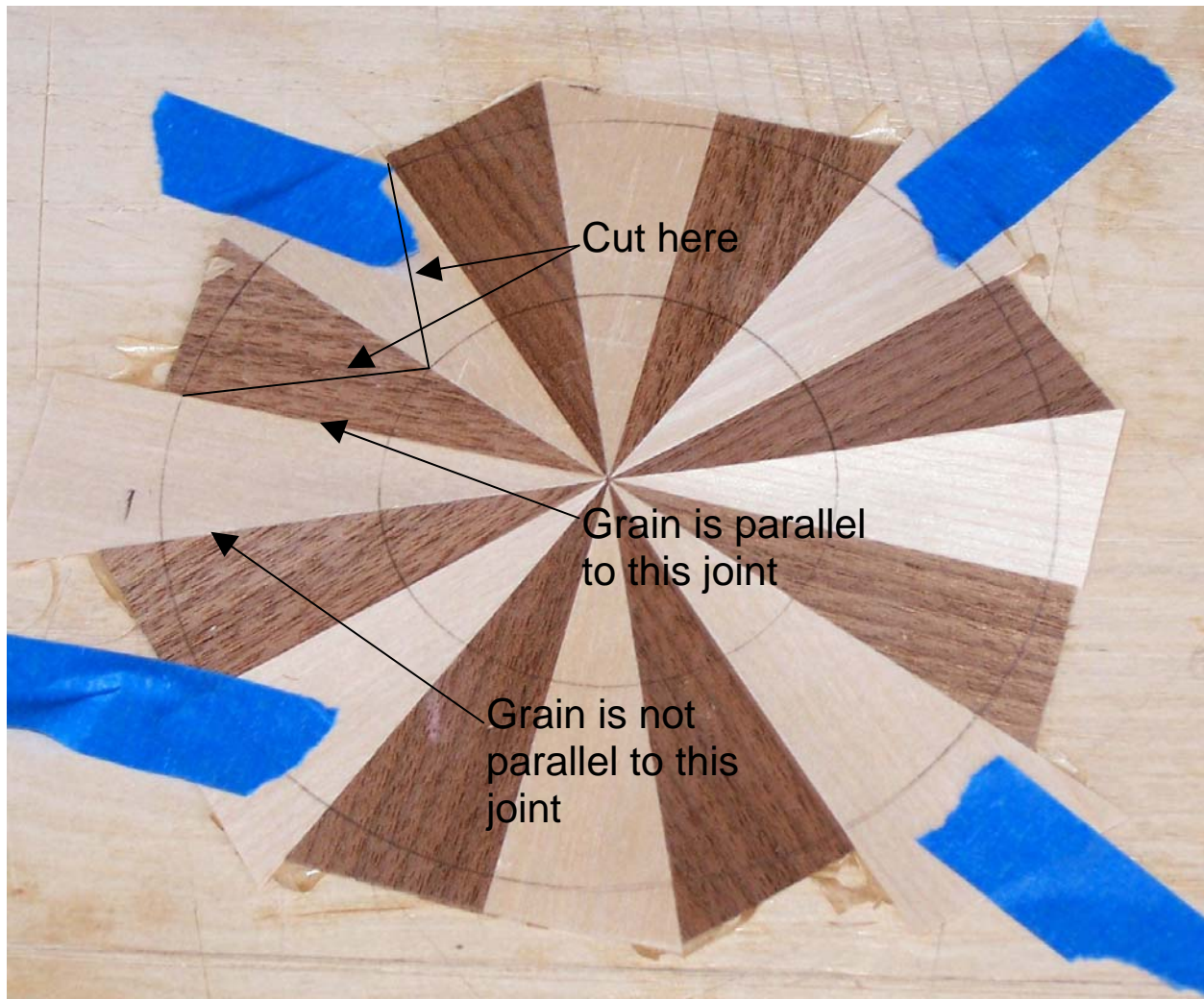
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Making the Rose

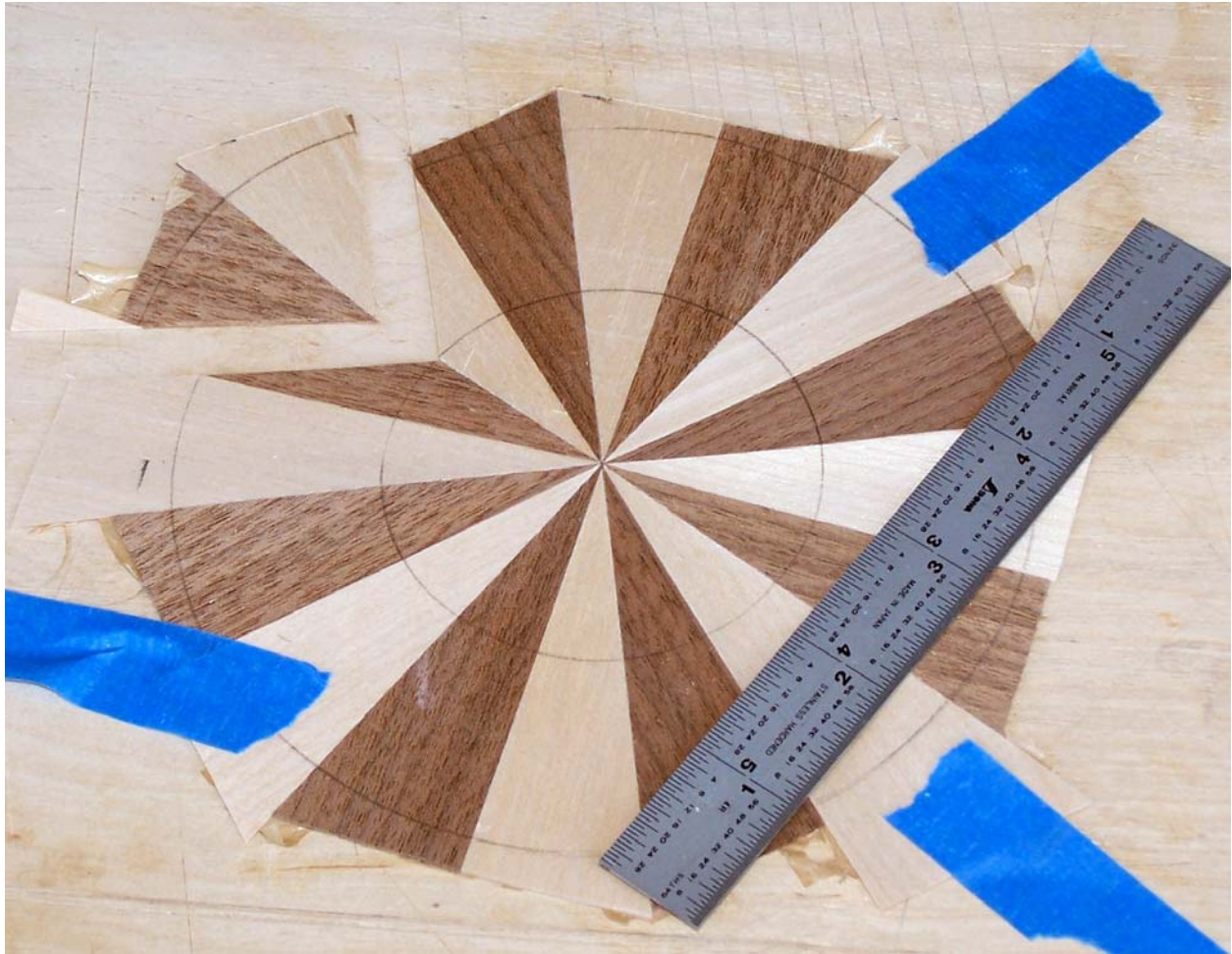
To begin making the rose, we have to mark where the cuts will be made. We said that the rose would be about 5 1/2 inches in diameter, so we can lay in a circle with a 2 3/4 inch radius, using the compass tool. Next, we have to decide what the inner radius will be for the major points. I chose a radius of 1 3/8 inches but that is strictly personal preference. A larger or smaller radius can be used to suit your artistic sensibilities.

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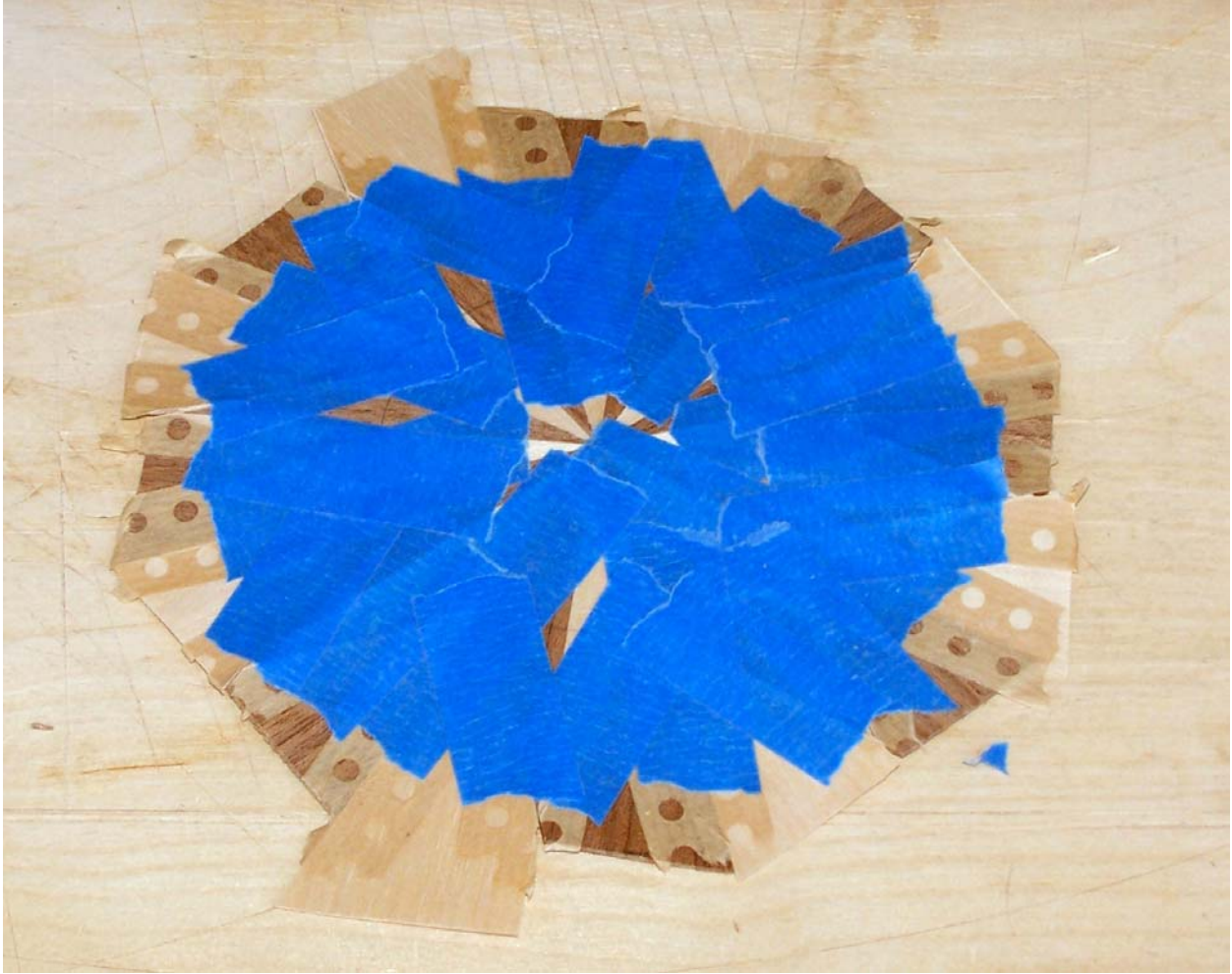
Now, what I'm going to do is make a cut from the intersection of a seam and the circles, as marked on the picture above. Note that I want to leave a point on the rose where the grain of the veneer is running parallel to the joint. This will cut a wedge from the outside of the rose. In the next picture you can see the cut wedge in the upper left hand corner of the picture.

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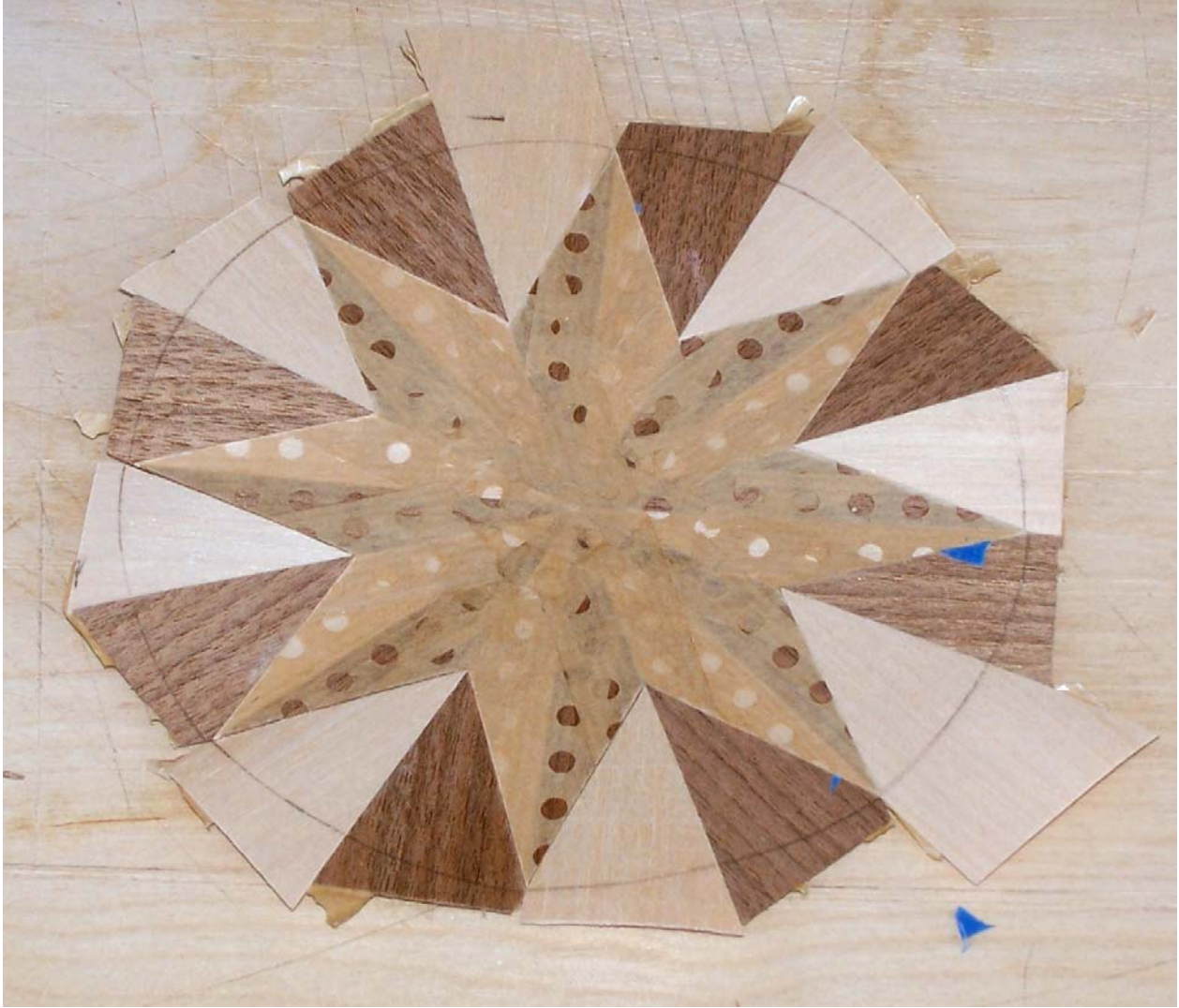
I now take this wedge and sand the edges to make sure they are smooth and straight, then I will turn that wedge over and put it back into the place where I cut it from, so that the dark side of the cut wedge is on the light side of the rose. When I see that it fits well, with no gaps, I tape it in with blue tape. I do this eight times, one for each of the minor compass points. When finished, I have blue tape all over the glue side. Note the veneer tape on the wedges I just cut since I turned them over and reinserted them into the cuts I made.

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Now, let's turn the piece over so that the show face is up.

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Note how the major points of the compass rose stand out now because they are covered with veneer tape. The wedges do not have any veneer tape on them because the side showing used to be the glue face (and we don't put veneer tape on the glue face). Our next step is to use veneer tape to attach the wedges to the main body of the rose. You must also put veneer tape on the joint in the middle of the wedge because we're going to remove all the tape from the rear and that joint must be held together.

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Set the piece aside and let the veneer tape dry well. Our next step is to turn the piece over and remove all the blue tape and the veneer tape from the glue face. The veneer tape on the show face must be dry and holding the pieces well or we'll have a mess on our hands.

In this next picture we see the glue face of the piece, with blue tape removed. To remove the veneer tape, I mist it with water. Once the water has soaked into the veneer tape, I can peel it off.

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Here you see the glue face with the veneer tape removed. You can see how the cut wedges were reversed and re-inserted into the places where they were cut from.

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Since we put water on the piece to remove the veneer tape, we need to set it aside and let all the water dry before taking the next step.

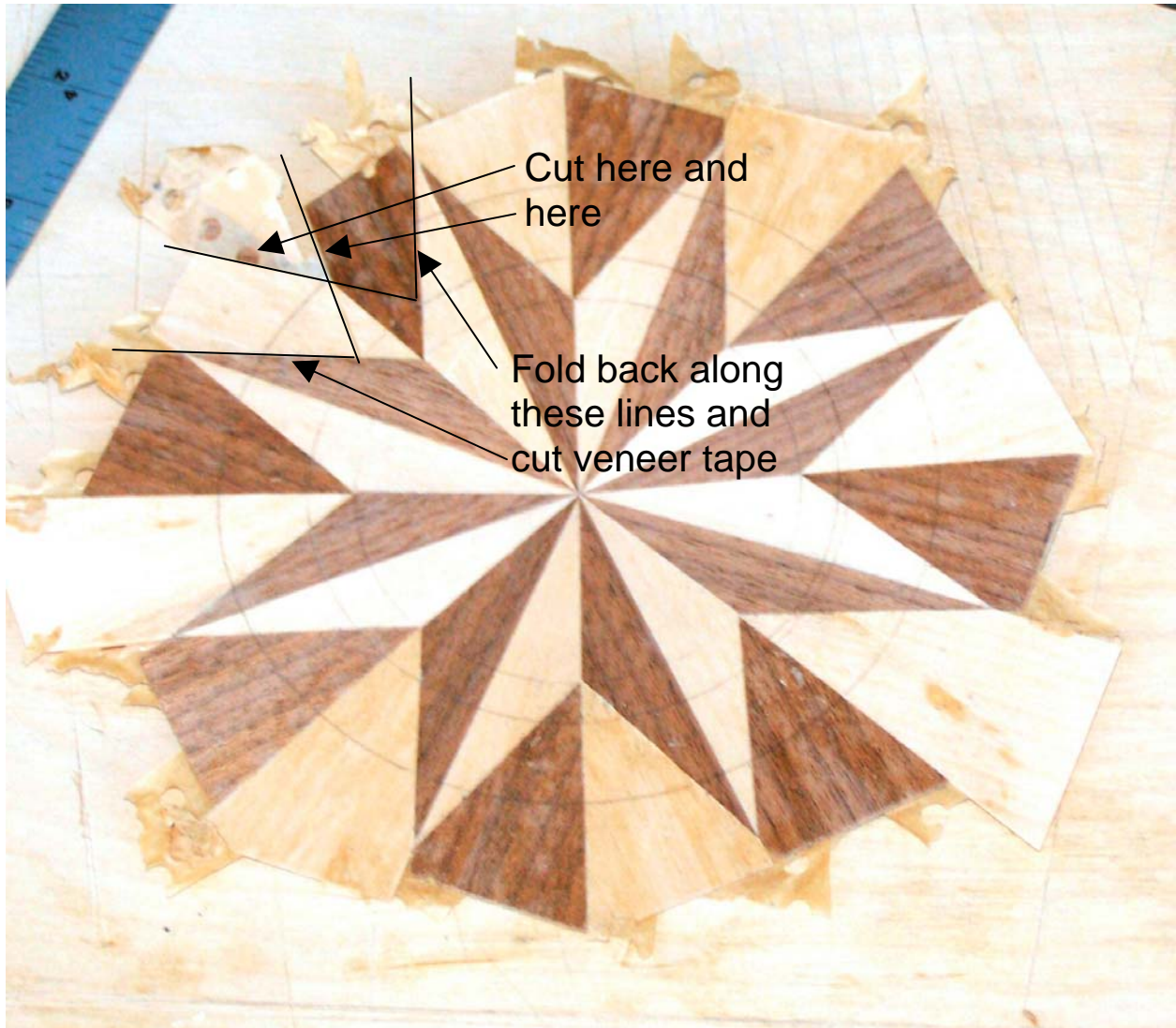
After leaving it sit between two pieces of plywood overnight, we're ready to complete the cutting.

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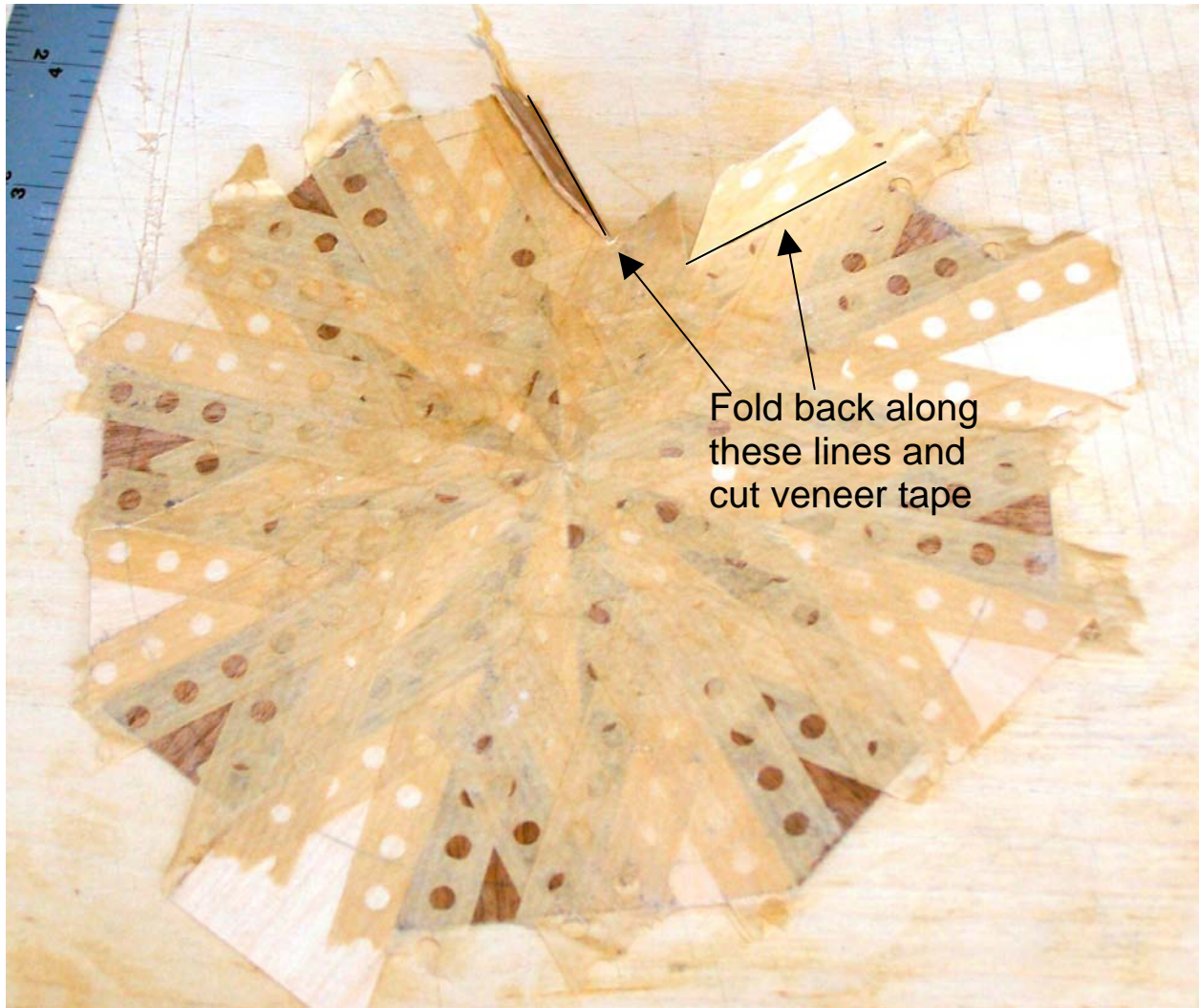
Our next step is to draw two circles which represent the top and bottom of the minor points. I chose a radius of $2 \frac{1}{4}$ inches for the outermost points and $1 \frac{3}{4}$ inches for the junction with the major points. Make a cut between the two circles on the junctions shown in the next picture.

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Once the cuts are made, fold back the remaining pieces of veneer and cut along the veneer tape. See the next picture.

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Once you make all the cuts, you have completed the compass rose. The next two pictures show the completed compass rose from the glue face and from the show face.

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To inset the compass rose into a veneer field, position the rose in place and tape it with blue tape. Make a mark on the compass rose and on the field so that you know the orientation and can reposition the rose properly - although the rose looks symmetrical, it is not and will only fit one way after you cut the field.

Now, using a sharp knife, cut the field using the border of the rose as a guide. When you come to a piece of tape which is holding the rose to the field, remove that piece, make your cut and then replace the tape. When the cut is made all around the rose, remove the rose and snap

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out the waste from the field. Then using your marks, inset the rose into the field and hold it in place with veneer tape on the show face.

This completes the tutorial. I hope you enjoy working with veneer as much as I do. If this paper has been of value to you, please send me an e-mail with nothing but a subject of "Compass Rose" so that I'll know that the paper is being read and used. I will not send you any messages unless you ask me a question.

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