



Turning an 8" Square Laminated Plate

Introduction

For many years, I have used 4/4 wood to turn lazy susans and recently acquired some beautiful 4/4 wood. I got to wondering what else besides lazy susans I could turn with 4/4 wood. I discovered that turning square plates with thin wood inserts and strips of lamination was a fun and exciting way to use my 4/4 wood. The wooden plates have been very well received.

The plates are made from 1" x 8" x 8" squares of wood that have several thin pieces of contrasting wood and veneer inserted and glued so that they run down one side of the plate. I found that there is an infinite variety of designs that can be created. I am still experimenting with new designs.

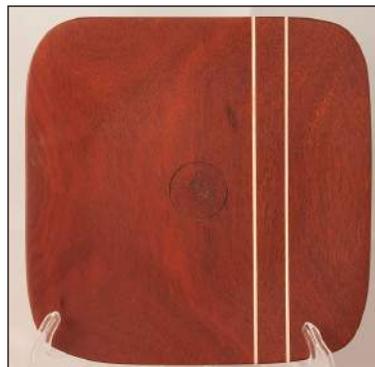
This instructional handout will focus on the basics of preparing the inserts and turning the plate. Once you are comfortable with the basics, you can quickly move on to new designs.



Wood Selection

Wood for the Plates

I use a variety of wood for the plates, including red grandis, bloodwood, paduk, cherry, walnut, canary wood, and maple. The wood I use for the plate is 1" thick and 8" long. The widths of the wood can vary from 7 1/2" to 8". However, once the inserts have been glued into the plate the width may be more than 8". It is ok for the width to be more than 8", because the plate will be cut to 8" square before turning.



Wood Selection (continued)

Wood for the Inserts

The wood used for the inserts varies from 1/16" to 3/8" in thickness, 1" in width and 8" in length. I often use black, white or colored veneer between the wood inserts as a contrasting color.

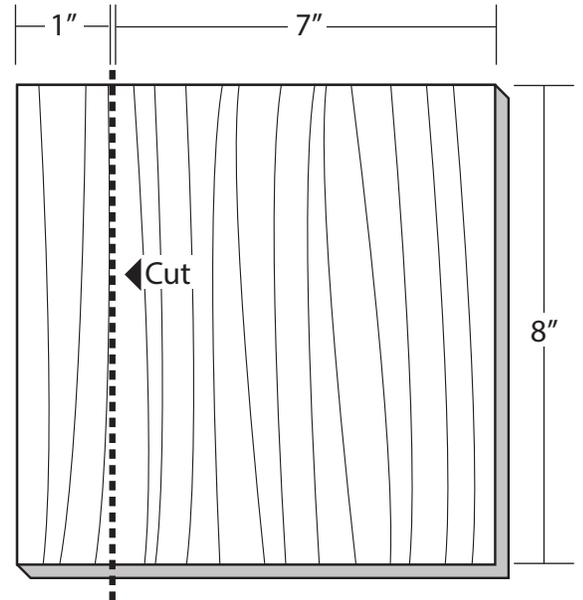


Wood Preparation

Preparing the Plates

In preparing the plates for the inserts, I select 1" wood that is 7 1/2" to 8" in width.

The wood is cut 8" long. I cut the wood on the table saw 1" in from the edge in the direction of the grain, so that I will be gluing side grain to side grain. I glue the inserts between this 1" edge and the rest of the plate. There can be exceptions to this, as you will see in the photo gallery at the end of this handout.

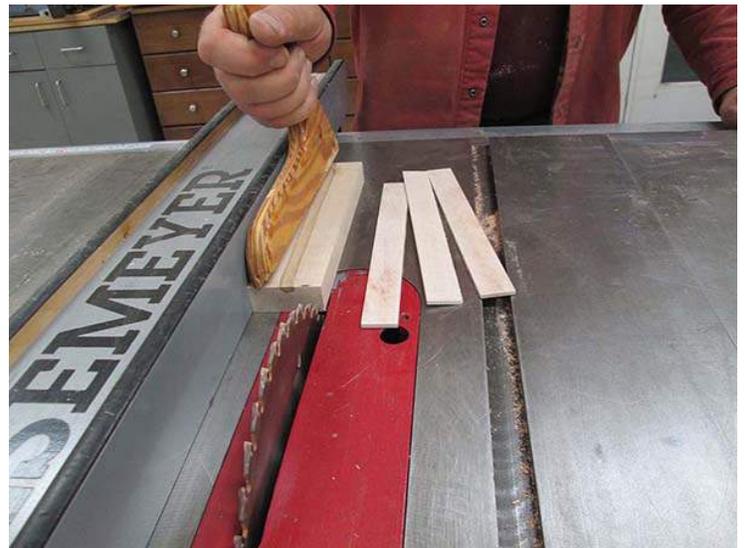


Preparing the Inserts and Veneer

On the table saw, I cut 1/16" to 3/8" widths of wood from 1" thick boards to make the inserts. I then cut the strips 8" in length. (The strips could also be cut on a band saw.) I cut the veneer with a paper cutter, 1" wide and 8" long.

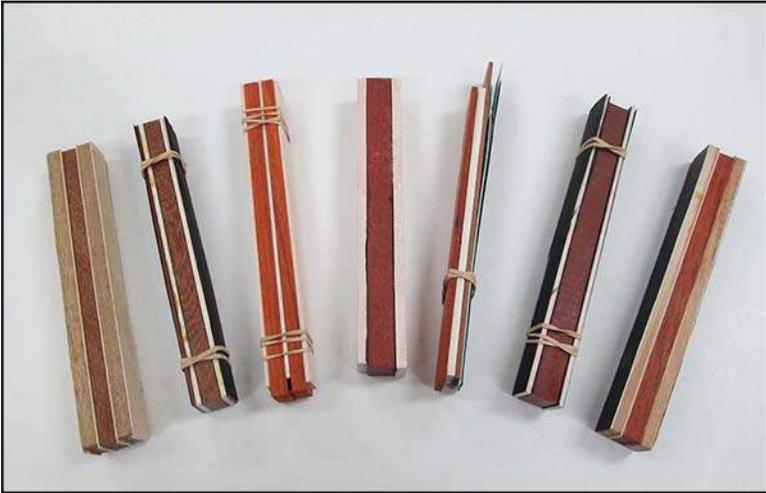
NOTE:

If the strips of wood to be used for the inserts are not smooth on both sides, run them through a drum sander until smooth. If using oily wood such as ebony, gently rub the wood with acetone before gluing.



Assembling Inserts

In creating the insert, I select the colors and thickness of the woods that complement each other and the plate wood. I also decide if I am going to use veneers with the inserts and, if so, what colors. I have found that the use of veneer with the inserts can enhance the appearance of the insert.



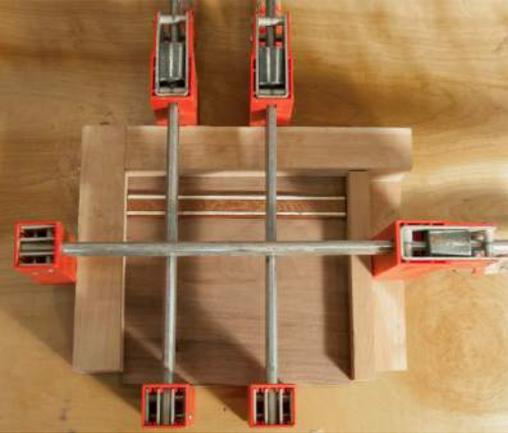
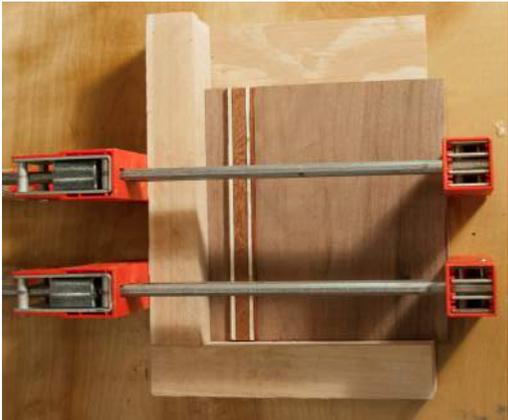
Gluing the Insert and Plate

I sometimes glue the strips of wood and veneer together as a unit before I glue them into the plate wood. Other times, I put the strips of wood and veneer into the plate and glue them all together at the same time.

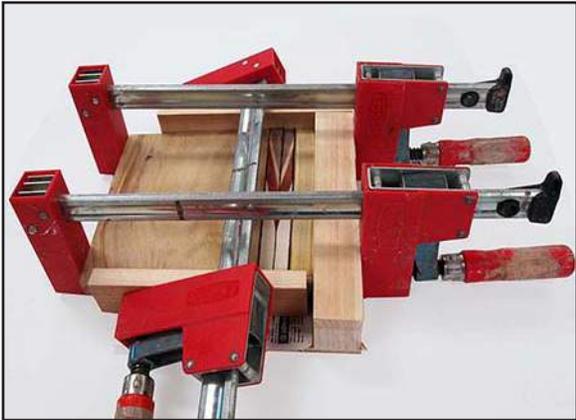
I spread a thin layer of Titebond II glue on both sides of all the strips of wood and veneer and the sides of the plate wood.

Once all the strips have been covered with glue and inserted into the plate, I use clamps to squeeze them together. I let the plate and inserts set in the clamps overnight.

NOTE:
When gluing, I use a right angle jig to prevent slippage. It is important to keep all the pieces flat in the jig.



Right angle jig

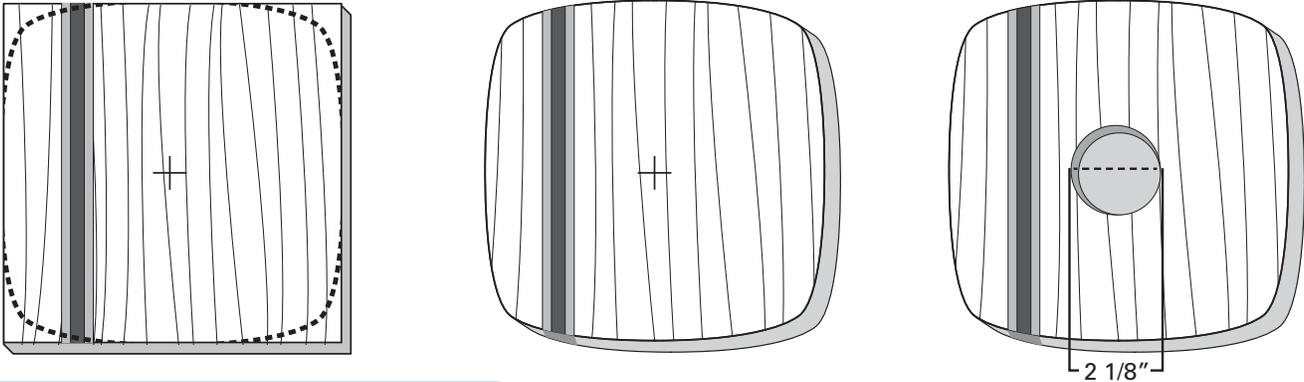


Using right angle jig

Preparing to Turn the Plate

Once the wood is glued, I make sure that it is 8" square. I place the template on the wood and draw the corners. (See template at end of this handout.) Then I mark the center of the plate.

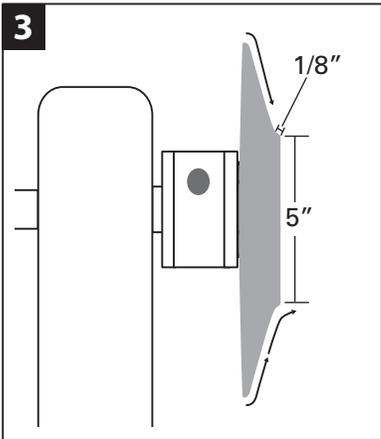
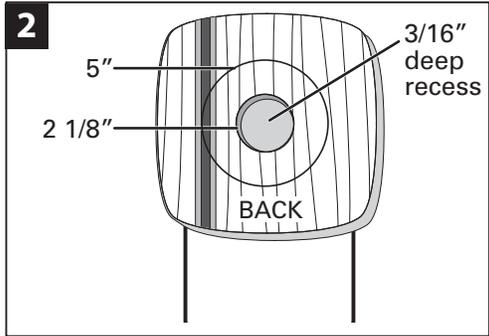
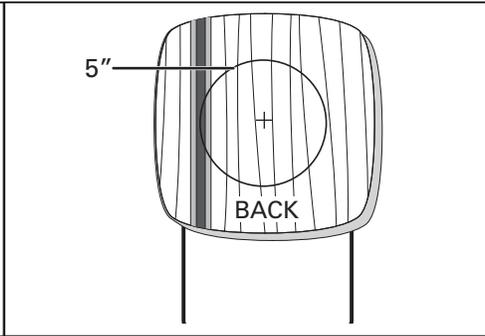
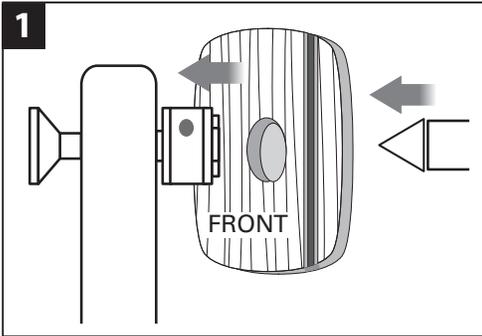
I rough cut the corners of the plate on the band saw and then use a disk sander to shape the corner edges of the plate. This allows me to fine tune the corners. With a 2 1/8" Forstner drill bit, I drill a recess 1/8" deep on the **front** of the plate. In this recess the chuck jaws will be inserted and expanded in order to turn the back of the plate.



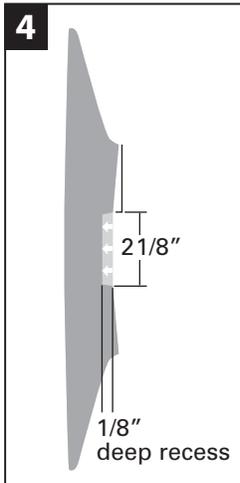
Turning the Plate

1. Placing the jaws of the chuck into the recess on the front of the plate, mount it onto the lathe. Bring up the tail stock to locate the center of the back of the plate. Remove the tail stock and draw a 5" circle around the center point. This 5" circle will become the foot of the plate.

2. Using a 2 1/8" Forstner bit, drill a 1/16" deep recess in the back of the plate. Deepen this recess to 3/16" deep with a scraper. This recess will be used to turn the front of the plate. I do not drill the hole all the way with a Forstner bit because the center of the bit will produce a hole that is deeper than 3/16". Bring the tail stock back up to the plate while turning the back of the plate.



3. Using a push cut with a 3/8" bowl gouge, turn the back of the plate up to the 5" foot. When finished turning the back of the plate, the 5" foot area should not be more than 1/8" proud of the surface.



4. Once the area outside the foot on the back of the plate has been turned, carefully slope the foot area from the outside edge to the recess by no more than 1/16". This will allow the plate to sit on the outside edge of the 5" foot. The recess should now be 1/8" deep. This is deep enough to use for chucking the plate.

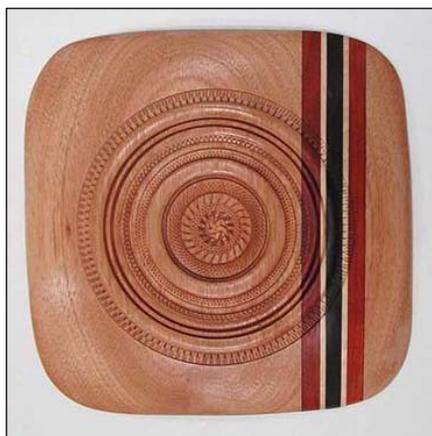
Turning the Plate (continued)

5. Sand the area on the back of the plate outside the foot as well as the area within the foot. I use a 3" disc sander to sand the back of the plate. I use the 3" disc sander to round over the back edges of the plate because I do not care for flat edges.
6. I use texturing, knurling, pyramid and spiraling tools to enhance the foot area on the back of the plate.



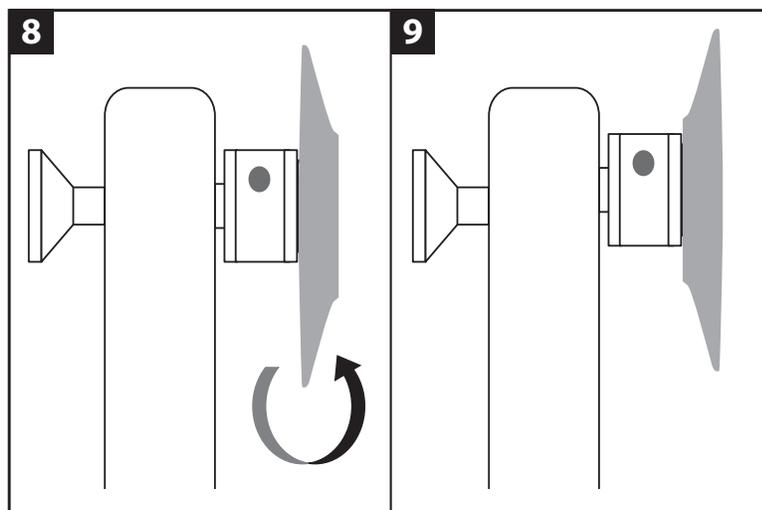
Detailing Tools: Knurling, texturing, spiraling and Pyramid.

7. After applying surface enhancements, hand sand the foot area with fine sandpaper.
8. Release the plate from the chuck. You are now ready to turn the front of the plate.



Turning the Front of the Plate

1. Mount the chuck into the recess on the back of the plate to turn the front of the plate.
2. Take light cuts from the edge of the plate to the center recess.
3. Once the center recess is removed you should check the thickness of the plate.
4. I like to have the plate about 1/4" thick from the edge to the center.
5. Sand the front of the plate. I use a 5" random orbital sander to sand the front of the plate. I do not turn on the lathe while using the orbital sander.
6. I do not care to leave the sides of the plate flat, so I use the sander to round the front edges. Now the front and back of the edges have been rounded.



Finishing the Plate

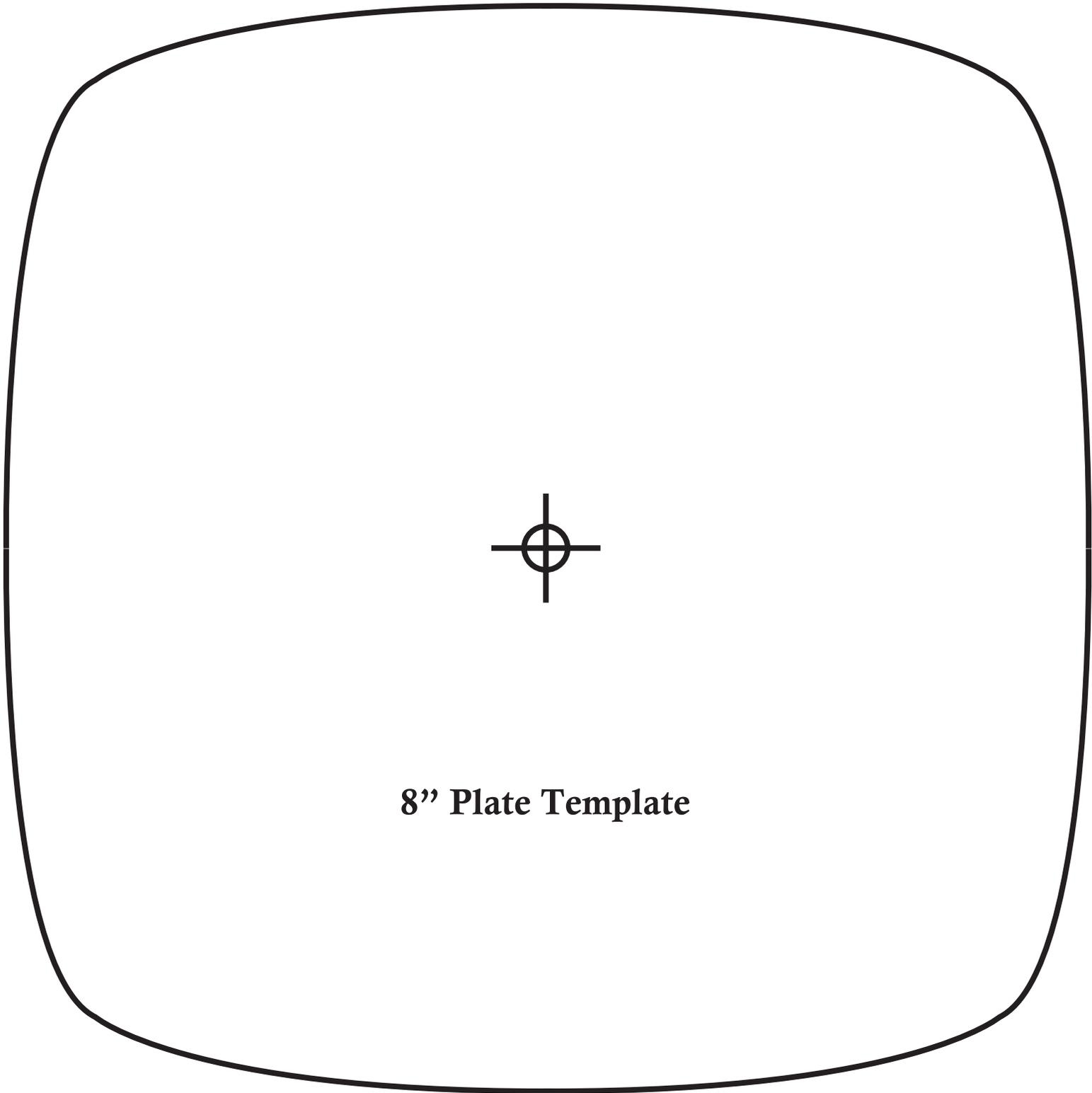
I apply a mixture of 1/3 pure Tung oil, 1/3 polyurethane and 1/3 mineral spirits to the plate. I let it dry overnight and then lightly sand with 600 grit. The next day, I apply a second coat and let dry overnight again. I finish by buffing the plate and applying a coat of wax.

Gallery of Additional Laminated Plate Designs



Personality plate - Don Leydens

Painted plates - Louise Tramontano



8" Plate Template