

Cheese Board



Cheese Board Overview:

This project requires basic woodworking skills and access to woodworking machines. Woodworking machines have sharp cutting edges and are **NOT** forgiving. You should be properly trained in the use of these machines. Ensure that you wear safety glasses and hearing protection, use push sticks, hold-downs, clamps and a cutting sled to cut the project parts safely.

These cheese boards are made from a variety of hardwoods. The primary woods are hard maple and beech. The hardwoods used for accents are cherry, gongalo alves, Peruvian walnut, wenge, Macassar ebony and or purple heart. Any combination of hardwoods can be used. It would be best to use hardwoods that have tight grain. Avoid open grain woods like mahogany and oak.

These boards are not intended to be cutting boards since the wood grain is orientated from end to end. The sawing motion of sharp knives across the grain will cut the wood fibers and will leave cut marks.

Woodworkers use scraps of wood left over from other projects. If you know a woodworker, see if you can get some of their hardwood scraps. If not, you will need to purchase a few pieces of hardwood from your local supplier.

This is the type of project that making several cheese boards is more cost effective and efficient than making just one.

The overall size of the boards in this project are 10 ½" wide by 16 ½" long, although you can make them any size you want. The thickness is ¾" to 1". In this case, I made these boards 7/8" thick.

The construction process involves milling a variety of hardwoods to 1" thick and 18" long. The width of the boards vary from 2 ½" wide to ¼" wide.

On a scale of 1-10, 10 being very difficult, this project is a "3". Milling the wood and gluing up the boards are the most difficult aspects of this project.

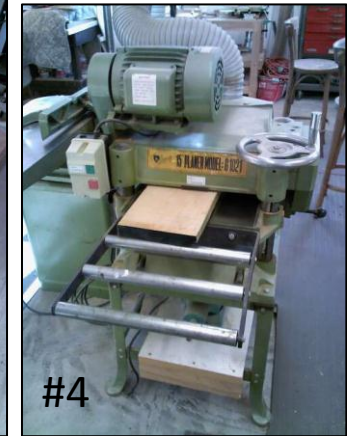
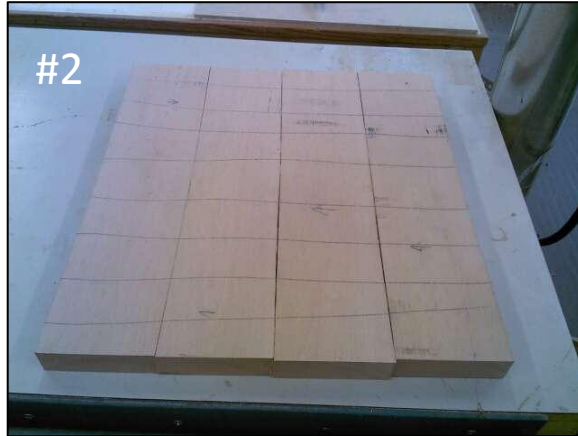
Materials Needed:

- Approximately 8 linear feet of beech or hard maple, 1" thick (used as primary woods).
- Approximately 4 linear feet of different hardwoods (cherry, gongalo alves, Peruvian walnut, wenge, Macassar ebony and or purple heart).
- 150 and 180 grit sandpaper and 0000 steel wool.
- Glue (Titebond III)
- Bees wax and mineral oil

Tools & Equipment Needed:

- Table saw with a cross cut sled
- Hand held jig saw
- 8" jointer
- Planner or flat bed drum sander
- Router (hand held and router table)
- Block plane
- Bar or pipe clamps

Stock Preparation



Step #1:

After purchasing the wood, you will need to mill it flat and thickness all the boards to the same dimension.

Cut the pieces of wood to 18" to 20" in length as shown in photo #1. (this length provides a little extra as a fudge factor).

Draw witness lines across the pieces of wood (photo #2) and use a jointer and make one face flat as shown in photo #3. (The witness lines will indicate when the board has been flattened).

Use a planer or flat bed drum sander to make the opposite face parallel to the jointed face. Photos #4 & 5).

Make one edge 90 degrees to the faces by using a jointer as shown in photo #6.



Stock Preparation

Step #2:

Cut the contrasting hardwoods on a table saw to the desired width.

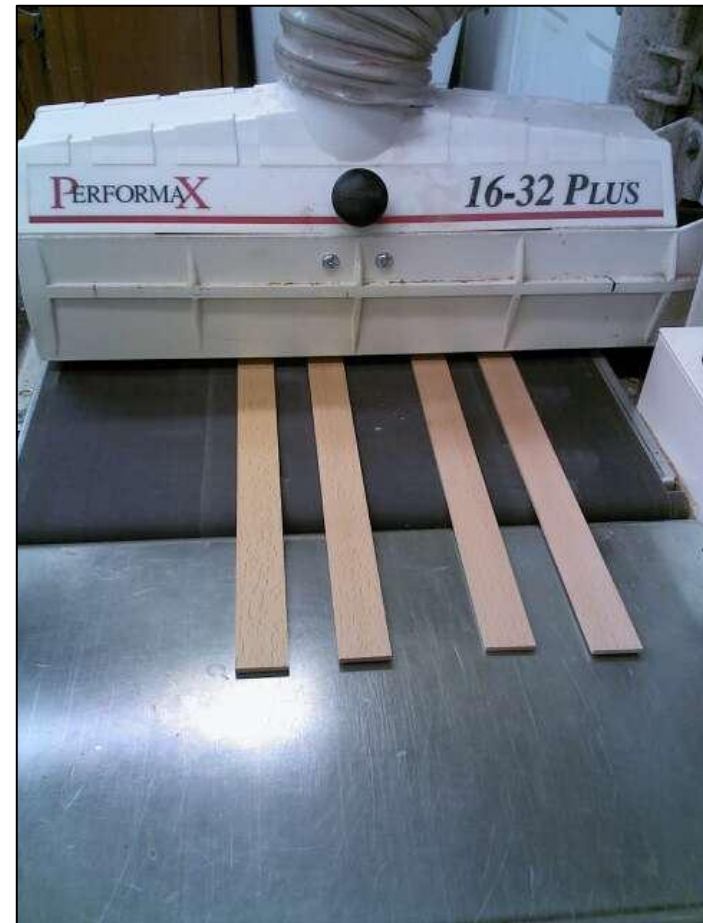
SAFETY NOTE: Use a push stick when cutting thin strips on the table saw.

I recommend that you cut them in a variety of different widths from 1/8" to 1" wide as pictured below.

Having different contrasting hardwoods in a variety of widths allow you the ability to create an array of patterns.

The photo at left shows 1/4" strips being sanded smooth using a flat bed drum sander.

Thickness sand the contrasting hardwood strips to the desired size.



Stock Preparation

Step #3:

All the stock is now flat and has a standard thickness of 1" and the edges are 90 degrees to the boards faces.

If you know the layout of the boards you can cut the primary stock to width as shown on the right. Otherwise, leave the primary boards wide.

In the photo below, notice that the contrasting woods are placed on top of the primary woods to determine the best layout. Once the layout is established you can cut the primary woods to width.

NOTE: It is best to cut the boards slightly oversized to allow for jointing and planing the sawn sides flat.



Board Layout

Step #4:

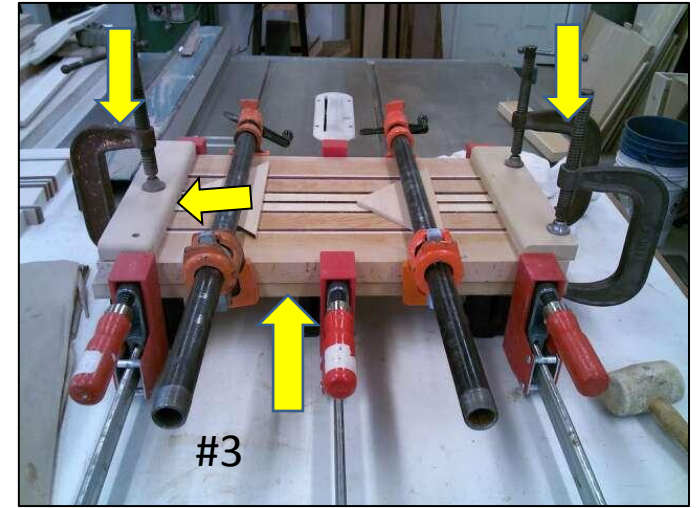
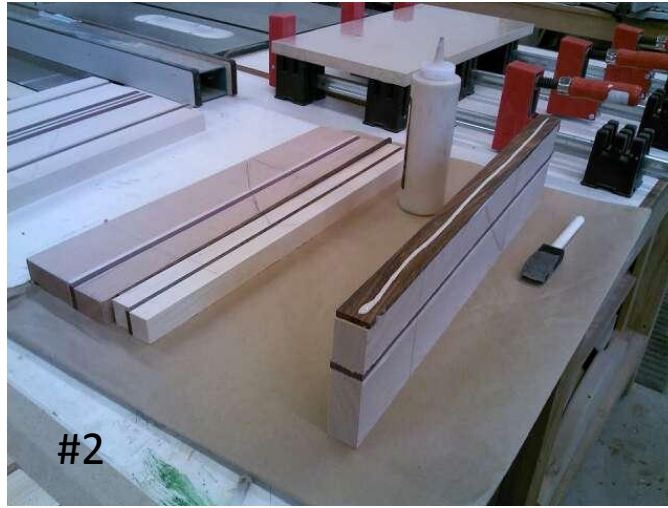
This is the fun part.

Play with the layout of the boards by mixing and matching the primary woods and the contrasting woods.

As pictured on the right, a variety of layouts can be achieved. You may discover that you need more contrasting woods of different widths. This is the time to create more strips.



Gluing up the Boards



Step #5:

Once you determine the layout, you will need to ensure that all the strips of wood have flat sides. You want to ensure that all the pieces of wood fit together without any gaps. Clamping pressure will **NOT** eliminate gaps.

Photo #1 shows a plane being used to remove saw marks or other irregularities on the side of a board.

Clamp the boards together without glue in order to detect boards that are not fitting tightly to each other. Once you are satisfied with the fit, you can start the glue up. I also cut a piece of MDF (highlighted in photo #3) slightly smaller than the boards that are being glued to serve as a gluing platform. This piece was covered in clear packing tape in order to avoid being glued to the boards. This MDF board helps to keep the strips of wood flat on the bottom side.

I recommend using a water proof glue like Titebond III. You have about 15 minutes before the glue starts to setup, so you need to have the clamps and other supplies staged before starting the glue-up.

Apply glue to both sides of each board. Spread the glue evenly with a foam brush. Proceed to the next board until all the boards are in place. Photo #2. Take time to flush each board to the previous layer.

A combination of bar and pipe clamps are used under and over the boards. Notice that I also used "C" clamps and cauls (*wood pieces positioned at the ends on top that span the width of the board*) to ensure that the pieces are held flat). Photo #3. The small triangular scraps under the pipe clamps are placed to lift the clamps off the surface of the wood. These scraps have clear packing tape on the underside to ensure that do not get glued to the boards.

Let the glue dry at least 8 hours.

Flatten the Boards

Step #6:

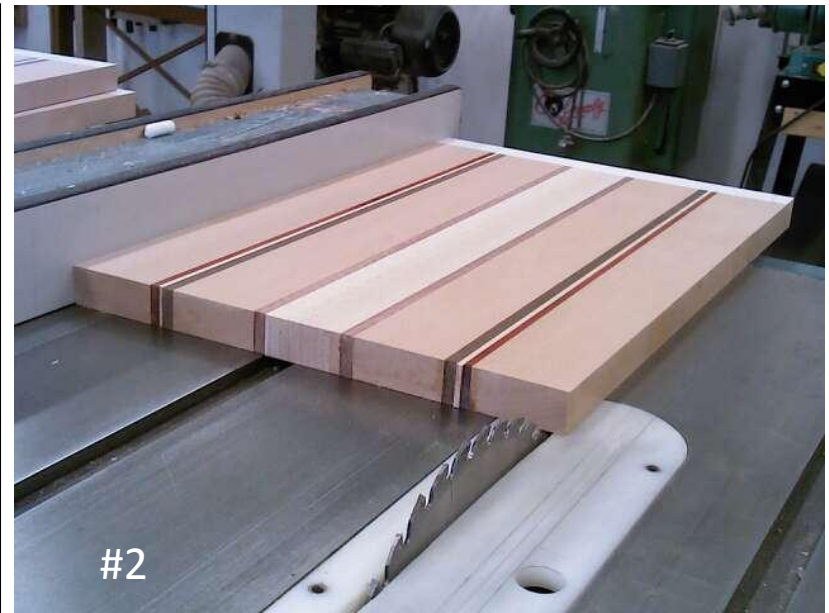
Once the boards have been glued together. Remove the clamps and scrape any of the dried glue that has squeezed out from the joints.

You need to make one side flat. You can do this with a belt sander or a hand plane.

Once one side is flat, use a flat bed drum sander to flatten the other side.



Cutting the Boards to Finished Size



Step #7:

It is time to start the process of cutting the boards to finished size.

In order to ensure that the pattern is centered in the board, you need to measure from the center of the board to the edge of the board.

I placed white masking tape along the edge of each board to make the marks easier to see on the dark woods. Mark the center. Assuming that your boards are 10 1/2" wide, you will need to measure 5 1/4" from the center to each edge of the board. Photo #1. Adjust the measurements based on your finished size.

Measure from either side and set your table saw to that measurement. Cut one edge. Photo #2.

Turn the board and cut the other side to the mark you set.

Clean up the cut edges with a hand plane. Photo #3.



Cutting the Boards to Finished Size

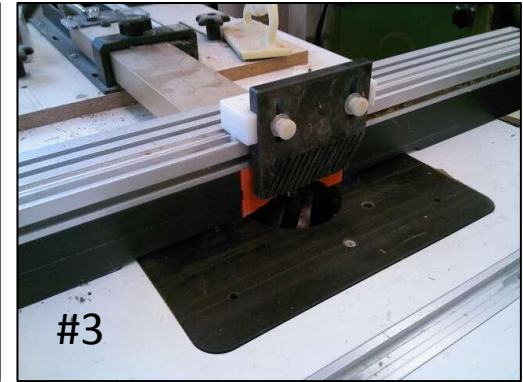
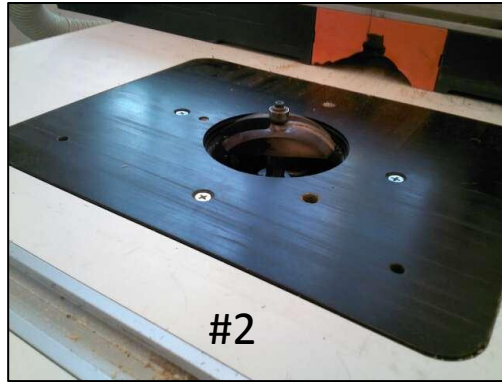


Step #8:

Use an adjustable square and mark the desired length of the board. Photo #1.

Using a cross cut sled on your table saw, cut one end and then the other.

Cutting the End Profiles



Step #9:

Use a cove router bit that will provides a pleasing profile for the hand-hold. Set the fence to the middle of the router bit. Photos #1-3.

NOTE: Large router bits should be run at a lower speed. Set your router at a lower speed.

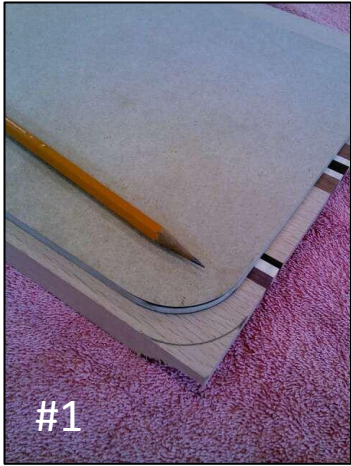
Use a hold-down as shown in photo #4.

Make a series of small cuts, no more than 1/8" at a time. You will achieve a much smoother profile and reduce tear out using this procedure.

Feed the board slowly and make sure that it rides tight to the router table fence.



Shaping the Corners



Step #10:

Shaping the corner round is best achieved using a 1/4" MDF template.

Using the template trace the corner shape on each corner. Photo #1.

Use a band saw or a hand held jig saw and trim the waste on each corner. Photo #2.

Use a flush trim router bit with a top guide bearing as shown in photo #3.

Position the router bit so the bearing will ride along the edge of the MDF template and the cutting edge of the router will make full contact with the wood.

Use double sided tape to secure the template to the board as shown in photo #6.

Clamp the template and board to a workbench as shown in photo #4.

Rout the edges. Photo #5.



Easing the Edges



Step #11:

A $\frac{1}{4}$ " round-over router bit is used to ease the edges of the cheese tray.

You can use a router table or a hand held router to rout the edges. If using a hand held router, it would be best to secure the board to your work surface or place the cheese board on a non-skid mat.

Round over the edges on both faces.

Sand the Boards



Step #12:

Use a combination of sanding blocks and a random orbit sander to sand all the surfaces and edges. A dowel or a round rubber sanding block is used to sand the curved hand hold.

Start with 150 grit sand paper and work up to 220 grit.

Finishing the Boards



Step #13:

Make a paste of bees wax and mineral oil by combining 1 cup of mineral oil with $\frac{1}{2}$ cup of loosely packed grated bees wax in a glass container. Heat about 4 minutes in a microwave until it liquefies. You can also use a double boiler. There is no need to stir it, but watch it closely for safety while it melts.

Let the mixture cool to the consistency of pudding. Wipe the mixture liberally onto the wood. After a half-hour, wipe off the excess. I recommend at least 3 coats.

Apply additional coats as necessary depending on use and the frequency of wiping with a damp cloth.

DO NOT SOAK THE BOARD IN WATER OR PLACE IN DISHWASHER!

Finished Boards



Step #13:

The first two boards above use hard maple as the primary wood. The two on the right, top row and the lower photo use beech as the primary wood.

The hardwoods used for accents are cherry, gonzalo alves, Peruvian walnut, wenge, Macassar ebony and or purple heart. Any combination of hardwoods can be used.

It is best to use hardwoods that have tight grain. Avoid open grain woods like mahogany and oak.

A cheese board made of only thin pieces is more likely to warp over time.

