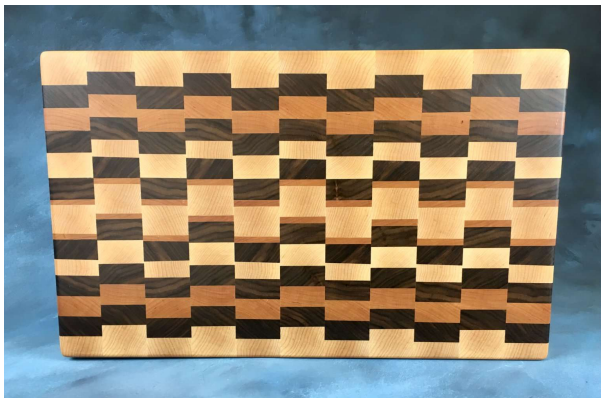
International Association of Penturners

Cutting Board Tutorial 101

Author: Mark Mayo aka: mmayo Dec, 2019

First, I'm sure many in IAP make better and more complicated cutting boards. That said, I make and sell numerous pretty and tightly built cutting boards or cheese slicers every year. Here are some ideas to help you start making cutting boards or to improve your cutting board techniques.



Cheese slicers are small (8"x 6") cutting boards you make the same way. Keep those short scraps!

Table Saw

It is time to adjust your fence to be parallel to your blade. Please don't assume it is right. If you have your saw's instructions, it will be covered. If not Google it and spend the 10 minutes to get it perfect. My contractor's saw has a Biesemeyer T-square fence and requires an Allen wrench and 3-5 minutes of adjustment.

After that, use any method to get the blade exactly 90 degrees from the saw tabletop. A good engineer's square will work well, but sight and adjust the tilt carefully. It must be exactly correct to get tight joints from the saw alone. I was given a digital angle tool that absolutely works to perfection. To use it you attach it to your saw table (it's magnetic) and touch the zero button. Move it to your blade and adjust the tilt to yield 90 degrees or as close as possible. If the best deviation you can get is more than 0.1-0.2 degrees, read how to reset the 90 degree zero stop on your saw. It will be a gymnastic pain in the #$@*&.

Saw Blade

If you do NOT have a working and adjusted jointer, buy a Freud Glue Line Rip blade. The thin kerf model is very useful to me with tough hardwoods. It will make almost perfect cuts and will allow fairly tight cutting boards right from the saw. The edges of freshly cut maple will cut you after being cut with this blade so be careful.

I make enough panels for tackle boxes, cutting boards, cheese boards and the like to buy a new $45 blade yearly. Even with a jointer I still start with this blade. Few folks can sharpen these blades correctly. Yes, they will take your money and "sharpen" the blade, but it won't be right unless you send it to Freud or buy a new one. Believe me I've tried Woodcraft and two other big time blade sharpening shops- they failed miserably.

Wood

My go to woods are: maple, walnut, cherry, purpleheart, bloodwood and small strips of poplar. African mahogany is also used like poplar as an accent strip or in place of cherry. Insist on really hard woods if you get woods other than these listed to resist knife marks when the cutting board is used. The design comes from your creativity or copying what you see. I think of it as a compliment when someone, not in the Tehachapi area, copies my designs. My wood store, called Austin Hardwoods and Hardware sells 4/4 wood surfaced on three sides (3S). It is 7/8" thick which allows me to end up with around a 3/4" cutting board after making it flush and smooth. If you shop at Woodcraft, Rockler or gasp Home Depot you will start with 3/4" and get thinner from there on. Perhaps too thin to me.

Cutting

When you cut your project, think about the length first. I cut the different wood species to length first. This is my artist's pallet. I lay out each wood species in a pile near the saw. For a 12" finished board I cut the pieces to 12-1/4". If you are new to panel glue-ups use 12.5". I set up the rip fence and use a shop made push slick to protect me and guide the pieces safely through the rip. Cut a couple of pieces and begin to assemble the board on the table away from the where you are cutting. Cut additional pieces as the idea you had takes shape. Vary the widths for interest and try to be symmetrical by cutting pairs of identical width pieces if that works for you. Push the pieces together and check how they mate.

If you did all or most of my suggestions, you should be impressed with how tightly they fit. Measure the width and add pieces until you are 1/4" to 1/2" over the desired width. I end up with 11-1/4"-11-1/2" in width for a 11" width finished cutting board.

Jointer

I have an inexpensive $350 - 6" Rikon jointer, I love it. It has a spiral cutter head with lots of small cutters. It arrived out of the box almost perfect, with just a bit of adjustment it was exactly right. I made a 12" rectangular push stick with a top handle to guide the piece through the jointer safely. Jointers scare me a bit so I'm extra careful. If you don't have a jointer, your saw blade choice and saw alignment becomes a must. If you want absolutely the tightest joints - align your saw and fence, use a Freud Glue Line Rip blade and then carefully joint the edges.

Glue

This will be easy- USE Titebond 3, period. Give that Gorilla glue a rest and don't even think about any thickness of CA glue. Titebond 1 and 2 are not waperproof and anything that says Elmers is a party foul. Try to break apart my cutting boards and the wood will break before the glue joint every time. Buy a silicone glue spreader from Rockler and be sure sufficient glue coats the edges to be glued 100%. I'd rather have too much rather than too little. Get an old towel and tear it up in 12"x12" pieces, wet it with water and use it to wipe up squeeze out. Rinse it often.

Clamps and Cauls

I have lots of clamps, but for panel glue-ups I use Bessey K body clamps. Yes, they cost a lot, but this is not where you should save money. Mine are old and look used, very used. They have more than earned their place in my shop. I do not like the Bessey Jr. K clamps. I have four and they are greatly inferior to the better more expensive K body clamps. The best clamp size is 18"-24" for 11" -12" wide cutting boards. Use two cauls for every glue up. Mine are 2x2's cut a bit longer than the length of the intended cutting board. A popular cutting board for me that sells well is 12" long x 11" wide. The two cauls are 13" long.

Glue up

Before you start, set up FOUR clamps, two cauls and your cutting board pieces. Be sure to protect the flat, level work surface under your project. Use a piece of 3/4" plywood or melamine if you are not sure about the flatness of your surface. I use an old sheet and several layers of newspaper beneath

the clamps. Get the project aligned (clamp, caul, cutting board, caul, clamp) and take a look at the junctions between the pieces you have selected. They should look perfect with either pushing them together by hand or just a bit of clamping pressure. If not, recut or joint the offending pieces.

I use chalk to mark the upper surfaces on every board. I draw three lines across the width, and both ends and draw a triangle in the middle. During glue up the white chalk marks help to achieve the correct assembly. Now loosen the clamps and widen the clamps a inch more. Remove the cutting board and set it aside. Use blue tape to cover the region where your cutting board will occupy. Your tape pieces should be just under 11" long and should cover the clamp's upper surface. Reassemble and push the pieces toward one clamp end (close to you). There should be 1" of free space. Push board #1 up toward the top caul. I then remove the second board and apply a 100% coverage even coat of glue to both edges. If your finger touches an edge, repaint with glue to be sure you have glue coverage. Replace that piece butting it up to piece #1 and butt up piece three. Continue this method until all pieces are assembled.

Loosely tighten a center clamp, another center clamp and both end clamps. The pieces may shift so align them again. I have pairs of 10" 2x2's with blue tape on them to flush up the board ends. Tighten more. Wipe most of the glue squeeze out with a wet towel. I take a moment to be sure the boards are in contact with the clamps. I use one of the 2x2's and a dead blow hammer. You might have to loosen the clamps if some boards have moved up off the clamp. Re-clamp and make it tight. Rotate the entire project vertical and stand it up. Wipe the glue on the bottom of the cutting board. Don't get too much water or glue residue on your clamps. Let dry OVERNIGHT. Don't rush this.

Sizing

Remove the clamps and scrape the glue where you find it. I remove the blue tape from the clamps at this point unless another board will be made right away. I slowly cut the long grain edges (the 12.25" edge) first with the table saw fence. I crosscut the jagged ends next with a good miter or crosscut sled, just a bit at a time to not waste any. Cross cut slowly and smoothly to reduce saw marks.

Routing the Edges

Use a 1/2" quarter round router bit to soften the edges. MLCS made my triple wing carbide router bits, they rock. If a sharper edge pleases you try a 1/8" quarter round. Use a 5" x 10" x 3/4" block BEHIND the cutting board to push it through the router to reduce tear out. Do the four edges and turn it over and repeat. Be careful here! Stand the board up on an edge and place the front edge against the fence, use that block to square the board and block against the fence.

Push it past the router bit to soften the corner edge. Repeat for all four edges. If this scares you, sand it instead. If you don't have a router, sand the board's shape until you like it, be sure to be symmetrical in your rounding.

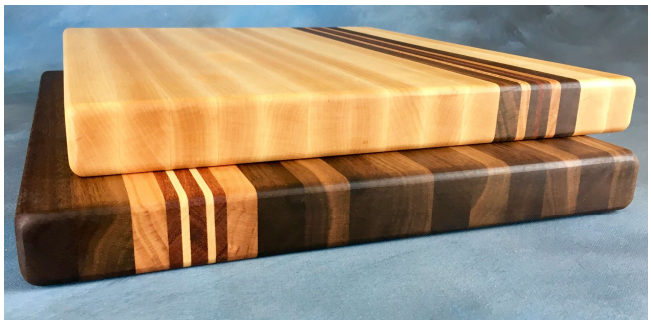
Smoothing and Sanding

If the whole cutting board is oriented in the long grain direction, you can plane it. I gently bring the cutter head down in very slight amounts with each pass. If your knives have nicks, move them a bit or replace them. I'd rather make twenty easy passes than four heavy ones and it takes a lot of sanding to replace nick marks. If you have access to a drum sander - use it. My drum sander uses a 150-180 grit roll and I have one due to sales of panel items like cutting boards. It is a great investment. Clean the drum's sandpaper often with the large crepe eraser blocks. If you don't have a planer or drum sander, start with 100 grit and be even with your passes, don't concentrate on any one area. Keep both watching and feeling the surface. Demand perfection. I start hand sanding with an electric sander at 120 grit and I focus on those sharp ends. I sand the whole board especially the edges and corners. I sand the face in addition to remove planer or drum sander marks. Move through 150, 180 and 220 grits everywhere on the board. I sand just the front and back faces with 320 grit to finish. It should feel very smooth and round everywhere.

Finishing

Wipe the entire board with a dry cloth towel, not a paper towel to remove the dust. Apply Howard's Butcher Block Conditioner or make your own mix from mineral oil and beeswax diluted 12-15:1. Let sit for 20 minutes, repeat four times. Wipe well with dry paper towels and use or sell. Always remind people that real wood cutting boards cannot go in a sink full of water or the dishwasher; I know this because it happens.

Selling



We sell a hardwood 12"x11" cutting board for $40, inlay boards sell for more; we sell a lot of them. Thicker boards like the ones shown sell for $100+.

Your mileage may vary.

Best of luck