Central Indiana Woodworkers 2022

Working with Slabs

Kreg Track Saw

MAS Table Top epoxy

MAS Deep Pour

Total Boat Table Top epoxy

Total Boat Thick Set

Restorer clean up tool

Sanding mop

Tyvek tape

Silicone caulk

Silicone mat

How much epoxy?

Calculate the volume of the area you're filling:

Length" x width" x depth"

Multiply the result by .55 to convert to ounces

Metered mixing cups

Pigment

Mica powder

Heat gun

Bowties and inlays

Bowtie template-cut the recess and the inlay-requires a plunge router

Guide bushing and router bit for above inlay template

Slabstitcher inlays-fixed based router works

Hand-cut bowties

Make the bowtie twice as long as it is wide

Draw 12-degree lines from each corner toward the middle

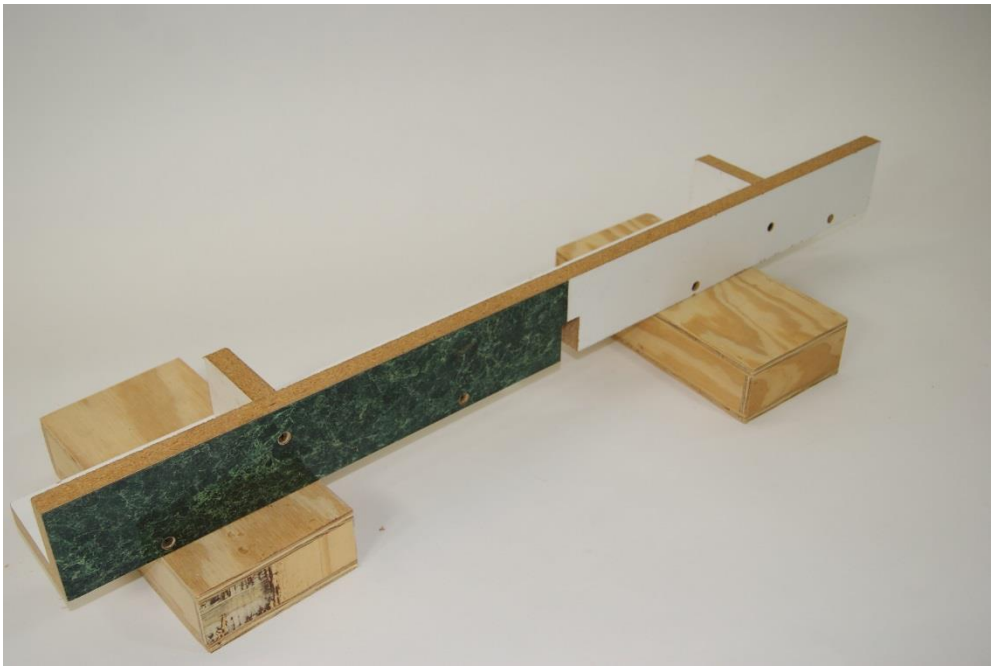
George's Live Edge Slab book

Router Table Joinery

Unplug the router for all set up changes

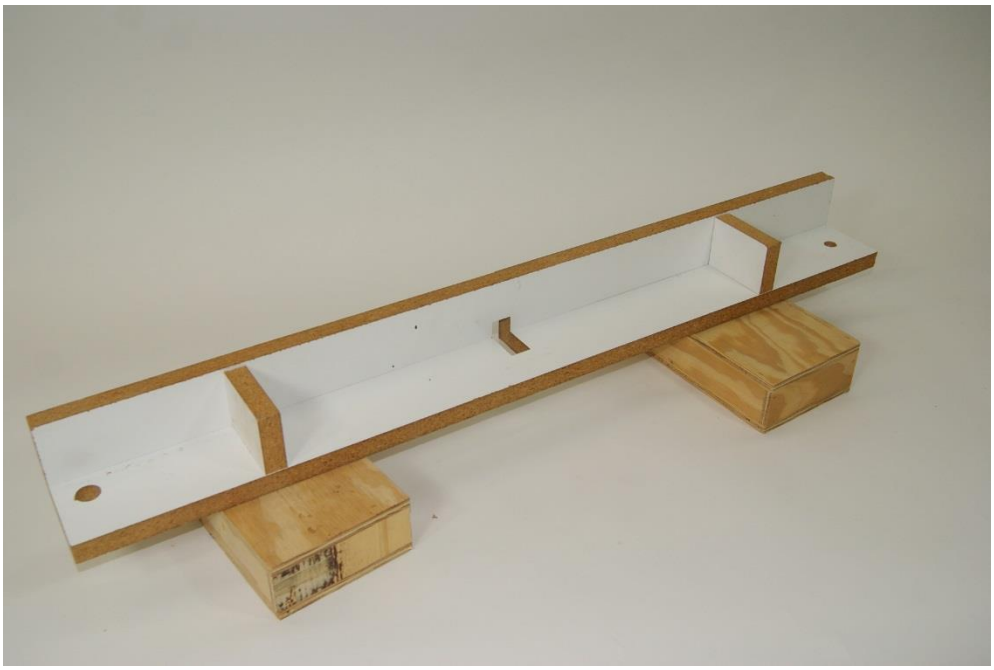
Jointing

- Requires 1/32” to 1/16” offset in fence
    - Some router table fences include shims for this



Shop-made jointing fence

- Melamine body
- Plastic laminate on outfeed face only



- Webs keep the face of the fence square to the bottom of the fence

- Set up is easiest if you use a flush trim bit
- Straight edge from face of outfeed fence to ball bearing on bit

- Spiral bits provide a better surface finish but are harder to set up if they don't have a bearing.

Set up

- Create no more than 1/16" offset between the infeed and outfeed fences
- Make the outfeed fence even with the tip of the cutters on the bit
- If the cut snipes when making test cuts, you're taking off too much material. If the material butts into the outfeed fence, you're not taking enough off.

Benefits

- High rpm of router gives great results
- Helical cutter (spiral router bit)
- No jointer required
- Carbide cutters allow you to joint man-made material

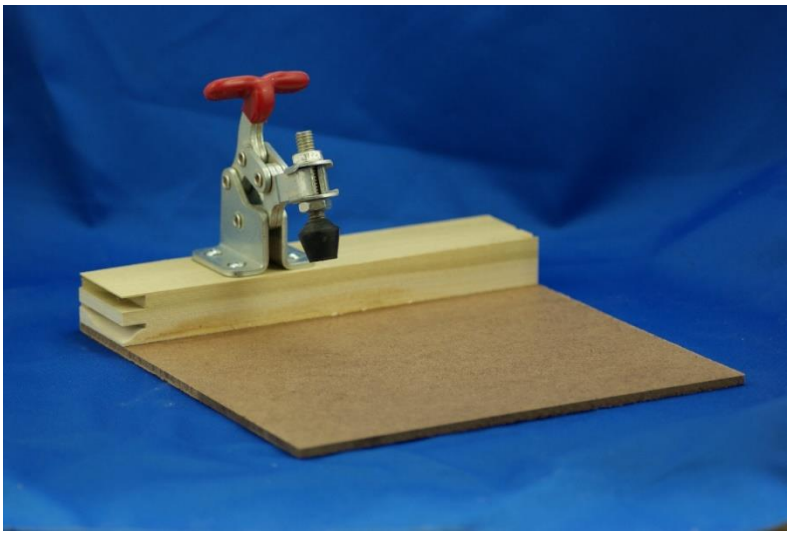
Limitations

- Can't face joint
- Bit can flutter with very thick material. Works well up to 1-1/2" thick material

Cope and stile

- Must be done on a router table

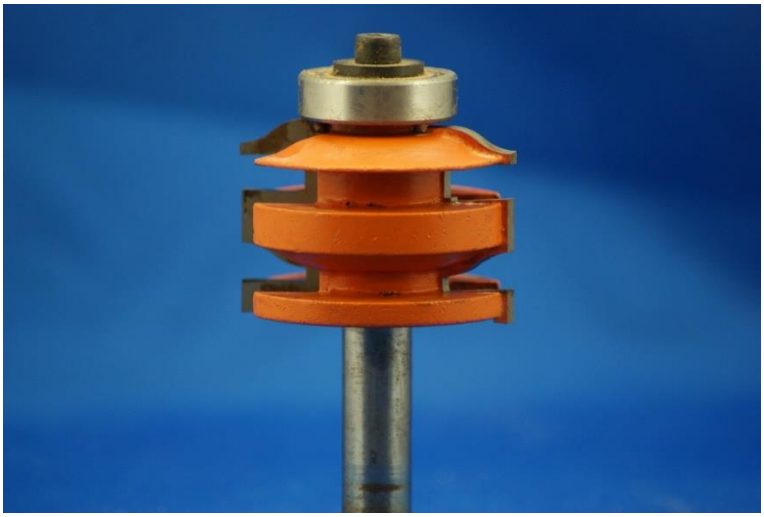
- The best results come from a matched set of rail and stile bits
- Set up the end grain cutter, on the left, first
- All parts are fed good face down.



- Use a shop-made coping sled to handle the end grain cuts
- 1/4" x 6” x 8” base
- 3/4" x 2” x 8” backer
- Toggle clamp

- Be sure you're getting the right set of bits for your project. The need to match the thickness of your material. The bit on the left is for ¾" +/- stock. The bit on the right cuts the same profile but is for ½" +/- stock

- Reversible bits are another option.
- A single bit is taken apart and restacked between end grain and long grain cuts.
- With this cutter some parts are fed face up, others face down. This can lead to alignment issues.



- Stacked bits are very tall and expose a great deal of cutter. I would prefer to not consider these for doors at all.

Cope the end grain first

- Put a test rail in the coping sled
- Set the end grain cutter so the carbide is even with the top of the material
- Position the fence so the face of the fence is even with the ball bearing on the cutter
- Secure the test piece in the sled
- Cut partially into the test piece. Don't cut all the way through.
- Check the results
    - Lip on the front of the of the cope should be half as large as the shoulder on the back. Approximately 3/32" and 3/16".
- Adjust cutter height as needed
- Mark the back face of all frame pieces
- Cope the ends of the rails with the marked back facing up

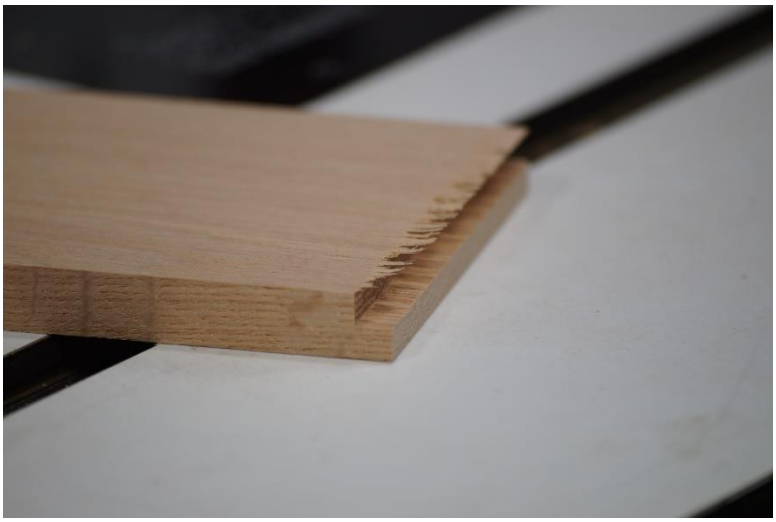
Make the long grain cut

- Use a coped piece to set the height of the cutter
    - Top of tongue cutter even with top of tongue
- Position fence so it's even with the ball bearing
- Add feather boards to the fence
- Make a test cut in scrap
    - When assembled, the face of the coped piece should be flush with the face of the long grain piece
- Adjust cutter height as necessary
- Machine all frame pieces with the marked back facing up

Rabbeted Drawer Lock

Use a slot cutting bit that's half the size of your material thickness. Use a 1/4" slot cutter to make this joint in 1/2" stock.

- Set the height of the slot cutter so the top of the cutter is even with the top of your material.
- Position the fence so that depth of cut is ¼"
- Cut a test front/back piece. The thickness of the test piece must perfectly match the thickness of the drawer. Use a backer board to support the piece.
- Cut a test side piece. Use a push pad to hold it firmly against the fence.
- Test the fit. If the joint is too tight, lower the cutter. If it's too loose, raise the cutter.



If the fit is good but the front/back test pieces look like this, your material is too thick.

When the tongue and groove are a perfect fit, machine your drawer parts. Fronts and backs are machined horizontally on the table. Sides are machined vertically. Cut both ends of all the pieces.

It’s a good idea to zero clearance the infeed fence. This will help prevent chipping when you do the vertical pass.

Pay careful attention to the orientation of the parts when you cut the grooves for the drawer bottoms.

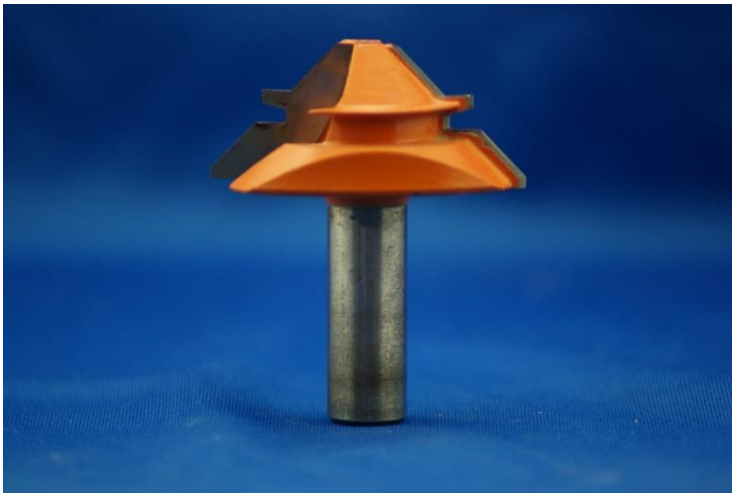
Groove the fronts and backs with the rabbet facing away from the fence.

Groove the sides with the dadoes facing the fence. Your drawers are done!

Drawer lock

- Be sure the bit is the right size for your material
- Must be done in a router table.
- Some parts (drawer sides) are fed vertically. Others (drawer fronts) are fed horizontally.
- When setting the height of the bit try to make the distance from the inside corner down to the table the same as the distance from the inside corner up to the top. Test cuts will finalize this setting
- Position the fence so the tip of the cutter projects beyond the face of the fence by half the material thickness.
- Make test cuts with one piece vertical and one horizontal.
- If the fit between the tongue and groove is loose, raise the bit. If it's too tight, lower the bit.
- If the drawer side doesn't seat completely into the front, move the fence back to take off more wood.
- If the drawer side seats too deeply into the drawer front move the fence forward to take less material off.
- Once the bit height and fence location are correct, make a zero clearance fence on the infeed side to reduce chipping.

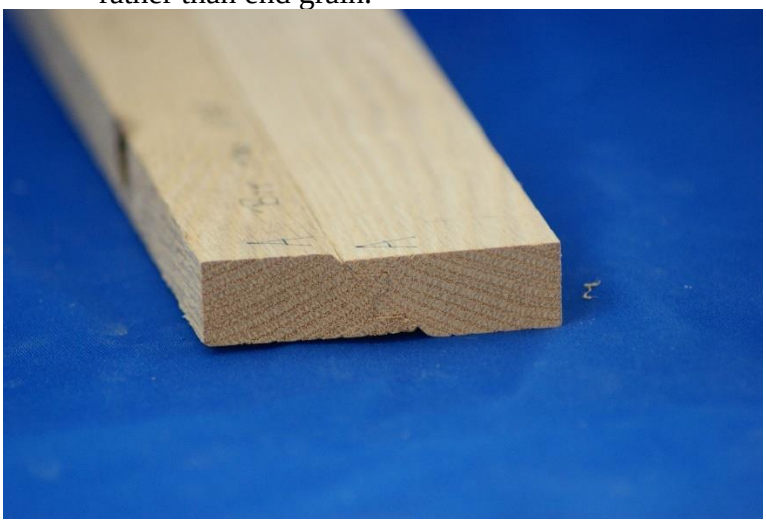
Lock Miter



- Must be done in a router table
- Match the bit to your material thickness.
- The center of the bit is the inside corner immediately under the groove cutter.

- Set the height of the bit so the center of the bit is aligned with the center of your material.

- Position the fence so the top of the material, the face of the fence and the 45-degree angle of the bit are aligned.
- Make test cuts with both pieces horizontal. It's easiest to make the test cuts in long grain, rather than end grain.



- If the face of the material is higher than the knife edge the bit is high. Lower it by half the offset.

- If the knife edge is higher than the face of the material the bit is too low. Raise it by half the offset.

- Adjust the height of the bit until the faces are even.
- Note that each time you change the height of the bit you must reposition the fence.
- When the height is perfect make additional test cuts to check the fence position.

- If the knife edge has a flat on it you need to move the fence back to take off more material.

- If the piece snipes at the end of the cut you're taking off too much material and need to move the fence forward.

- Cut your project pieces with one piece vertical and one horizontal.
- On pieces over 5/8" thick pre-bevel the piece with a 45-degree chamfer so you're not removing so much material with the router bit. Be sure you don't bevel too much off or you won't leave enough material for the tongue to form.