

# PantoProject: Build a Tray to Organize Your Accessories

Your PantoRouter™ comes with quite a few accessories, from templates to router bits and guide bearings, plus there are the little spacers and clamp helpers you'll build along the way. The PantoRouter also comes with the ability to make a nice tray to organize and store those parts and pieces.

This simple project takes advantage of the PantoRouter's foolproof finger-joint template to craft a flat, wide box, which you can make from any wood. We'll use 1/2-in. finger joints here, which look great in 3/4-in.-thick stock. After cutting the joints, we'll use the PantoRouter's ability to make long mortises to rout hand slots into the end pieces, and then head to the router table to slot all four sides for a 1/4-in. MDF bottom. I used MDF there for a couple of reasons. Unlike solid wood, it doesn't expand or contract, so you can glue it into the slots to strengthen the box. And unlike plywood, MDF tends to run closer to its stated dimension, which meant I could borrow the PantoRouter's standard 1/4-in. bit and make perfect slots in one pass.

Along the way, you'll learn how plan an organizer tray from the bottom up, determining how much storage space you need by laying out your items on the actual bottom panel and drawing in lines where the dividers will go. And finally, I'll show you a super-simple way to glue dividers into any shop drawer or storage tray.

Of course you can build a full rolling cabinet to mobilize your PantoRouter and stow all the supplies, but this tray is a simpler solution and uses the PantoRouter for a couple of the joinery operations. It clamps neatly onto the top of the machine for storage, and it sits nicely in front of the machine in use, keeping all your essentials close at hand.

While I included the key steps here for making finger joints on the PantoRouter, be sure to consult the finger-joint how-to guide for other important tips. By the way, the terms finger-joint and box-joint are used interchangeably in woodworking.

—Asa Christiana

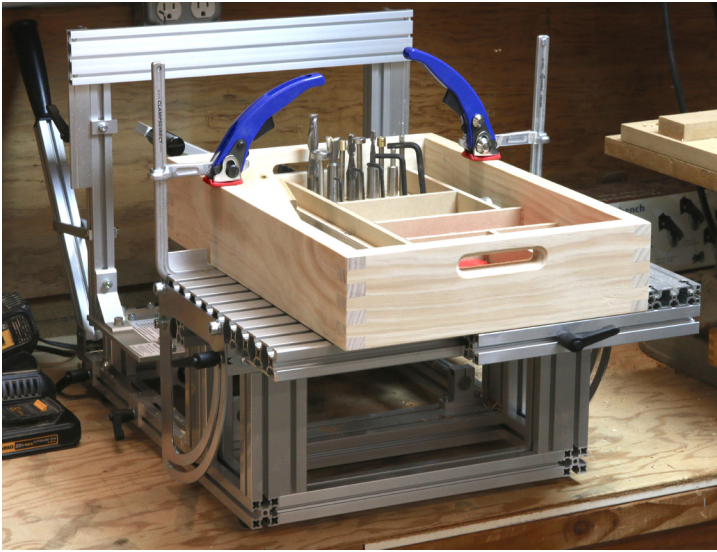


**Organize your supplies.** This handsome little tray holds everything you need for every operation on the PantoRouter, with space for additional accessories in the future.



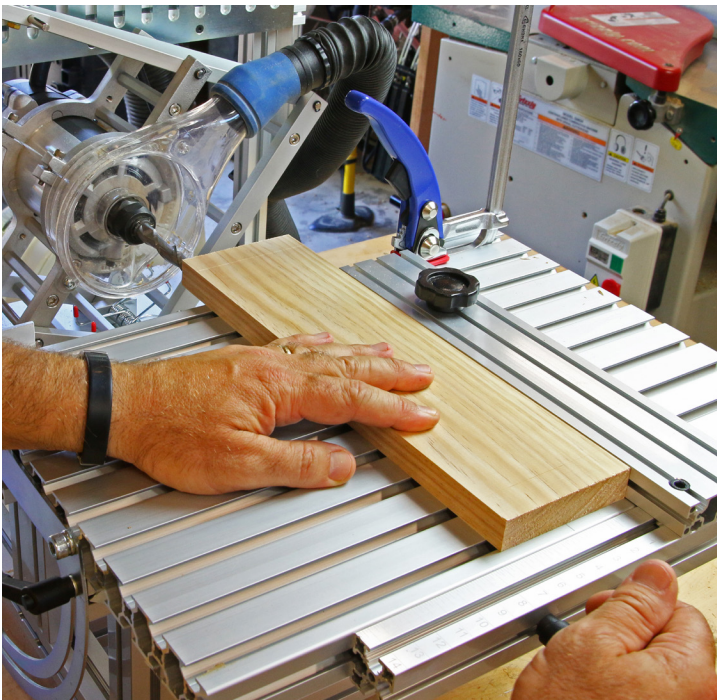
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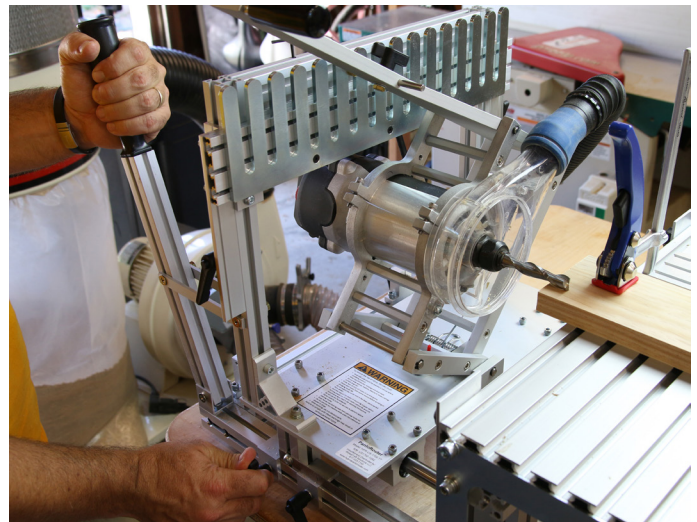
**Stowaway.** The accessory tray fits neatly on the table for storage, where the PantoRouter clamps lock it in place.

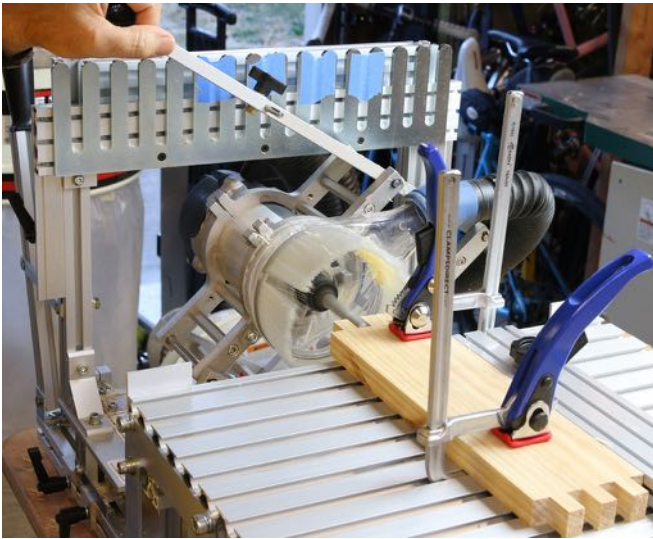
**Start this box at the bottom.** I laid out all the essential supplies and accessories on a piece of 1/4-in.-thick MDF to determine how big the box needed to be and how I would organize it. Then I drew in lines where the dividers would go. But don't cut the bottom to final size until the box is made.



**Set the fence.** I recommend centering the workpieces, using the centering scale built into the fence. Then the fence can stay in that position, ensuring the joints go together cleanly no matter which way the workpieces are oriented.

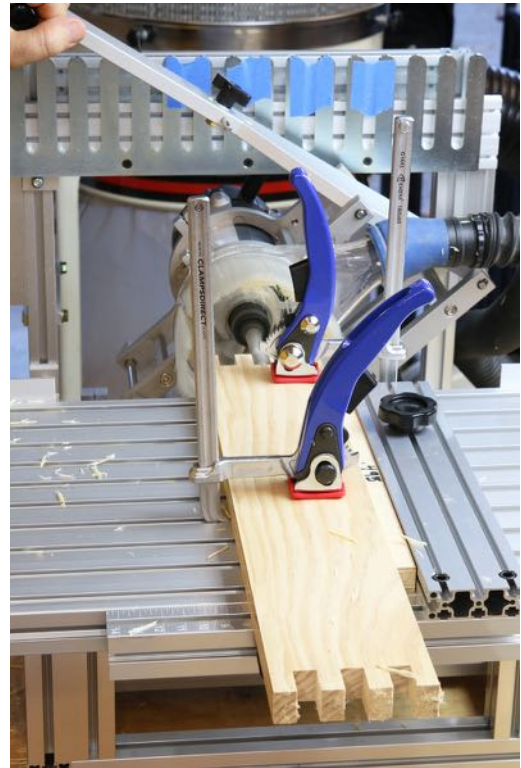
**Set the depth.** For the cleanest cuts, I recommend scribing the workpiece thickness onto both ends and both sides of every workpiece. You will also need those lines to set the depth of the 1/2-in.-dia. router bit initially and to position subsequent workpieces accurately. Lock both depth stops so the carriage can't move forward or backward. Consult the How-To Guide for Box Joints for the other steps and tips.



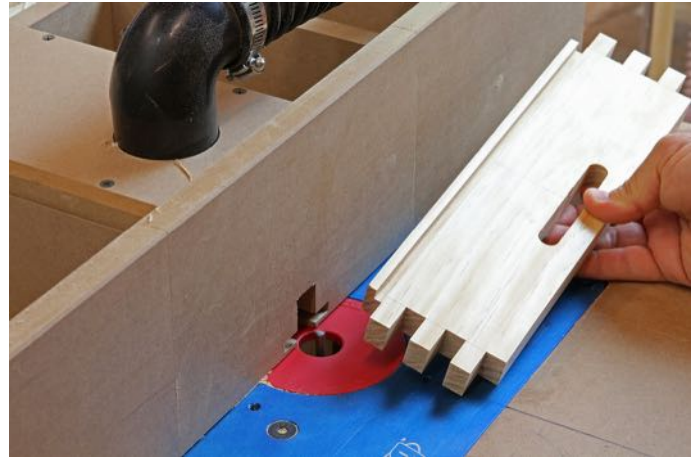
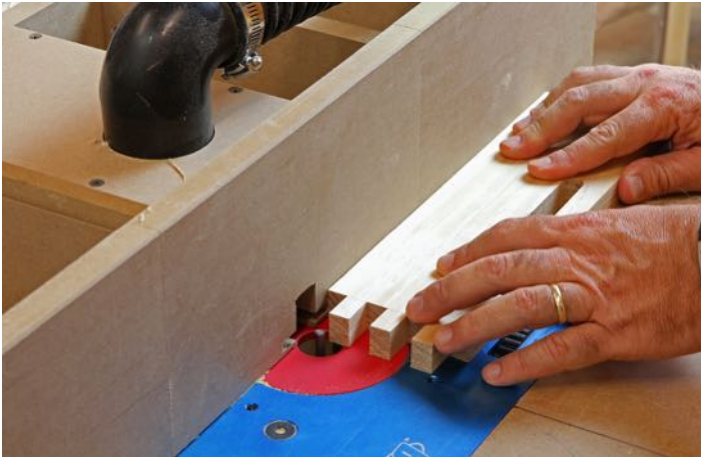


**Ends first.** Cut joints in the shorter workpieces first. To position the template initially, move it side-to-side while checking the bit against the workpiece to be sure the joints will be centered. For 1/2-in. finger joints, you'll use every other slot in the template. Block the others with tape as a visual guide.

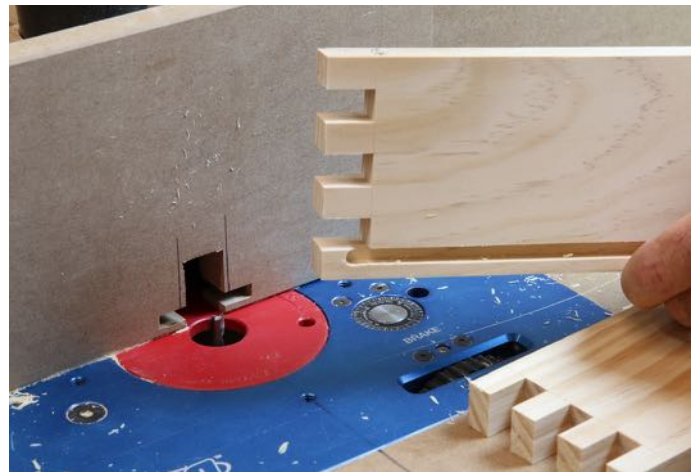
**Long sides now.** To cut the mating finger array, you make a spacer exactly equal to the bit width, and insert it between the fence and workpiece.



**Handy handles, Panto-style.** Use the tapered point-er, running it in one of the slots on the template holders, to rout a slot on the box ends, using the same 1/2-in. bit. Use the vertical mortising templates as stops, setting them 6 in. apart to create a 3-in.-long slot (remember the 2-to-1 pantograph ratio!).



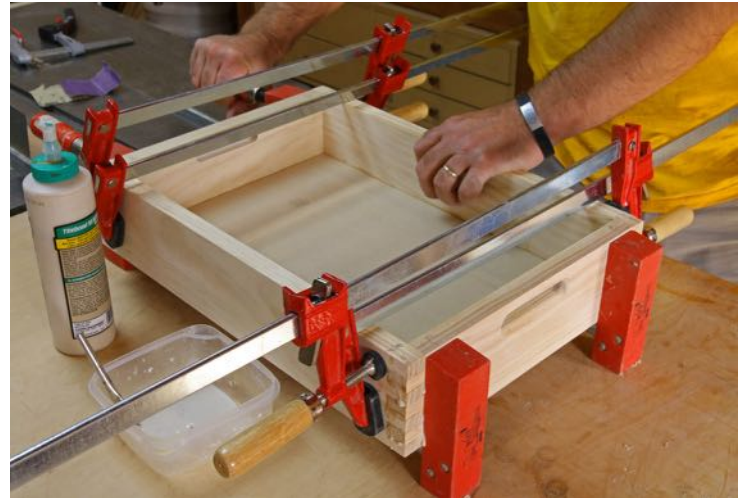
**Bottom slots.** I took advantage of the 1/4-in. bit provided with the PantoRouter to slot the sides for the MDF bottom panel. On the end pieces, I was able to rout the slots straight through, since the ends will be covered by the overlapping fingers.



**Stopped slots in the sides.** The sides are trickier, requiring stopped slots so they don't show on the ends of the fingers. I drew lines on the fence to show me where to drop the workpiece down onto the spinning bit and where to lift it. Hold it snug against the fence as you do so, and just pivot one end up or down.



**Cut the bottom to size.** I determined its actual size by dry-fitting the box sides, taking inside measurements, and then adding the amount the box bottom sticks into its slots, minus 1/16 in. overall so it doesn't bottom out in the slots, preventing full assembly.



**Assembly time.** Use a brush to spread glue in all the slots, and on the sides of each finger. I recommend parallel-jaw clamps to help you keep everything square—adding F-style clamps as needed to draw all the joints fully closed. Don't worry about the glue squeeze-out on the outside of the joints, but take a minute to scrape it out of the inside corners of the box, once it gels up a little. After an hour or so, you can remove the clamps, and start scraping off glue, leveling joints, softening hard corners and edges, etc., with whatever combination of sanding block and block plane you are comfortable with. This is also the time to add a wood finish, if you choose to.

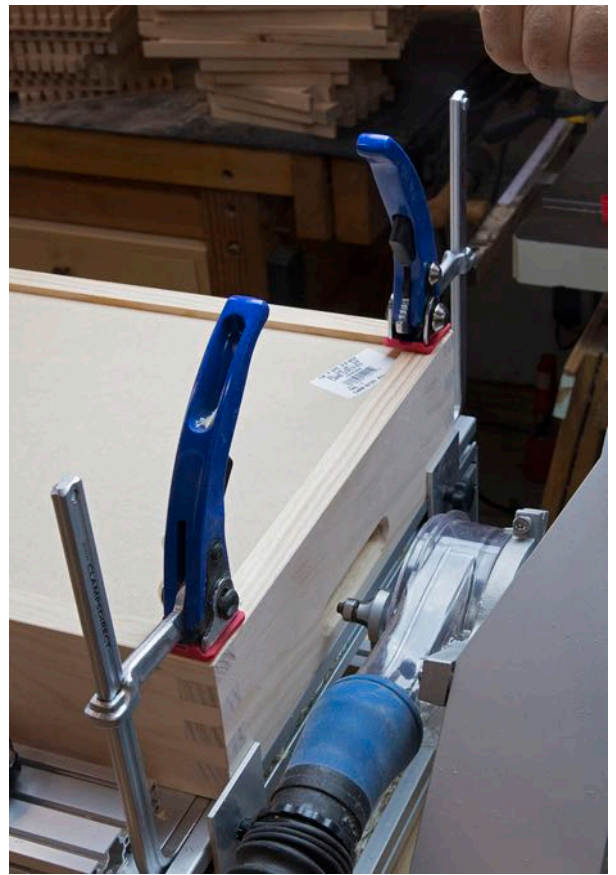


**A great way to add dividers.** I cut the dividers from the 1/4 in. MDF, simply held them in place by hand, and used beads of hot glue to lock them in. It's a little clunky looking for real furniture, but it's a fast, easy, and rock-solid way to organize shop drawers. Plus it is a reversible system: You can pull everything out later and redo it for different supplies

**Make an insert.** Bits and guide bearings are easier to find and grab if they are standing up, so drill holes in a piece of plywood, just a hair larger than the parts they will accommodate if possible, and drop that into the tray. Notice there is plenty of room for future bits and pieces.



**Another PantoRouter trick.** When the box was done, I realized the handles were a bit uncomfortable as is, so I loaded a bearing-guided roundover bit in the PantoRouter, set the depth stop on the machine, and inserted the spinning bit into the handle slots, running it around the inner surface of the mortised handholds to create perfect roundovers.



**All of the essentials, close at hand.** Drop the tray in front of the PantoRouter, and everything you need is organized and ready for action.