SIMPLY ROUTING by Mark Eaton

Tips & Projects

A Classy Book Box

If you're anything like me, you probably subscribe to or collect magazines relating to your hobbies. After a few years of collecting you soon find out how tall the pile is before it falls over by itself.

As woodworkers, we tend to collect everything our hobby entails, and magazines are no different than scrap wood, screws, hinges and anything else that might come in handy somewhere down the road. Woodworkers are some of the best recyclers around.

I thought it was about time to start organizing my magazines by placing them into slipcases. So, with recycling in mind, I went to my scrap bin and searched for stock I could laminate together and make this project. I had a bunch of pine that I had used at one time as stickers for drying wood. That pile of wood has since dwindled and the pine pile keeps growing – so pine it is.

Any wood that you have in your shop will work for this project but we are always looking for ways to get rid of the scrap so here is another idea. The project calls for some 3/8" stock that is only 10" long but also 12" wide for the sides, so laminating seemed like the best bet when it comes to scrap. If you can't find any thin stock in your scraps you may be able to resaw some from thicker stock on your bandsaw or you might just plane down some thicker stock to suit.

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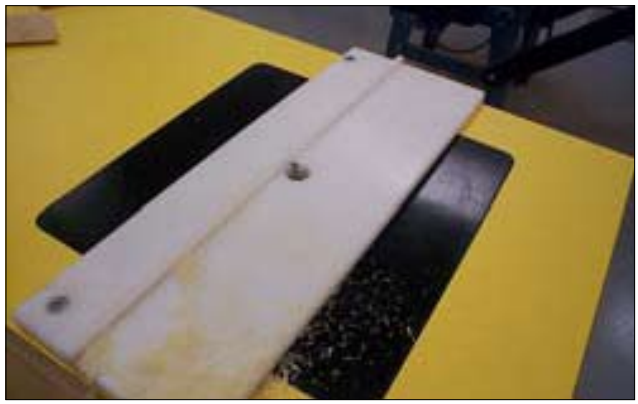
Let's get started.

1) Rip and crosscut pieces of 3/8" thick stock to 9¼ x 11¾". I laminated some thinner boards together to get my 11¾" width. If the stock is scrap you might want to run it through a planer first to make the thicknesses equal. Make 3 boards like this. Two will be for the sides and you will cross cut the other for your front and back.



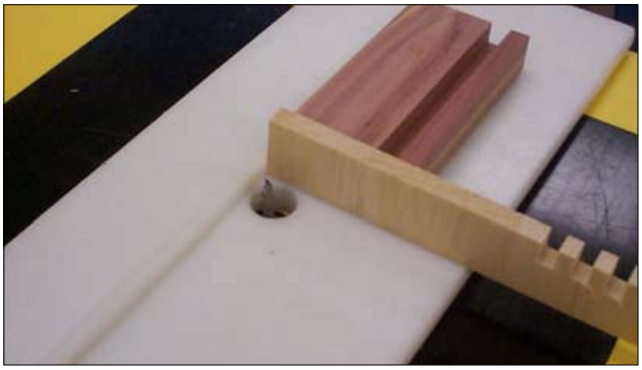
2) I used a ¼" spacer fence on my router table to cut the box joints for the project. If you don't have a jig like this you can make a finger-type jig for your table saw and attach it to your mitre gauge.

3) Chuck up a ¼" solid carbide spiral bit into your router. This bit will carve through the wood better than a straight bit because the flute is spiral like a drill rather than just straight carbide tips.

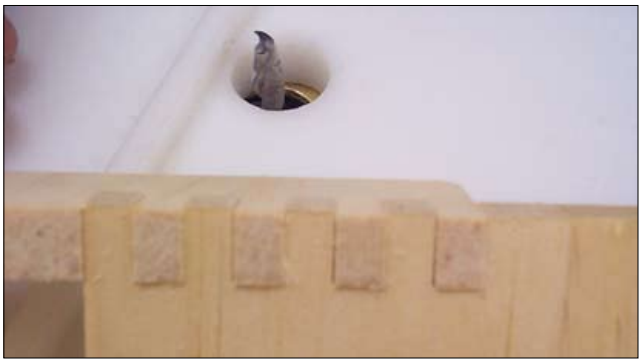
4) Set up the ¼" spacer fence on your table so that you have a ¼" bit with a ¼" space and a ¼" fence. Your fence should be on the right hand side of the bit so that the rotation of the cutter will hold the stock against the fence for you.

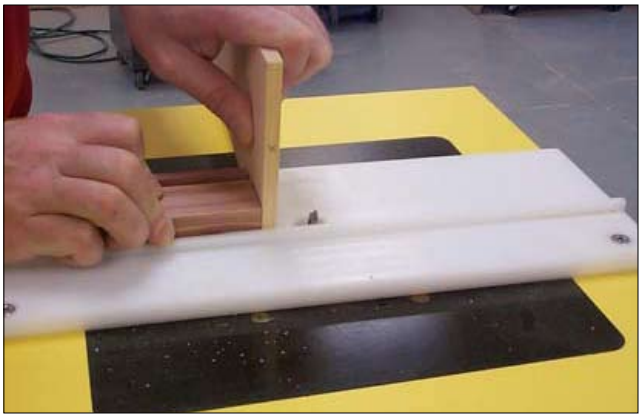
5) Take a few pieces of left over stock from your project parts and run a few test box joints. The test is to make sure that your joints will not be too tight or too loose. Set the height of the cutter to the thickness of the material. Use your stock to set this height. The bit should be slightly above the stock so that the pins will be a hair longer than the thickness of the stock. If they were too short you would have to sand the entire surface down to the pins rather than the pins down to the surface. Run a few sample cuts.

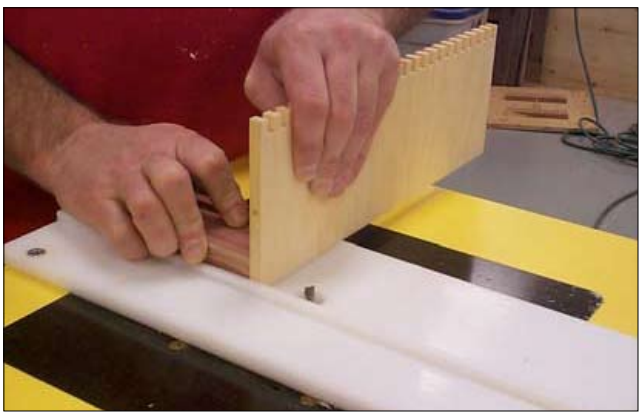
A box joint is always cut on end grain so make sure that you have the end grain down to the table. Once you have a good fitting joint you are ready to begin cutting your project parts. The box joints should be slightly proud of the sides so that they can be sanded flush later.



6) Take your pieces and mark your good outside and good tops. Start with the front and back first. Stand your piece on the end grain with the top "X" facing the fence. Use a backer board to eliminate any tear out. The backer board will also keep your piece straight and square to the cutter. Cut one end and then rotate the piece over. Keep the "X" to the fence and cut the other end.





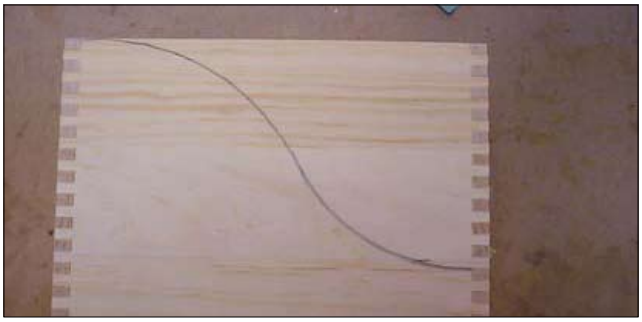


7) Before you begin cutting the sides of the case we have to create an offset jig. The jig is a piece of ¾" stock that is dressed on all four sides. Place this piece against the fence and run a groove all the way along it. Turn the piece around and slide it over the ¼" fence and clamp it there. This creates an exact ¼" offset for the case sides.

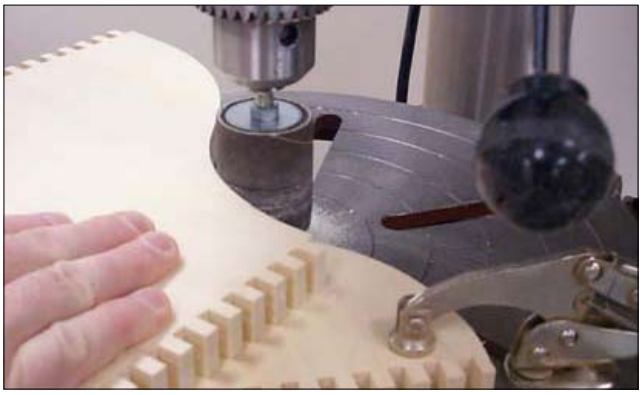
8) Take your sides and place the "X" top against the offset jig. When you make the cut it will be the exact opposite of the first cut you made on the ends. This is what makes a box with a flush top. Next, cut the tops off both of the sidepieces and remove the offset jig. Place the first cut over the fence and continue to cut the rest of the box joints on your sides.

Now let's dry fit.

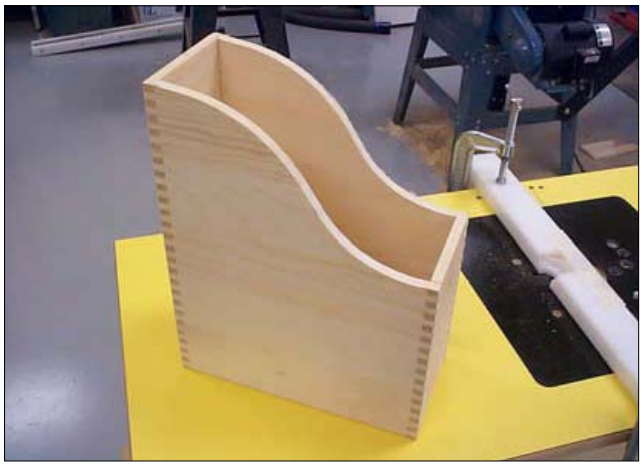
9) When all of your box jointed parts are cut out dry fit the project to see how you did. Make sure that all of the "X's" are face up and out when you test your fit. You should now have a tall box.



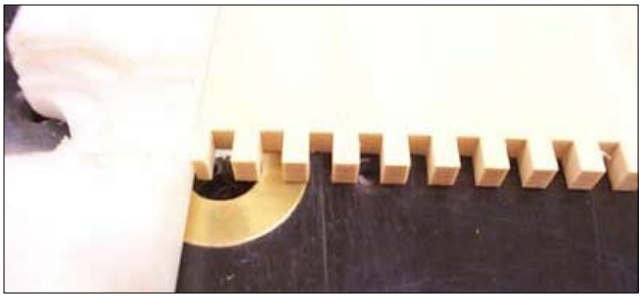
10) Let's cut the curve next. I used a 5" radius for the top of the box and a 4" radius for the middle. Make sure that the bottom exit mark lines up with the top of a box joint pocket. This will give a nicer look to the completed piece by putting a pin at the top facing out rather than the end grain.



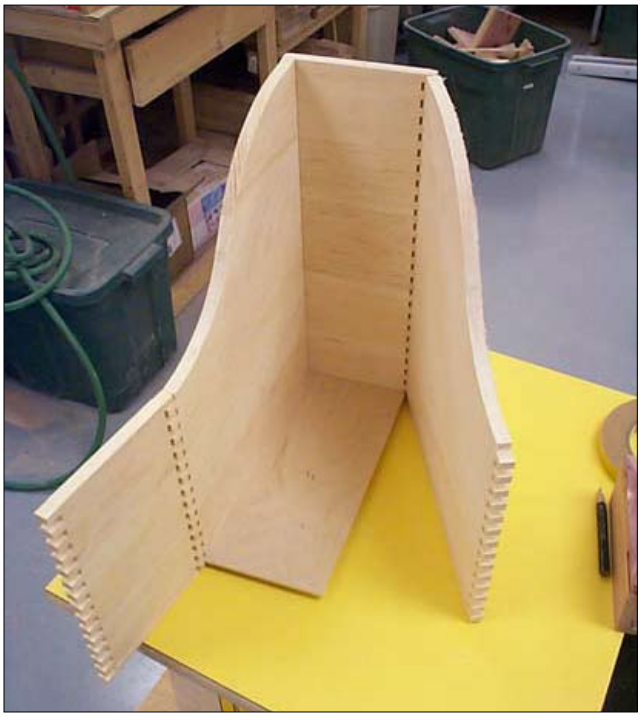
11) Using a bandsaw or scroll saw cut this top arch off. If you are going to be making several of these you may want to consider making a template of the arch and cut the tops off with your router and a flush trim bit. This method will make every one of your slipcovers exactly the same. Sand the curves to shape with a drum sander. Cut the front of the box down to size so that it will fit into the new smaller size front pins. Dry fit the parts together to check the fit.



12) Now for the bottom. Chuck up a 1/8" spiral bit or straight bit into your router. Set the height of the cutter to 3/16" or half the thickness of the material. Set your regular fence on your router table and line the bit up with the middle of the first box joint cut at the bottom of your side.



13) To cut the groove for your plywood bottom on a box joint you have to make a couple of set ups. First, lay the sides down with your "X" facing away from the fence and your good side up. Now run the groove along the bottom of the piece. Take your time during this cut as the 1/8" bit is very small and may break. The second cut is a bit different. If you just run the ends straight through you will see the groove on the outside of your box and it will show when assembled. You must make a plunge cut for this. Make a marking on your fence so that you won't cut through the box pin and start and stop at this mark. This will hide the plywood piece inside of the bottom rather than showing it out the corners.



14) Dry fit the project together again, this time with the bottom in place. You may have to trim the plywood to fit your project depending on how long your box joint pins were.

Gluing and Assembling

15) Use a small disposable brush to glue these parts together. You don't want to have a lot of glue squeeze out on the inside of a piece like this since it is very hard to remove. Lightly clamp your parts together while the glue is setting. Too much clamp pressure will cause the 3/8" stock to buckle.

16) When the glue is dry, sand the project and apply the finish of your choice. You may want to make several of these book boxes while you're at it so that as your magazine collection grows you can place them in a suitable holder and display them proudly in your home or workshop.

Bill of Materials

Part:	*T*	*W*	*L*	*Material*	*Qty*
A) Sides	3/8"	11 3/4"	9 1/4"	Pine	2
B) Ends	3/8"	11 3/4"	4 1/4"	Pine	2
C) Bottom	1/8"	3 3/4"	8½"	Ply	1

*Finished Size