

# Lock Rabbet Drawer Joinery

By Randy Johnson

**F**or fast, easy, accurate joinery in everything from kitchen-cabinet drawers to jewelry boxes, the lock rabbet is the way to go. Lock rabbets are self-aligning and sufficiently strong for light- and medium-duty drawers.

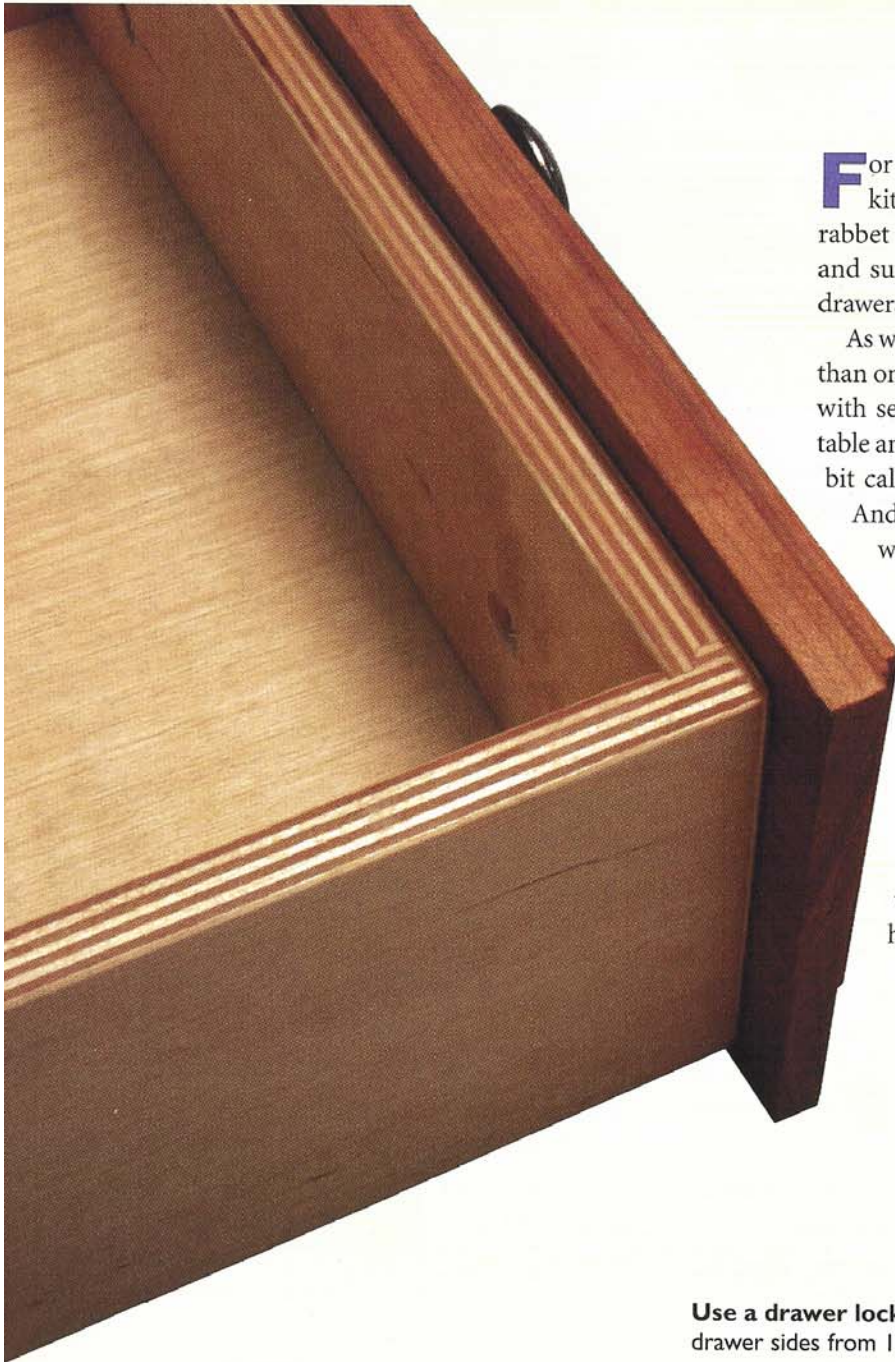
As with most woodworking techniques, there is more than one way to make a lock rabbet. We experimented with several methods using the tablesaw and router table and settled on this as our favorite. It uses a router bit called a drawer lock bit (see Sources, page 63).

And for the wood, we chose 1/2-in. Baltic birch plywood. Its multiple layers and lack of internal voids make it strong and stable.

## Router Bit Setup

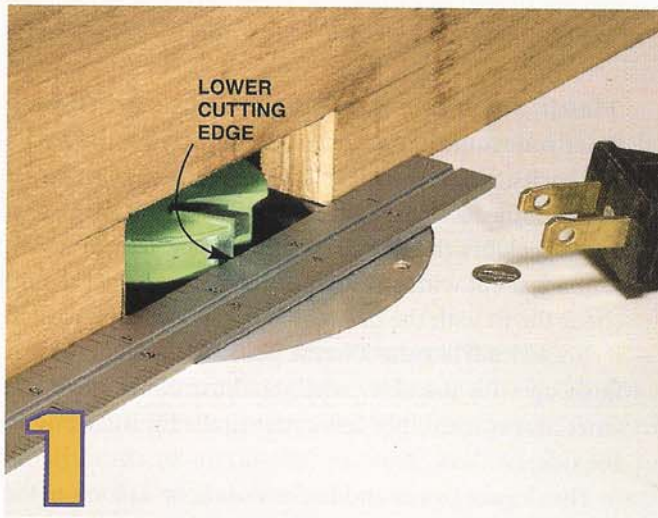
Setting up the drawer lock bit is not difficult. Start by aligning this bit with the fence, as shown in Photo 1. Next, adjust the height of the bit to approximately 3/8 in. (Photo 2). Run a couple of test boards (Photo 3) and check the fit (Photo 4). The first test boards you make are unlikely to give you a perfect fit, so adjust the bit's height until the fit is just right.

**Use a drawer lock router bit on drawer sides from 1/2- to 1-in. thick.**

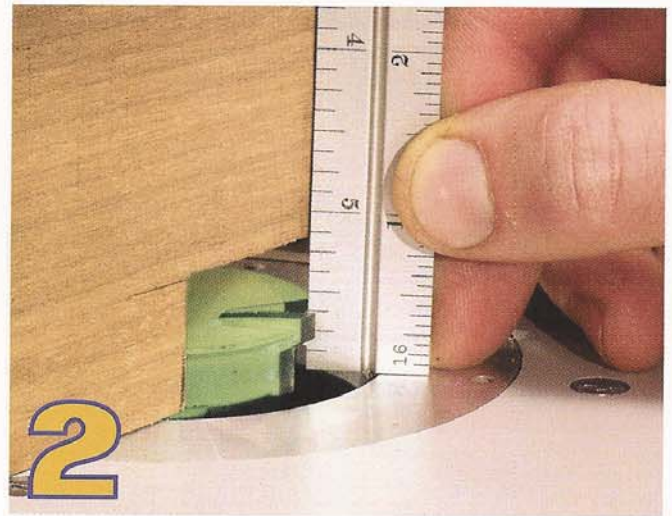




Here's a router-made drawer joint that's quick, simple and self-aligning.



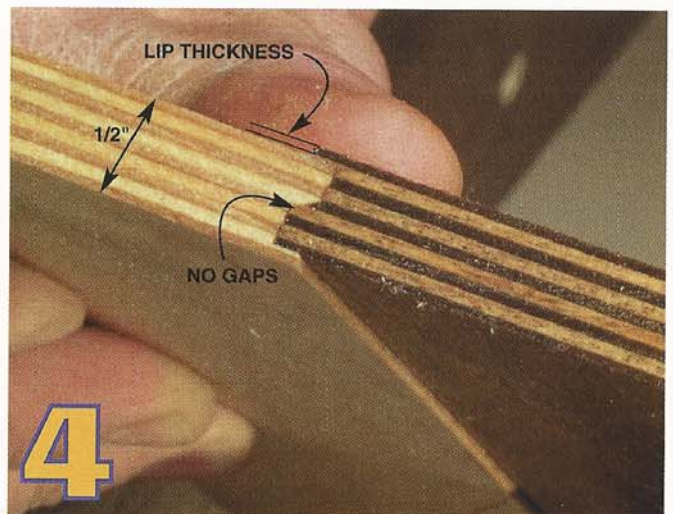
**1** Adjust the router fence until the lower cutting edge just touches the straightedge, which is tight against the fence. Be sure your machine is unplugged during this adjustment.



**2** Adjust the height of the router bit to approximately 3/8 in. above the table. This is not the final setting, but a starting point. Be sure your machine is unplugged during this adjustment.



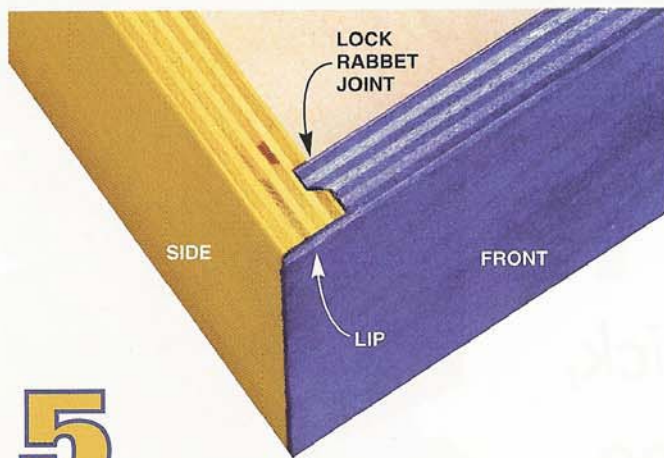
**3** Test the setup by routing a couple of scrap boards.



**4** Check the fit. The test joints should fit together easily, but without any gaps. Remember: Lower to loosen and heighten to tighten. Lip thickness will be between 1/16 in. and 1/8 in. when using 1/2-in. material.



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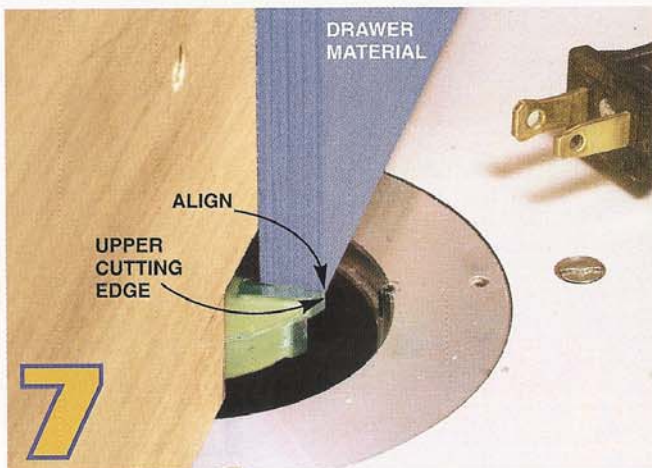
5

**Make both cuts for a lock rabbet joint** with one router bit. To clarify the process, we've colored the sides yellow and the front and back blue.



6

**Rout the panels for the drawer sides.** Keep even pressure on the panel so it stays against the fence and in constant contact with the table. Use a tall fence for good support.



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**Reset the fence for fronts and backs** using a scrap piece of drawer-box material. Move the fence back so the upper cutting edge aligns with the outer edge of the material.

Be sure your machine is unplugged during this adjustment.

## Making the Drawer Sides

To determine the length of your drawer sides, subtract two times the thickness of the lip on your test board (Photo 4) from your final drawer box length. For example, if you're making a 12-in.-long drawer box and the lip on the test board is 1/16 in., the material for the drawer sides should be 11-7/8-in. long. Here's the math:

$$\begin{aligned} 1/16" \times 2 &= 1/8" \\ 12" - 1/8" &= 11-7/8" \end{aligned}$$

Prepare your plywood by cutting it into panels that equal the length you calculated with the formula above and are two to three drawer-sides wide (Photo 9). Add 1 in. to the width to allow for saw kerfs and edge waste. The edge waste will accommodate the chip-out that usually occurs when the router bit exits the cut. To rout the joint for drawer sides, hold the panel vertically against the fence (Photo 6).

## Making the Drawer Box Fronts and Backs

Reset your router-table fence before you rout the fronts and backs. Set a scrap piece of your drawer-box material on top of the bit and move the fence back until the cutting depth matches the thickness of the material (Photo 7). Run a test cut with a scrap of drawer-box material and check the fit with the drawer side panels you cut earlier. It should look like the joint in Photo 5. If the lip doesn't flush up with the side panel, readjust the router-table fence and run another test cut until the lip is flush with the side.

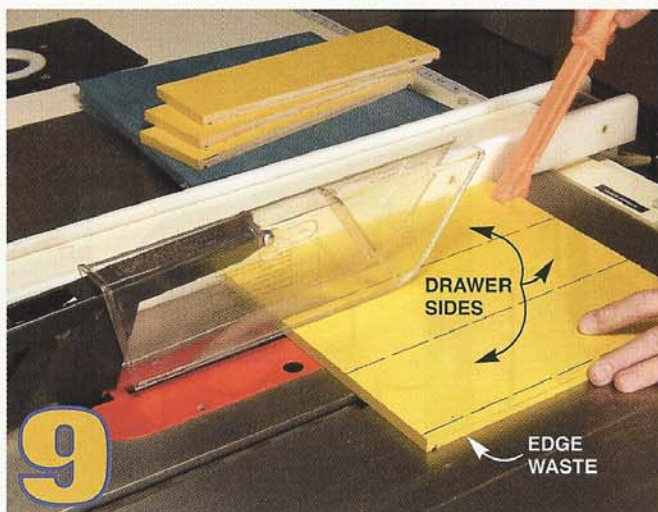
The drawer fronts and backs should be as long as the final width of the drawer box because they span the full width (Photo 5). These front and back panels are routed flat on the table (Photo 8).



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**Rout the front and back panels.** Hold the panel firmly against the table to prevent it from lifting, or you'll spoil the joint.





**Rip the drawer parts to final width** and then saw or rout the dado for the drawer bottoms.

### Final Sizing

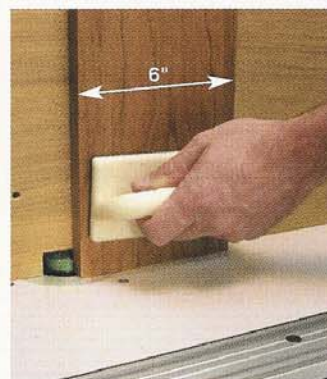
Now you can saw the drawer parts to final width (Photo 9). Then, saw or rout a 3/16-in.-deep dado in the parts for the drawer bottoms. Make the drawer bottoms out of 1/4-in. plywood and test fit all the parts by assembling a drawer without glue.

### Assembling the Drawer Boxes

On small drawers, masking tape works fine as a clamping tool (Photo 10). For larger drawers or thicker material, a few small brads or metal clamps work well. Apply glue to the joints and the dado for the bottom. By gluing the plywood bottom in place, the drawer ends up considerably stronger. **AW**



**Hold the parts** of smaller drawers together with masking tape. Be sure the boxes are square before setting them aside to dry.



### What about solid or thick wood?

A drawer lock router bit works equally well in solid wood. However, it's not safe to rout anything narrower than 6-in. wide with this technique. For narrower parts, start with a wider board and rip the parts to final width like we did with the plywood.

The bit we used is good for material from 1/2- to 1-in. thick. With thicker material, the settings for the router bit and fence are determined just as they were for our 1/2-in. Baltic birch. You'll notice that if you use thicker material, the lip will also be thicker.



**Oops!**

We fed this side panel too fast and got lots of chipping. By slowing down the feed rate we were able to keep this from happening. A zero-clearance fence will work wonders, too.

CHIP OUT

### Sources

1/2-in. Baltic Birch, 5 ft. x 5 ft.; \$34, plus shipping and handling  
The Hardwood Store of North Carolina, (888) 445-7335  
[www.hardwoodstore.com](http://www.hardwoodstore.com)

The following companies sell drawer lock router bits. Prices average about \$32 for 1/4-in.-shank bits and \$43 for 1/2-in.-shank bits.

Amana, (800) 445-0077  
Bosch, (877) 267-2499  
CMT, (888) 268-2487  
Craftsman, (800) 377-7414  
Eagle America, (800) 872-2511  
Freud, (800) 334-4107  
Jesada, (800) 531-5559  
Katana, (800) 533-9298

MLCS, (800) 533-9298  
Oldham Viper, (800) 828-9000  
Rockler, (800) 279-4441  
Whiteside, (800) 225-3982  
Woodline, (800) 472-6950  
Woodworker's Choice,  
(800) 892-4866