

## Getting more from your Router

#### **Router-table outfeed bin eats errant chips**

Even with a dust-collector hose attached to my router table's fence, chips and sawdust still manage to escape—generally toward the outfeed side of the table. To collect that debris, I built a simple plywood bin with an opening on top to catch the chips and a hole in the bottom to fit a 2 1/2" vacuum hose. By joining that hose with the one already attached to the router-table fence, I only have one dust-collector hookup to concern myself with.

—Thomas Freh, Newfane, N.Y.



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#### Speed guide adds purpose to router bit storage

In past issues of Wood, you've listed the correct speed range to use for router bits of various diameters. This guide gave me an idea.

On the top edge of my router bit drawer, I drew hash marks corresponding to various bit diameters. Between these marks, I wrote the appropriate bit speed from your guide. Now, when I pick up the bit I want, I simply hold it against this guide to determine the correct router speed. —Kevin Greene, Baskerville, Va.



## Keyhole bit unlocks the secret to no-slip bookends

I've built many a bookshelf over the years and have always been frustrated by free-standing bookends, which tend to slip or tip. So, while crafting a bookshelf for my great-granddaughter recently, I hit upon the idea of fully adjustable

built-in bookends.

In the top of the shelf, I used a keyhole bit in my plunge router to make a stopped slot, as shown in the drawing. I plunged the bit 1/2" deep into the center of the shelf, and then routed to near each end. That created a keyhole slot with a single entry hole that will be hidden by books.

After making the bookends, I drove a  $#10 \times 1 1/2$ " flathead wood screw into the bottom of each, leaving the head about 1/4" proud. To install the bookends, insert the head of the screw into one of the keyholes and slide it where you want it. The pressure from a book or two leaning against the bookends prevents them from sliding away.

-Gerald "Jum" Coorough, Prairie du Chien, Wis.





### Small-part routing safety

A wooden handscrew clamp serves as a safe "extension" of your hands, gripping the small part firmly while sitting flat on the table surface as you rout its edges.

#### Small-part routing safety

Scrap stock also helps provide you safety and control. Simply apply a strip of double-faced tape to one edge of the scrap, attach the workpiece, and rout. The scrap also assists in preventing chip-out.





#### Small-part routing safety

For handheld routing of small parts, clamp a scrap to your workbench, and apply cloth-backed, double-faced tape to the top. Press the small part onto the tape for a secure hold during machining.

# Use a follower block for chip free routing

When routing across end grain, small chips of wood often tear from the trailing edge as the

bit exits the workpiece. To prevent this, push the workpiece past the bit with a scrap follower block, as shown. The block supports the edge grain, preventing it from tearing out. Using a follower block also steadies a long, narrow workpiece for smoother routing. To make a follower block easier to handle, cut a 6" length of 1" dowel, drill a centered 1" hole in the block, and insert he dowel.





### **Playing with blocks**

Backing up your cuts makes as much sense when routing as when using a tablesaw. In both cases, you transfer the tear-out to a piece of scrap instead of your project parts. When routing, combine tear-out prevention with safety by using pushblocks to keep fingers a safe distance from spinning bits. With router pushblocks, because of the many different bit profiles, you need either lots of blocks or ways to reuse the same block.

One solution: Make this sacrificial pushblock, shown in drawing, from a 4"-square piece of scrap that's been drilled to accept a dowel handle. Use it

once, turn it 90°, and you have a fresh backing to use with your next bit, plus up to two more sides standing by. Make these blocks large enough and you can remove the chewed-up edges on your tablesaw and reuse them another four times. Larger blocks double as braces for keeping long workpieces perpendicular to your router table fence. The profile in back shows this block has backed up one router bit already, but still has three more grain-supporting edges left.

#### A clearly superior subbase for routers

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My shop-made router table has one big advantage over other tables—I don't have to remove the router's subbase when changing between freehand work and table work. That's because the 1/4" clear acrylic subbase I made for handheld use also sits securely in a 3/8" rabbet 1/4" deep in the router table opening.

Make the subbase plate 1" larger in diameter than the router base and add a tab at least 1/2" wider on all sides than the side handles, as shown. (This tab makes it possible to insert the router from above and keeps the router itself from spinning.)

When mounting the subbase plate, be sure to align the tab directly underneath one of the handles. To install the router in the table, drop the uncovered handle through the handle opening, and then spin the router 180° to align the subbase plate. Secure the

router in place with short lengths of rubber hose jammed between the handles and the underside of the table.

#### -Robert Martin, Picture Butte, Alberta



#### Don't get burned routing stopped chamfers

Ever experienced tear-out or burning when routing a stopped chamfer? Tear-out can happen if you rout the entire chamfer in one pass. Burning occurs if the spinning bit lingers in one spot, so you need to quickly pull the part away from the bit at the end of the chamfer. Here's an easy way to avoid these problems. With the part on edge and against a stop block, rotate the part into the bit, as shown top. Without hesitating, rout about two-thirds the length of the chamfer. Then flip the part end-for-end and reposition it against the stop block with the face down and partially chamfered edge toward the fence, as shown bottom. Rout again, stopping when you pass the previously chamfered area.

#### Micro adjust your fence with a turnbuckle

Making superfine adjustments to my router table fence was hitor-miss until I came up with my own micro adjustment system, shown in drawing. With this system, I simply clamp one end of the fence and make fine adjustments to the other end, fore or aft, with the turnbuckle.



To add a turnbuckle to your fence, use the hardware shown to add a pivot bolt to both the fence and the starting block. Use a turnbuckle with eyes large

enough to fit snugly over the bolts. If the eyes are too large, fill them with epoxy, let it cure, and then drill out the epoxy to fit the bolts. Use a washer on either side of the eye, and tighten the assembly together.

The turnbuckle works best on the "push" stroke, so always make final adjustments by driving the fence away from the starting block to take out any slack in the threads. To ensure that the fence doesn't move once you've got it perfect, clamp the turnbuckle end of the fence down. When not in use, you can leave the pivot bolt and eyes in place and remove the turnbuckle. Then store the fence and the starting block. —Wayne Donovan, Kansas City, Mo.

#### **Plan your passes**

You may need to think through this cutting sequence the first few times, but you'll soon make it a habit after seeing the results. On workpieces where you're routing all four edges, don't just spin the workpiece and cut from edge to end and back again. Cut the ends first and then rout the edges. Edge grain near the ends is the most susceptible to tear-out, but cutting the ends first allows you to remove any damaged areas at the same time you rout the edges.





The alternative? There is none. Cutting the edges first, as we did on the sample board shown, leaves profiles vulnerable to tear-out. If you're still having tear-out problems, use multiple passes and leave less than 1/32" of material for your final pass. This tear-out could have been avoided by cutting the end-grain edges before cutting the edges that run with the grain.

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