This is an excerpt from the book

Getting Started In Woodworking

by Aimé Ontario Frasier

SKILL BUILDER Router 101—Rabbeting

What You'll Need

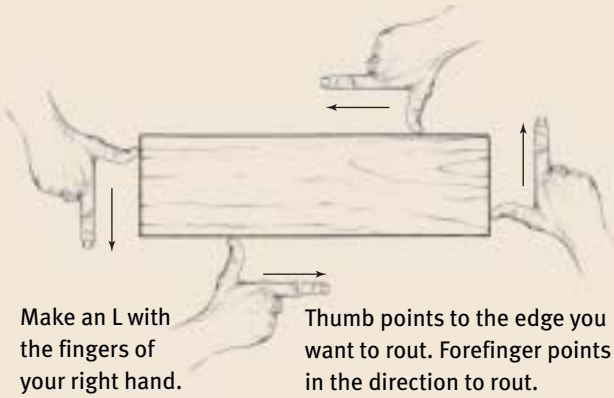
- Router
- Rabbeting bit, ⅜" rabbet depth and a ½" cutting length
- Scrap wood for practice, 1" x 5" x 3'
- Two clamps
- Combination square or router-bit depth gauge
- Dust mask
- Hearing protection
- Safety glasses

Rabbeting is a great application to start learning to use the router because it's a simple cut that's easy to set up and guide. With the bearing on the tip of the rabbeting bit, the router is docile and easy to control as long as you remember the rule: Rout against the turning of the bit. The easiest way to figure out just which way to rout is by making an L with your right thumb and forefinger. Point to the surface you want to rout with your thumb. Your right forefinger points in the direction the machine should travel.

If you rout in the other direction (called climb cutting), the router tends to pull itself along buy the turning of the bit, making it difficult to control. Climb cutting is used in some circumstances, but most of your routing should be done using the above rule.

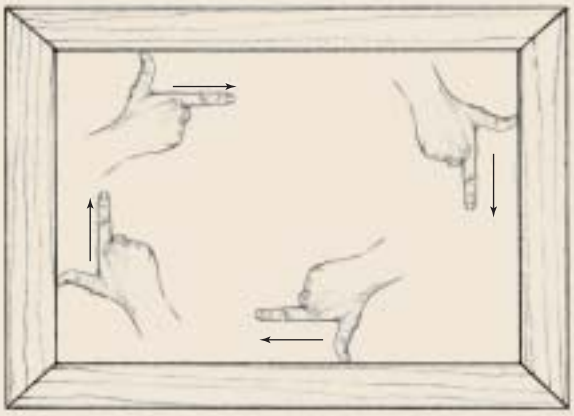

A

Routing Rule of Thumb and Forefinger



Make an L with the fingers of your right hand.

Thumb points to the edge you want to rout. Forefinger points in the direction to rout.



The key to router success is keeping the base flat on the surface. If the router tips just a little off vertical, it can rout a perfectly molded divot in the edge before you know what has happened. Concentrate on keeping the router flat on the work, with the bearing pressed against its guiding surface. Keep your work area clean, your clamps out of the way, and make sure the router cord runs free before you start. That moment of inattention when you look down to step over an obstruction could be enough to mess up a perfect edge. Whenever you run a router, you should wear hearing protection, eye protection, and a dust mask.


B

Setting Up the Router

Before working with the collet or bit, be certain the router is unplugged.

1 Move the base plate away from the body of the router to give you room to work. Loosen the collet lock nut by holding the shaft steady with one of the two wrenches that came with your router, as shown in photo B, or by using the shaft-lock button if your router has one.

2 Insert the shank into the collet as far as it can go, then back it out about 1/16" and hand-tighten the collet.

3 Using the wrench or wrenches, crank the lock nut as tightly as you can.

4 Put the router upside down on the bench. Hold the 3/8" step on a router-bit depth gauge over the side of the bit and raise or lower the cutter until the end of the cutter just touches the gauge, as shown in photo C. You can also use a sliding square. Set the blade at 3/8" and put the end of the blade on the router base, with the base of the square as a height gauge for the bit. Make sure the end of the blade is within the square's base so that it can rest flat on the router base plate so the base of the square is perpendicular.


C

5 Check that your workspace is clear, make sure the on/off switch is set to off, and plug in the router.

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Routing the Rabbet

1 Clamp the workpiece with the edge to be rabbeted overhanging the edge of the bench (this prevents the bearing from scoring your benchtop). Position the clamps so the router base won't run into them when making the rabbet.

2 Start your first test cut anywhere in the middle of the piece. Put the router base on the workpiece, but make sure the bit is about 1" away from the edge. The seemingly great distance from the work is because many routers give a little twitch when switched on, and you don't want the bit to accidentally touch the wood before you're ready to cut.

3 When you're routing, you need to be in a strong and stable position that lets you see what's going on at the bit. Stand well back from the work, and bend at the knees to see the cutter, as shown in photo D.

4 Once the router comes up to speed, push it directly inward. It'll make a lot of noise and dust at first, but as soon as the bearing touches the edge, it'll quiet down. Push the router from left to right, at the same time exerting a steady inward pressure to keep the bearing against the edge. Don't push too hard, or the bearing will dent the wood.

D

5 Make a cut several inches long, move the bit about 1" away from the edge (as in your starting position), and turn off the router. When the bit has stopped spinning, remove the router and check the depth of cut with a sliding square. Adjust by trial and error until the depth is correct.

Rabbeting the Ends

It takes some practice to get the rabbet perfect at the ends of the board. The most common mistake is taking a little chunk out of the end by running around the corner. This happens when you are trying too hard to keep the bearing in contact with the edge of the workpiece. With a little practice, you can get perfect corners. The secret is an inch of climb cutting at each end.

1 Clamp a board as described above, and start the router about 2" to the right of the left end of the edge to be rabbeted.

2 Turn on the router, push it against the edge, and slowly bring it to your left. You're making a climb cut in the opposite direction of the rule of thumb and forefinger. You'll find the router doesn't want to stay against the edge as it does when you rout in the other direction. Be prepared for the router to pull toward you a little, but don't worry if it does. Go slowly and you'll be in control. Watch the bit, and you'll see that before the bearing reaches the left end of the board, the wider diameter cuts a rabbet right to the end.

3 When you reach this point, stop your motion to the left, and push the router inward so the bearing contacts the edge. Then you can start cutting from left to right in the normal fashion.

4 When you get to the far end, slow down and watch what's happening. In a similar fashion, you'll stop when the cut goes to the end, but before the bearing runs off the edge. The biggest mistake people make when routing is to assume they have to rush just because the router is so fast and noisy.