

TOOL Close-Up

MicroFence

ROUTER EDGE GUIDE



Humor me for just a moment and think of your router as a workhorse. In order to get anything out of your workhorse, you're going to need a good bridle. So to stretch this metaphor a little further, let me just say that MicroFence makes one of the best router "bridles" going.

The Micrometer Edge Guide System (MicroFence for short) is an incredibly precise, microadjustable router fence that delivers repeatability, accuracy, and versatility beyond conventional fences.

The version I evaluated is the MicroFence Total Package. This package includes everything for precise joint making and circle cutting in diameters from 6" to 24". It sells for about \$260, which is in the low end of the \$160 to \$1,200 price range of MicroFence packages.

The more inclusive packages contain accessories for cutting ellipses, attachments that expand the circle-cutting range from as small as 1" in diameter to as large as 48", and various other attachments too numerous to list here. (Visit www.MicroFence.com to see the entire line.)

Straight Line Basics — One of the first places the MicroFence proves its worth is in the relatively simple operation of cutting rabbets and dadoes (*Photos at left*). At some point, you've probably noticed that a $\frac{3}{4}$ "-thick sheet

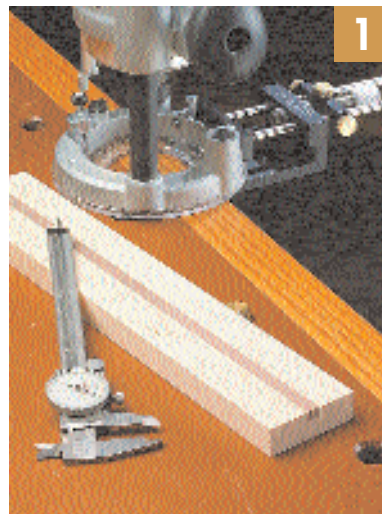
► Thanks to its precision adjustment mechanism (*Inset*), the MicroFence takes the guesswork out of routing perfectly-sized dado joints. It's shown *Above* with a low-profile fence for routing dados at exact intervals.



Advanced Class: Inlays

When router work needs to be incredibly precise, such as when routing grooves for inlay work (*Fig. 1*), the MicroFence's super-fine adjustment offers pinpoint accuracy.

The best accuracy is achieved by using a router bit that's smaller than the desired width of the groove. After making a first pass with the undersized bit, use a dial caliper to measure the inside dimension of the groove (*Fig. 2*). Then compare that to the width of the inlay material (*Fig. 3*). Subtract the width of the groove (.250 in this example) from the width of the inlay material (.330). The difference (.080) tells you exactly how far to adjust the MicroFence.



of plywood isn't quite $\frac{3}{4}$ " thick, but a $\frac{3}{4}$ " straight bit really is $\frac{3}{4}$ ". So if you cut a dado with a $\frac{3}{4}$ " bit, it will be slightly oversized for the plywood, resulting in a poor fit. The secret is to cut the joint in two passes with a bit smaller than the plywood (a $\frac{5}{8}$ " bit is a good choice).

With the MicroFence, adjusting the router for the second pass (the one that really counts) is a simple matter using the onboard microadjuster. The MicroFence is adjustable in increments of .001", so my approach was to "sneak up" on the settings until I found the perfect two-pass positioning. Once those were established, I set stop collars so I could quickly cut multiple dados. (The stop collars are a \$25 accessory).

Circle-Cutting Basics —The circle-cutting ability of the MicroFence is one more way this system distinguishes itself from off-the-rack router fences (Photo, top right). By attaching the circle-cutting jig to the MicroFence, circles ranging in diameter from 6" to 24" can be cut with the same laser-like precision.

Another interesting feature of the MicroFence is its ability to accurately follow irregular shapes (such as the curve shown in the Photo at right). For operations such as this, attach the half-round inserts that come with the basic kit (Photo, right). The inserts provide two constant contact points for better directional control.



◀ The circle jig accessory kit turns the MicroFence into an incredibly accurate circle jig for diameters ranging from 6" to 24".



◀ Half-round inserts on the MicroFence make it capable of following contours, such as when routing a groove parallel to a curved edge.

Advanced Class: Circle within a Circle

The MicroFence goes well beyond just everyday circle cutting with operations like circle-in-circle cuts. In this example, I cut a large ring from a sheet of maple plywood. After cutting the inner part of the ring, I used the microadjuster to increase the diameter of the setup by exactly the diameter of the router bit. Then I cut a final circle from a sheet of walnut plywood (Fig. 4). The result was a seamless, two-part circular tabletop cut in a few simple steps (Fig. 5).

