

Sunday, March 21, 2010

Cut, Fit and Repeat

Back in January, we attended a woodworking show and my wife talked me into buying a [Micro Fence](#) router guide. While watching the sales rep demonstrate that guide, two things became clear: 1) I wanted one of those guides and 2) it wasn't going to be as easy as it



looked. The guide is surprisingly easy to setup and use and it is amazingly accurate, but I still decided to learn how to use this tool the way I learn how to use most tools of this type – to build something with it. My wife and daughter love boxes so I decided to make my wife a small box with an inlay detail as a learning project for the Micro Fence. Note: if your wife buys you a tool, build her something with it – I think that was part of English Common Law.

The Micro Fence works like any other router guide, it's just a gazillion times more accurate. It attaches to the router via two guide posts and keeps the spinning bit an exact distance from the edge of the surface. The key to the success of the guide is the adjustment knob. The knob is graduated in 1,000's of an inch and moves with the precision of a fine watch. I have to be honest, I'm not used to woodworking with a dial-indicator, and it took a few passes with this thing hanging off the side of my trim router to get used to the feel. Once I got used to cutting precise grooves, I had to try and make equally precise inlay stock. I quickly realized that the setup on my table saw wasn't up to that task. Of course, I was going about this backwards.

The router guide is designed to make accurate small adjustments; my table saw fence is designed to cut "very straight" cuts, but we are not talking thousandths of an inch straight. So, first step, make up some very nice inlay stock; second step, cut a groove to match. That's where the dial indicator and micro-adjustment knob come into play. To fit the inlay, you first cut a groove somewhat narrower than the strip. Then, you measure the strip, measure the groove, calculate the difference, and adjust the fence. Then you make a second pass and the inlay simply



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TITS!

With each adjustment, each pass and each mistake, I learned more about the guide system. I also learned how to adapt the woodworking techniques I have long been comfortable with to accommodate the new level of accuracy. Later, I used the guide to perform the other task it is

advertised for, cutting a groove for modern plywood. Woodworkers know that ¼" hardwood plywood is nowhere near 0.25". I've gotten used to sneaking up on that groove on my table saw, but this guide made that unnecessary. I was able to cut the groove for the box bottom and the groove for the sliding lid with the same accuracy as the grooves for the inlay strips.



Learning new ways of doing something we already "know how to do" is often difficult. We simultaneously have to fight our urge to do what we know has worked in the past, and our desire to keep doing what we already know. Sometimes, our previous knowledge is a benefit; understanding film photography actually helps you use a digital camera better. Sometimes, previous knowledge gets in the way; I find my mechanical drawing skills still useful, but I don't think they helped me understand how to use a CAD system. My experience cutting inlay grooves by hand and even with a different router setup was of little value when I made this box – but, I'm very happy with the way the box turned out.

Posted by Dan at [5:42 AM](#)

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