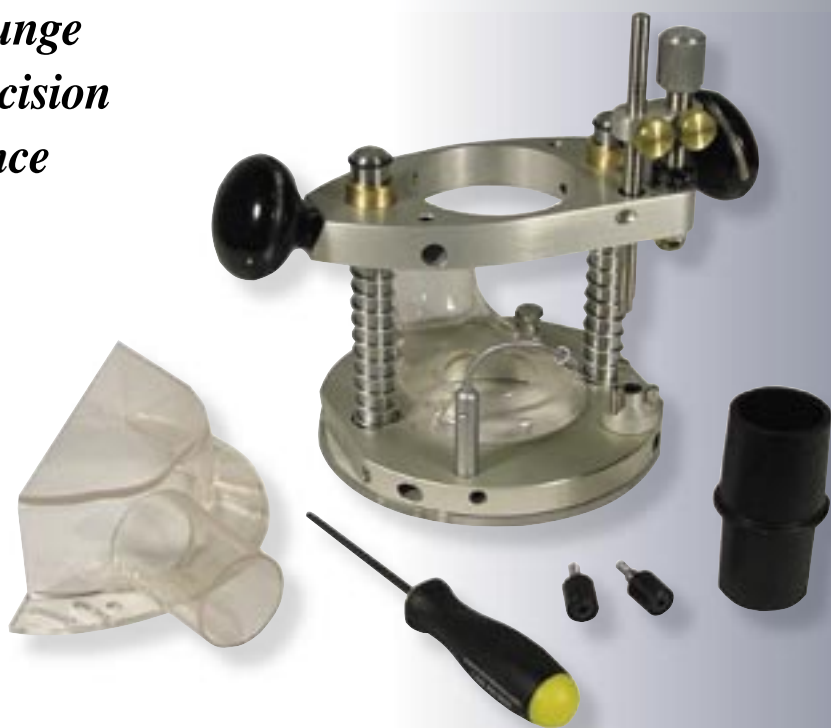# Dead-On Depth Device

Alan Goodsell *takes the plunge and tries out the latest precision accessory from Micro-Fence*

PHOTOGRAPHS BY THE AUTHOR

Over the years we have seen the emergence of truly accurate woodworking. Micro-Fence, have lead the field with their remarkable edge guides to fit almost any router, turning them into accurate cutting machines with the ability to laterally position a bit precisely. The Micro-Fence lineup has been further enhanced by a range of other router bolt-on accessories for precision routing, such as an ellipse jig and a circle guide to name but a few. The only thing lacking with the devices is that they still rely on the router's own system to set depths of cut, and some of these leave much to be desired. Micro-Fence have now developed a plunge router base, or Portable Three-Axis Mill, that incorporates their patented micro adjustment system in its depth setting system. The base is available to fit most popular laminate trimmer motors, and I chose

above The clear acrylic base will accept standard template guides

to try out the version that fits the Bosch PR20EVSK Colt laminate trimmer.

Build & Spec

The Portable Three-Axis Mill is superbly made from the highest quality of materials. The bulk of the device is made from high-grade aluminum that is precision machined in line with typical high Micro-Fence standards.

The Bosch trimmer motor fits easily into the motor carriage and sits on a pair of depth stops to hold it in position prior to being locked in place. It locates in a convenient position so the controls of the router fall easily to hand. Although I noted that the spindle lock button of the trimmer motor

was somewhat obscured by the carriage there was still enough of the button protruding to not interfere with its operation. Fitted into the carriage are brass bushings that slide on the externally sprung, stainless steel plunge rods. The plunge action is smooth, with good springing that is neither too heavy nor too soft.

The base is a solid piece of 6" diameter aluminum, drilled to fit the range of Micro-Fence edge guides, circle and ellipse jigs. Located on the base is a rotating depth turret that is a delight to use. It clicks effortlessly in one of its three indents, and each turn of one of the turret posts gives a $1/8$" height adjustment. Bearing onto the turret posts

"*The base is a solid piece of 6" dia. aluminum*"

is a stainless steel stop rod laser etched in increments of $1/16$" to make preliminary setups. This rod then locates in the heart of the unit's patented micro adjuster. It is possible to easily achieve depth settings accurate to 0.001" and the Mill has a plunge range of $2 \ 3/4$". There is clear acrylic sub base supplied, with a throat that is compatible with standard template guides.

The plastic handles are comfortable even though they feel a little small after using a larger router but it soon becomes clear that they are the perfect size for fingertip control. One of the handles locks the plunge and I was pleased to see that it secures firmly with no play on the opposing unlocked leg.

Also supplied, is a pair of acrylic dust ports of which one sits on the top of the base and the other under. They don't get in the way of routing and they will fit most shop vacuums.

The LED light can be fitted in a number of positions on the base, and gives off a remarkable amount of light for its size.

Bearings are supplied for mounting on the underside of the base, and makes light work of cutting centrally positioned mortises. Place the router base on a piece of wood and then turn it until the bearings touch the wood on either side. The bit literally has no choice but to make its cut in the center of the workpiece.

above The heart of the base is the patented micro adjustment system

In Use

The base is 3.85lbs which makes it a breeze to use handheld, but not so light that is wobbles at every opportunity. There are different methods to use the base and these are just two examples. First zero out the micrometer dial then plunge the base until the bit touches the surface of the wood and lock the plunge. Then bring the stop rod down to touch one of the posts of the turret and note its position. Following this, unlock and lift the rod for the desired depth of cut and lock in place. Plunge the router to make a trial cuts on a piece of scrap wood, until the stop rod again touches the turret post. Check the cut with a pair of calipers and then make fine adjustments with the micro adjuster to get exactly the depth of cut required.

Alternatively, if planning to inlay some cross banding, plunge the base so the bit brushes the surface of the wood, insert a piece of the inlay between the stop rod and one of the turret's posts, and tighten the rod. Plunge the base by the amount of the gap and the depth of cut will exactly match the thickness of the inlay, it is then possible to

above The three-position turret is smooth to use

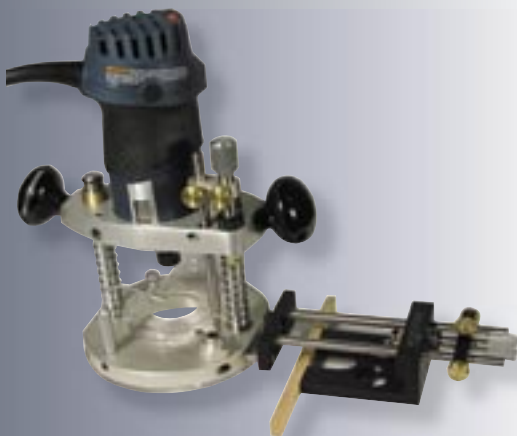fine-tune the depth of cut to allow for glue if needed.

If you combine the Portable Three-Axis Mill with a Micro-Fence edge guide you have a routing tool that is unsurpassed for precision cutting both laterally and for depth. The edge guide can be mounted on either side of the base, as can the ellipse and circle cutting jigs.
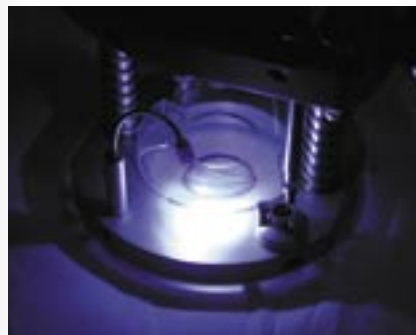
Optional Extras

An optional acrylic base is available with a larger $1 \ 3/4$" throat for the use of bigger diameter bits and carriage adaptor sleeves to allow different trimmer motors to be used in the Mill. Probably the most popular accessory will be the LED light, of which it is possible to add more to the base for extra lighting.

Conclusion

The quality and ease of use of this piece of equipment is remarkable, and even though the base has a price tag that may initially make you gasp, it will help you achieve a remarkable quality of work.

above The base combined with an edge guide makes a deadly accurate cutting tool

above The LED light gives good illumination

MORE INFO

Portable Three-Axis Mill: $399.95

For more information contact Micro-Fence: Tel: 800-480-6427 Website: www.microfence.com

***Laminate trimmer motor not included in price**