



Main image: The jig guiding the router base for accuracy
Above: The jig gives control without the need for guide bushes
Below: A clean housing cut



Insight

First projects

Peter Sefton lets us join the class as his students begin their woodworking journey

My new full-time students have recently started their woodworking adventure and after initial hand tool preparation and sharpening, one of their first jobs was a small chisel rack to store their own new hand tools. The guys had been given a design brief, which includes fixing a solid timber shelf with either hand-cut through-wedged tenons or a routed dovetail housing; some chose one of each for opposing ends of the shelf to gain experience.

Getting started

One of the first decisions was to select a suitably sized dovetail router cutter and we chose a new 1/4in shank, 8mm wide Whiteside cutter, with an 8° slope. Although the cutter was brand new and very sharp we used a second router, set up with a straight cutter to remove the bulk of the waste. The problem with routing enclosed dovetail housings is the strain this can place on the cutter – if one snaps mid-project it can be very frustrating.

We used a shop-made square

housing jig that last year's students produced. The main elements required by this jig are accuracy of dimensions and squareness of the cross guide rails. The jig also offers work support to eliminate breakout, as the router cutter exits the housing. As the jig has been used last year we decided to turn it around and route a fresh housing from the other side in order to give us renewed timber support.

Making the cut

The housings were cut at just over two-thirds of the timber thickness – in our case the housings were cut at 8.25mm in 12mm timber – and a stop on the jig was used to keep the housings a consistent length. The male part of the joint was produced on the router table using the same cutter, at 8mm high, now inverted with the shelf passing over the top of it. A false fence was fixed onto the INCRA fence to reduce break out. The cutter was used to cut through the false fence, from behind, to give a zero clearance. We also used a pressure guard in front and a sacrificial

piece of timber following on, which both helped to keep the shelf square and prevent breakout.

After the dovetail was cut on both sides of the shelf and tested for fit, I dampened the ash (*Fraxinus excelsior*) joint as this raises the grain. I do this and either re-route or lightly sand prior to gluing; if you don't dampen the joint, the glue will swell the joint during the gluing process and the joint may bind up mid-assembly before all the joints have been pushed home. ■

Peter Sefton

Peter Sefton is a well-known furniture maker who runs courses in fine woodworking, teaching and mentoring students at the Peter Sefton Furniture School. He also owns Wood Workers Workshop and he is a Liveryman of the Worshipful Company of Furniture Makers.
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