

## BAILEY'S ROUTER CLASS



# CD/DVD rack



**Anthony Bailey** makes this stylish store for your media

### THE PROJECT

This month I've come up with a simple but pleasing design for a CD rack (it could be used for DVDs of course) that will test your routing skills. Once you get the hang of using the jig to cut the slots for the rack, it's a doddle to make. I chose oak for the sides and ash for the top and bottom, but you can use any suitable hardwood.



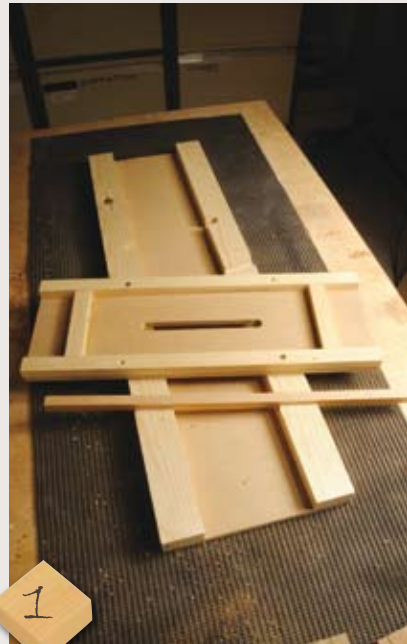
**T**he router is still the most versatile power tool there is. Along with a vast range of cutters, jigs and gadgets – many of which you can also make for yourself – it can help produce high-quality woodwork.

This series is intended to show you what the router can do, while assuming the reader has a general level of woodworking knowledge. We hope to show you the aspects of each project that specifically involve the router and how this great bit of kit can expand your woodworking skills.

Each month we will highlight the jigs, cutters and gadgets you will need to help you get more from this incredible machine. Feel free to send us pictures of your routing endeavours, or post them on the WPP forum at: [www.woodworkersinstitute.com](http://www.woodworkersinstitute.com)



# THE JIG

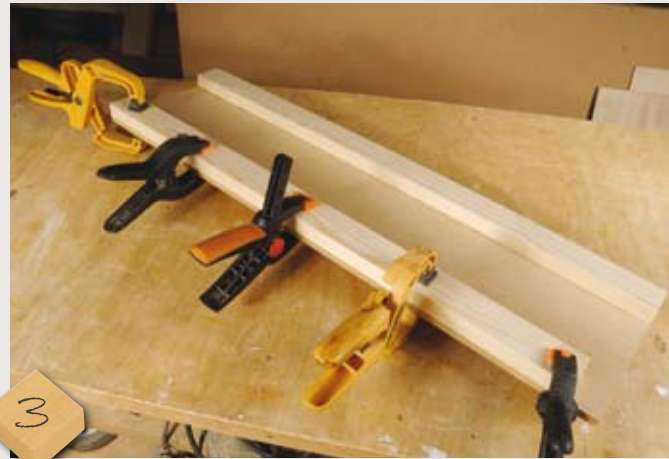


**1** The jig consists of two trays – one for the components to slide in and one for the router to slide in. The latter is screwed to the component tray and a registration stick ensures all the slots are the same distance apart

Glue a batten to a piece of thin MDF or ply and once dry, sit the router up against the batten and glue the other batten in place so the router slides smoothly without any play



Make up the component tray the same way. Measure the long dimension of a standard CD/DVD case and set the tray width so that the case projects for you to be able to pull it out. Make sure you allow for the 6mm veneered ply back panel



**4** Mark across halfway along the component tray, then set an adjustable bevel to about 78° – which looked about right. Mark this angle on both the left and right of the centreline as the jig is reversible



**5** Screw the router tray on one of the angled lines. The tray must be long enough for the router to move right across the lower tray

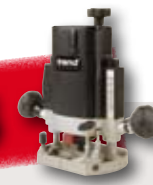


**6** Fit a 12.7mm straight cutter in your router, sit it in the upper tray and do a plunged slot cut through the router tray base so it starts and stops halfway into the side battens



**7** Glue end stops to limit the router's travel each time. Your jig is complete, apart from the registration stick slots which will be formed later

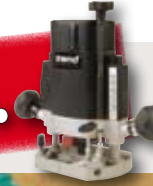
# THE CUTTERS



From left to right: 12.7mm straight cutter is used to make the slots. The top and bottom of the unit require a 6.35mm straight cutter for the grooves the sides will fit into. The back panel rebates and the tongues on the side component ends use a small Wealden tenon cutter, but any large diameter straight cutter will do. The undercut bevel on the top and bottom is done with a vertical panel raiser which you can obtain on an 8mm shank, as well as 1/2in. A Trend three wing laminate trim cutter put a small chamfer on the leading edges of the side panels



# MAKING IT...



**1** Saw and thickness all the stock required, apart from the back panel which will be prepared to fit later on. Make the side components a neat sliding fit in the slot jig without play and a spare piece for test cuts. Mark the first test slot and slide the component under the jig so the mark just appears at one side of the slot. Use a clamp to hold it while machining. Plunge and machine the first slot in at least two passes to about 10mm deep in 18mm stock. Remove the test piece, mark the next slot and reposition in the jig



**2** Continue until three slots are done, so the first slot appears from underneath the router tray



**3** With the test piece still in position, mark across the side battens where the first slot is. Remove the router tray and use it as a temporary fence for the router. Remove the test piece and rout slots through the side battens

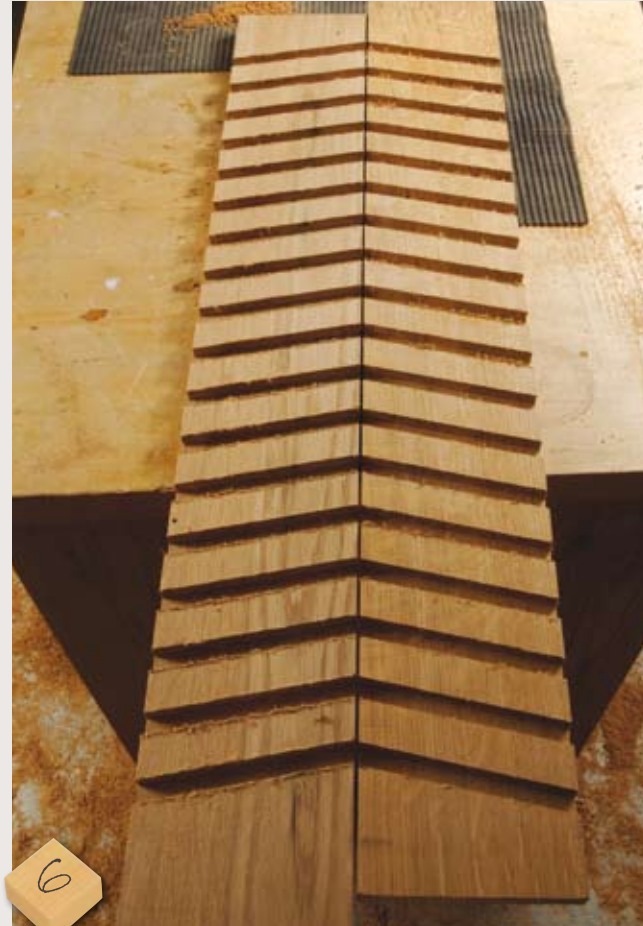


**4** Refit the router tray and replace the test piece. Make up a registration stick that fits tightly in the batten slots and second CD slot. Now make the next and all subsequent slots using only the registration stick





**5** You can proceed to completely slot one side component. Make sure you have enough spare length to suit your needs



**6** Now unscrew and move the router tray to the already marked opposing angle and repeat steps 1-5 – excluding the use of a test piece, as you will have demonstrated to yourself that the method works. You should end up with two mirror matched sets of slots waiting to be trimmed to length



**7** Set up a large diameter straight cutter to machine the back panel rebates. Aim to set the panel in by about 0.5mm – it is better that the solid sides protrude fractionally.

Use the same cutter to do the equivalent rebates on the top and bottom of the rack. You need a through sub-fence as seen in the picture. Mark the ends of the cut on the sub-fence and the start and stop positions of the rebate on each component. Now do a push-on, slide and pull-away cut on each component, so you end up with stopped rebates



**8** You need to carefully mark where the sides need to be tongue and grooved into the top and bottom of your rack. Check a CD/DVD will fit loosely and mark where the components meet. The stopped grooves are barefaced to the outside face of each side component. Set up a 6.4mm straight cutter in the router table with a through sub-fence in place and a stop block at the outfeed side. Do two passes to get to the final depth and make sure that you have proper control over the workpiece when passing over the cutter



**9** You can only do the right-hand slots like this, the other two need to be done running from the outfeed side. Don't worry, you will not be climb-cutting – we aren't widening a slot, so whichever direction we approach the cutter from doesn't matter. I machined these slots with the stop block to the right and found it safe. Refit the large straight cutter and rebate the ends of the sides to form the tongues. Trim off the leading edge of each tongue so it fits in the stopped groove



**11** The second bevel on the top and bottom is machined on by lying the pieces on the table and passing over the cutter to undercut the edges. Set the fence exactly parallel to the mitre slot and use the mitre fence to push the components and use a sacrificial block. Sand all components to a finish. Glue and assemble the rack and cut, glue and fit the back panel. A last touch is adding a stopped chamfer on the leading edges with a bevel cutter installed. I applied a clear satin lacquer finish, then used wirewool and waxed it ■



**10** A bevel vertical panel raiser is used to create an undercut shape that thins the profile of the top and bottom components' face edges. You must use a breakthrough sub-fence which has to fit closely, especially at the top, otherwise the wood fibres will breakout and tear. Start with the cutter only just showing through the sub-fence which should be moved back in stages between the passes, until you reach a satisfactory depth of cut. Take only shallow passes as the long grain passes will strip off wood that gets trapped



**For Anthony's top safety tips and techniques, turn to page 50**

If you liked this project you might be interested in an earlier version I did a few years ago. Simply Google "Routing The Plank" and you will find on our Woodworkers Institute website a revolving CD rack project where I machined the CD slots in mid-air – quite literally!

## Router torque

**Q** I'm really getting into routing and I own a couple of machines and various cutters and accessories. My problem is how to organise all the small bits which include various nuts, bolts, washers, lead-in pins, collets, self tapping screws, and goodness knows what else – oh and loads of bearings and matching Allen screws. What is the best way to tidy this messy collection up?

**A** Here is my collection of stuff that I use for the magazine. As you can see, it is quite well organised and it all fits in its own carry cabinet. It's easy enough to buy something suitable – the trick is to have an organised mind and enjoy

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sorting small components. What you tend to end up finding is that you have more similar items than you thought. Bearings are a good example – you may well find you have a more complete set of sizes than you realised. You need plenty of small machine screws for mounting routers in tables etc, and keeping them in separate compartments ensures you can keep sets of them together. Proper organised storage is the only way to go if you are a router fanatic like me!

