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BAILEY'S ROUTER CLASS

Old style shelves



Anthony Bailey makes use of his multi-profile cutter

THE PROJECT

When I was selfemployed as a cabinetmaker, I found that most clients preferred a traditional furniture style rather than contemporary. Consequently, I ended up with a very large cutter collection, covering all possible types and styles of furniture. Some were

used all the time, while others were almost a 'onejob wonder' and collected dust afterwards. Perhaps the most-used cutter I owned was a 'classic multi-profile' cutter, for want of a better name. I thought I would reprise those earlier days of furniture building by revisiting this cutter type. So, this month's project is just a simple set of shelves using just this cutter to produce the moulded edges - and a couple of others for jointing, of course.

For this exercise, I have chosen the large Wealden model. They also do a small version that suits a smaller router and in both cases, must be table mounted for safety and control. This style of cutter isn't unique to Wealden, but it is one of the few currently available. 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

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HOTOGRAPHS BY GMC/ANTHONY BAILEY



Do some sketches of possible scroll shapes. This can be harder than it seems – arriving at an aesthetically pleasing shape that is wide enough for your shelves can be a challenge



The two shelf ends need to match. Sometimes it makes sense to make up a template that can be used time and time again. If you want to batch produce these shelves, then a template is the way to go. However if you want to make just one set of shelves, the quicker method is to make up one end and use that as the template for the other



Mark and cut out the blank for the other end. Bandsaw it out oversize by roughly 3mm. Pin the finished end to the rough blank ready for machining. Pin the two pieces together where the shelves will be, avoiding marks on the finished furniture



Work out the size the whole unit needs to be and redraw the complicated end profile at full size on a large piece of paper. Adjust it until you are happy with the shape and stick it to your wood blank with spraymount adhesive. Bandsaw the shape out, running close to the pencil line. Remove the paper template and remaining adhesive using white spirit



Clean up the shape using a fine rasp or a wood file before doing so with abrasive, preferably wrapped around a piece of wood or cork block, so it will sand without rounding over from face to face



Set up the router table with a large trimming cutter with a bearing at the bottom end. The finished component is the one on top. Ensure the bearing is running against the top component and also a small amount of the cutter. Use a lead-in pin to start the cut safely and machine into the rotation direction of the cutter. You should now have a perfect copy of the first shelf end

THE CUTTERS

Apart from the classic multiprofile (shown far right with small version), I used a large trimming cutter (left) with a bottom bearing which is normally supplied with a glue shield to prevent the bearing from getting gummed up; and a straight cutter (middle) to remove most of the waste before running the dovetail cutter (right) to make rigid shelf joints. All these cutters are on a 1/2in shank.







Cut out all the components according to your drawing. The shelves are cut exactly to size and square, ensuring there is enough length to create the dovetails that will fit in the end housings. You need a slotted jig (pictured) to accept a router and **30mm guidebush** (see WPP38 for more details on this)



Mark out the shelf positions, including the limit of the slots which will stop short of the front edge. Screw a batten across the T-square to limit the router's travel. Machine most of the housing waste away with a narrow straight cutter



Do a second pass using the dovetail cutter but do not unplunge or it will ruin the cut – just switch off and wait before withdrawing the router from the slot



Set up the router table with the same dovetail cutter and do some test cuts with offcuts until you get a good sliding fit into the housing, then machine all the shelf ends in the same manner. The front end of each dovetail will need to be sawn slightly short and rounded to slide fully into the slot



Dry assemble the shelf unit and mark the housing positions on the underside of the blank for the top. Machine these housing exactly as you did for the sides

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Set up the large multi-profile cutter so the bearing will run against the

edge of the end blank. This will be on the outside face only. Because we are using the first, rather large 'classical' mould section, you will need to do repeated passes, raising the cutter between each so you don't

take off too much wood each time. Use a lead-in pin and push into the

direction of the router cutter's rotation



Now machine the dovetails on the top ends of the side blanks and check they fit the housings



The shelf top needs to have the front corners radiused. Repeat the previous moulding operation, this time on the underside of the top. The finished profile will be quite large and imposing when the top is finally fitted on



To shape the shelf edges, refit the fence to the router table and raise the combination cutter so the bead section is centred on the shelf thickness. So long as your router table insert is thin enough, the cutter should be able to rise up enough. Set the fence and as usual do test cuts until the result is correct. Shape the front edges only



Finally you can sand and apply a finish to each component before assembly. Then use a hammer and block to tap all the joints together

Router torque

Woodworking magazines often refer to making test cuts. I'm not sure if I really understand the value of this as I have done most work by hand until now. It seems wasteful on material and I can usually mark and cut correctly. I'm new to routing so is it really useful here?

A Hand work involves slow cuts; machine work produces quick and often deeper cuts. So any machine process that requires repeatable accuracy, especially where good joint fit or appearance of moulding details is essential, will need test cuts to ensure accuracy. You can get lucky or be able to simply make a minor running adjustment, but more often than not, it gets more involved than that. Look at it this way: if you need four components and you have an extra one as a test piece, it could avoid making adjustments partway through. This may otherwise spoil three of your original components if they no longer fitted properly, so this is a definite saving of time, timber and temper! I often cut timber rather overlength, thus producing useful offcuts that I keep rather than bin. These are the same section as the stock I'm going to machine and so long as I use a through fence on the router table, they will be safely supported. I should add that I keep a set of vernier callipers and a short steel rule handy for checking. Offcuts are useful for dye and finish tests as well.

Email your router questions to: anthonyb@thegmcgroup.com

Offcuts are very handy to use for test cuts with the router

