

BAILEY'S ROUTER CLASS

Key cabinet



Anthony Bailey continues his great series on the router

THE PROJECT



A simple, but very useful, small-scale project for keeping all your keys organised and easy to find. There are a number of router-based operations that are used to create this key cabinet. It can be made from solid wood or multi-laminate birch ply, and at a size to suit how many keys you have - you've no excuses for losing them ever again!

The 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

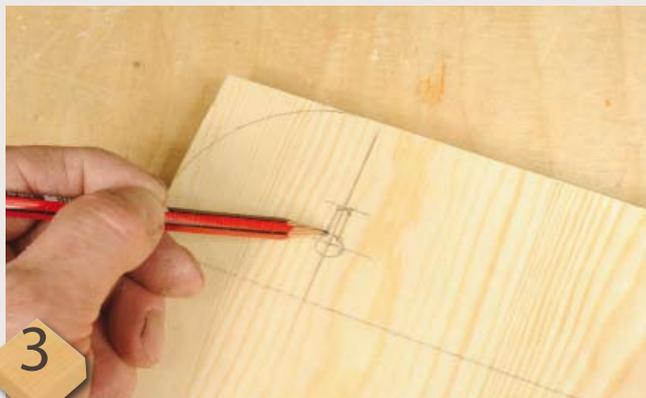


THE JIG



1

The keyhole cutter is a natty little tool for making a hidden slot for a screwhead to sit in so we can hang this cabinet on the wall. However, the catch is that the head is obviously larger than the slot cutting section above it. To avoid mistakes, we need what you might call a 'tray jig' in which the router will sit to restrict movement



3

Work out the desired limit of travel for the router and then glue and fix battens between the battens in step 2, to allow the router to travel that distance in the jig



5

With the jig resting on battens lifting it clear off the bench, place the router at the top end of the tray jig. Switch on and plunge the cutter so the widest part that will create the keyhole entry point goes into the jig base, and slide the router along to create the full length slot – you may need a deeper second pass to machine right through. You now have visual access of the slotting area and the jig is ready for use on the back panel of the cabinet



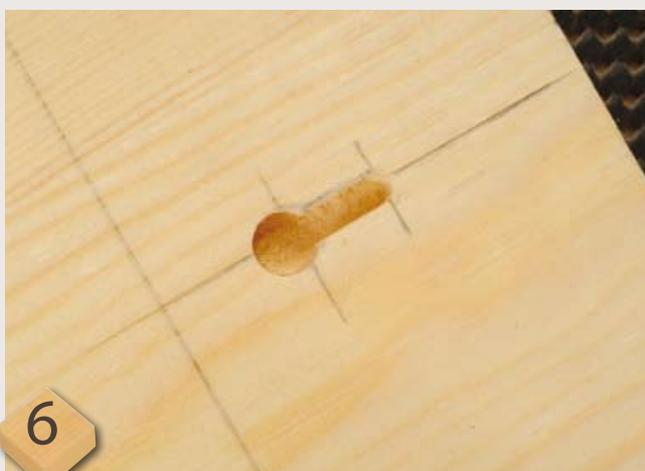
2

Glue and fix battens in place onto your plywood base so they allow the router to move in one direction only



4

Place the tray jig on the back panel to ascertain the correct position and then fit a crosswise batten underneath the tray jig at the chosen position



6

The resulting keyhole slot is neat and very functional

PHOTOGRAPHS BY GIMC/ANTHONY BAILEY

TOP TIP
Plains Projects

Home woodworkers, unlike specialist trades, seldom use narrow necked cutters like the keyhole cutter, but there are times when such cutters are very handy. They are great for making dovetail housings, which are often used for casework and bookshelves.

The downside of necked cutters of any kind is that they have to cut at full depth in one pass. You simply cannot plunge in several depth passes like a straight cutter can.



To remove the bulk of the waste, first use a straight cutter that is narrower than the width of the opening into the joint, and do repeated passes to near final depth. Fit the desired necked cutter and make the cut from the end, thus creating the final profile while taking out a minimal amount of wood. It avoids burning, chip clogging, and cutter breakage, plus it improves blade life and your working experience.

THE CUTTERS


I have used no less than seven cutters on this project, several of which are non-standard, but fun to use.

- The basic joint work is rebating, done with the small but excellent Wealden tenon cutter, which gives a very good result.
- Next is the smallest size Wealden keyhole cutter.
- The projecting top section of the back has a small Trend stopped ogee profile on a bearing guided cutter.
- A Trend 3mm spiral cutter was used to drill the holes for the piano hooks.
- The hinge cutter gives a good clean finish and minimal edge tearout.
- The door has a pattern made with a face mould cutter – this has a bearing mounted on the shaft for template following. This must be used with a thick template so you can take shallow passes while the bearing can still contact the template edge.
- The door edge has a small ovolo moulding created by setting the cutter down enough to make slight step shapes.

MAKING IT...


1

Cut and plane all components to width and length, except for top and bottom pieces and the door, which is trimmed to size later. If using solid wood for this you may need to carefully edge joint pieces together for the door and back panel – which should be thick enough to accommodate the piano hooks



2

Mark out the cabinet top position on the backboard and the shape for the projecting top, also the keyhole positions on the reverse side. Use the keyhole jig to machine the keyhole slots while the top is still square



3

Jigsaw or bandsaw the top curves and sand to a smooth, even, finished shape. Use a small bearing guided ovolo cutter to run around the top edge, making sure you start and finish before the marked line of the cabinet top



4

To make accurate holes for the piano hooks that hold the keys, a 3mm spiral cutter is ideal for drilling with the router. Use some abrasive taped to the baseplate if necessary, to stop the router from wandering



5 Use a tenoning cutter, or a 19mm straight cutter with a through fence in place to machine a rebate on the ends of the cabinet side pieces. Use a square cut push block behind for accurate support and to avoid breakout



6 The cabinet sides are also rebated so they sit along the sides of the back panel without projecting too far, for aesthetic purposes. Do this at the same cutter and fence settings



7 Now cut the top and bottom to fit when the side pieces are in place. All components can be sanded and glued and pinned in place. For simplicity, the hinge recesses can be machined to the full depth of the folded hinge into the cabinet carcass, and simply surface fixed to the door. You don't need a jig for just two recesses, but you do need to clamp a batten along the cabinet side to give more support for the router and fence



8 The door is cut to size and a template made for the bearing guided face moulding cutter (see Router Class in WPP43 for more on template working). Make sure you use an offcut in the middle for support and keep the router tight to the edge of the template and machine at an even pace. The template is pinned to the door blank and the blank sits on a rubber router mat. The edge has an ovolo shape routed on it. Finally sand, apply a finish, and fit the hooks, hinges, knob and a catch! ■

Router torque

Q You seem to always be using a 'through fence' on the router table. Why is it necessary?

A There are a number of reasons why a through fence is the best way to work. My own experience with routers and spindle moulders shows that you get better work support, and you can work more safely as only part of the cutter is exposed.

Also, when you do scribing (end) cuts, there is no danger of the workpiece slipping into the fence opening, or getting dragged on to the cutter as seen in photo 1.

Even with the best aligned fences, a workpiece can catch on the outfeed fence, causing a slight 'dink' in the surface and



1 marring the finish. Where a cutter will be partly behind the fence line, fit a sub-fence and start with the cutter well behind it. Switch on and push the fence back carefully until the cutter breaks through and is exposed enough for the cut you need. Keep hold of the fence and press the NVR switch to cut the power. It is best to keep hold of the fence for this, so have a friend switch it off for you. This is because snatches



2 and kickback occur at slower speeds, and you need the fence to stay put. If there is a bearing or shaft on top of the cutter you need to cut this area out with a bandsaw first. Your subfence is now ready and you can wind the cutter up or down while running. Trim away any fluffing or tearout at the outfeed side of the cutter with the router switched off.

Email your router questions to: anthonyb@thegmcgroup.com