BAILEY'S ROUTER CLASS

Kitchen towel roll holder

Anthony Bailey builds a jig to make dowels of all sizes

PHOTOGRAPHS BY GMC/ANTHONY BAILEY

THE PROJECT

This is a simple, but interesting, project involving a number of machining operations. In particular, it addresses the problem of what to do if you need dowel in a timber other than standard pinky-white obeche. You can make the dowel with the method shown here to any reasonable length.

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**

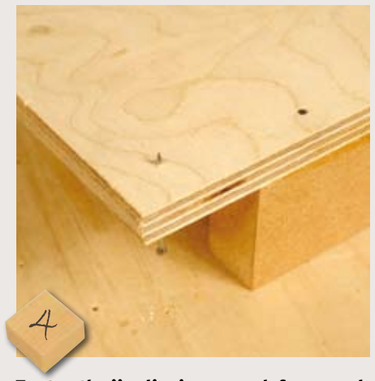
On a roll... our Anthony has found the perfect place for his holder

THE JIG

Cut two strips of 18mm MDF or ply, slightly wider than the intended size of the dowel you will be making. The jig can be made longer to suit other projects... the principle remaining exactly the same. Glue and pin a strip of MDF along one side of the strip of ply, to create an L-shape

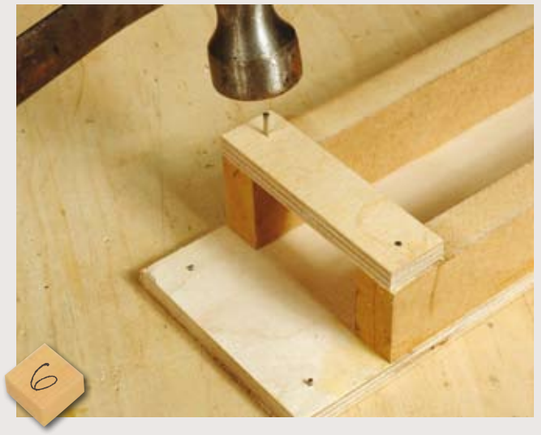
The space inside the jig should be such that the component will sit in the jig with enough clearance to one side for the roundover cutter and bearing, in this case a 12.7mm radius cutter. It is important the cutter will not randomly catch on the side of the jig – although if this does happen the consequences shouldn't be very serious. Mark this position

Now you know the position of the jig's second side trim the base of the jig down on the saw and glue and pin the second MDF strip. This forms a U-shape. Ensure there is no glue at all in the internal corners



To stop the jig slipping around, four panel pins are driven through the corners of the jig so the tips project through

Turn the jig over and nip off the top part of each pin. To use the jig push it down firmly and the panel pin tips will bite into the work surface



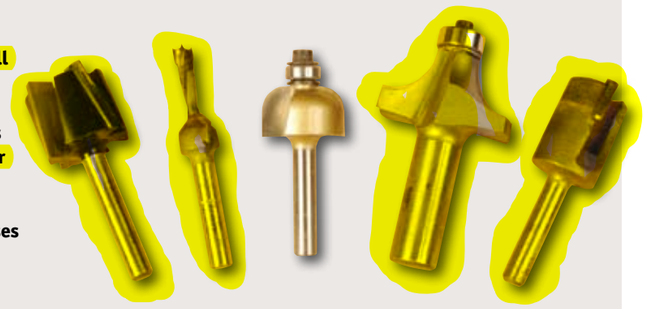
A narrow strip is pinned on at each end to stop the router over-sailing. It also prevents the cutter from contacting the clamps when they are holding the blank in place

The completed jig is very simple but it is being asked to do a very accurate job turning square stock into round dowel. Accurate preparation of the blanks is important for a good result

PROJECT KITCHEN TOWEL ROLL HOLDER

THE CUTTERS

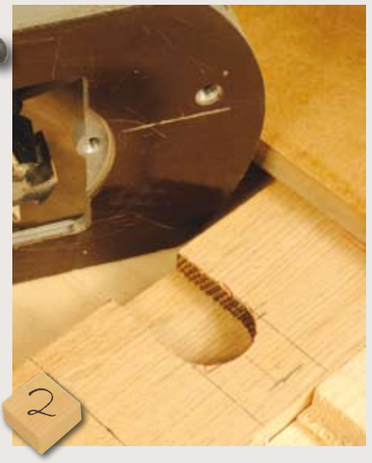
I wanted to make 25mm diameter dowel so Wealden's small tenoning cutter seemed the perfect answer as it is 25mm wide. However, I needed a second pass to slightly widen the slot which will take the dowel. The counterbore makes drilling pluggable holes easy and the matching plug cutter on the far right makes a perfect fitting plug cover. In the middle, the small cove gives a strong visual effect but, as with all cove cutters, it should be used in at least two passes because of the amount removed each time. The 12.7mm roundover cutter is on a ½in shank because of the strain imparted to the blank



MAKING IT

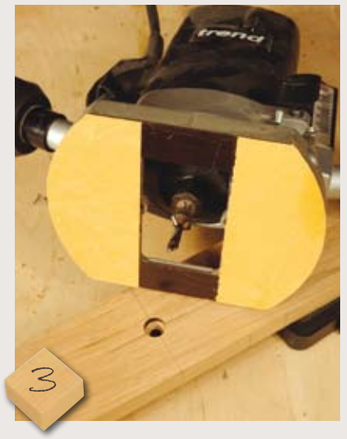
1

Cut a strip of wood for the back and ends of the holder and plane it flat and square. The blank can be left together as one strip and divided up later, so leave enough extra length to allow for trimming. Mark up the lengths with space in between, and also mark out the circular recesses to hold the ends of the dowel the kitchen roll will sit on. These need to be slightly bigger in diameter than the dowel and about 10mm deep



2

I used a 25mm tenoning cutter and a standard housing jig to guide the router. A second pass is needed to widen the slot by 2mm. Ensure you machine in the direction of cutter rotation, the other direction, climb cutting, can make the router run away and possibly damage the work



3

Drill and countersink two holes for mounting the holder using the router with abrasive spray-mounted on underneath to stop the router slipping around. The holes are cut from the face which does not have the slots cut in. I used proper counterbores rated for router use

4

The end cheeks need rounded front edges. Mark the curves and bandsaw them close to the line. Obtain a smooth curve on the drawn line using a disc sander or a static-mounted belt sander

5

A small cove cutter is used to relieve the rather thick looking edge of the board. This is done from the opposite side to the dowel slots. Note the bearing must be able to run against the wood just above these slots or the edge will get damaged at this point and ruin the job

6

Now is the time to accurately cut all the components apart. The ends will be biscuited to the back board. This job is most safely done with a biscuit jointer. I used two No.20 biscuits as packers to centre the 0 size slots, slow plunging is needed to avoid any kickback

7

Cutting the slot in the end component requires care. Raise the component up on a single no.20 biscuit to get the correct height, and then use two biscuits behind the component, so the jointer doesn't foul on the bottom biscuit. Plunge slowly, and keep your fingers away from the cutting end of the jointer

Ensure the dowel blank is machined straight, square and thicknessed to suit the intended cutter. Here the cutter used is the standard 12.7mm roundover cutter. Place the blank in the jig and clamp firmly with two F clamps ensuring the timber is well seated. Now carefully adjust the cutter projection and do short test runs at the end of the jig so you can get the roundover nicely shaped. If anything, the cut should leave a slight flat after you have cut both edges of one side. If you cut too deep, you will leave a step which cannot be sanded out. Then machine the entire length, unplunge and machine again turning the workpiece over each time until it is rounded

8

9

You should end up with a nearly perfect round dowel in your chosen timber. It will need a little sanding to iron out any tiny inaccuracies, and then it is ready to trim to length so it fits in the completed kitchen towel holder

10

The fixing holes in the holder can be plugged neatly for a discreet appearance. I found the plugs separated completely after being cut and though there was timber burning in the waste side after the cut, the plugs themselves were fine

Router torque

Email your router questions to: anthonyb@thegmcgroup.com

Q My cutters get coated in resin and dust and get a bit scorched sometimes, what is the best way to clean them?

A Router cutters do get gummed up and this then promotes burnt-on deposits which tend to have a slight blunting effect, which in turn cause the cutter to overheat even more. Drilling with the router can be the worst culprit, as has happened with this project. Even at the slowest running speed of 8,000rpm is still three times faster than a power drill so it is almost inevitable burning and resin build up will occur. I use a wax cleaning agent that isn't too volatile and therefore relatively safe to handle. An old toothbrush and web pan scourer help to push the muck off once the wax cleaner has softened the deposits. A Stanley knife will scrape off really tough areas. Do take care not to get hurt on the cutting edges, if necessary wear a protective leather work glove to hold the cutter while you are cleaning it, to protect your fingers. ■

A wax cleaning agent and toothbrush will fettle your cutters