

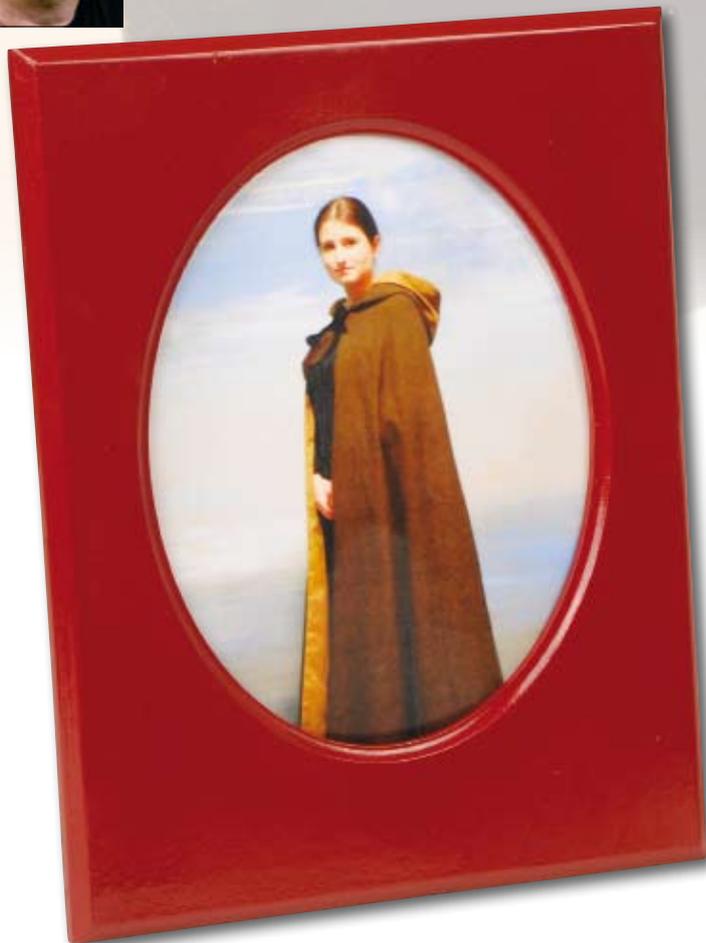


BAILEY'S ROUTER CLASS

Photo and picture frames



Anthony Bailey starts his new series on routing with a look at a simple but satisfying project



THE PROJECT



Standard square frames entail making thin components and four accurate mitres that need really sound, discreet jointing to hold them together. They are also pretty predictable as most photo and picture frames look like this.

However, if you opt for a different shape, in this case a solid frame with an elliptical cut-out for the picture to fit in, you can make it thinner. It has no tricky corner joints and is also aesthetically desirable. Indeed, in the Georgian and Regency eras it was popular to put silhouette portraits in elliptical mounts, as they looked more pleasing to the eye.

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 the results of your routing endeavours, or post them on the WPP forum at: www.woodworkersinstitute.com

THE JIG

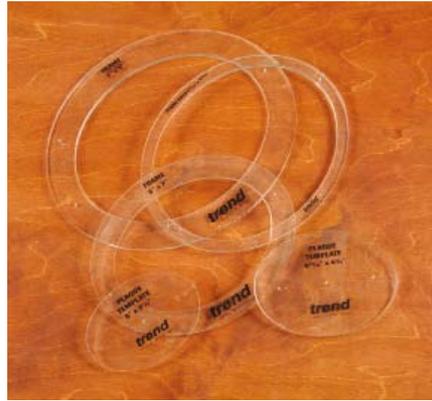


HOMEMADE

I learnt at school how to set out an ellipse in technical drawing classes but not everybody knows how, so here is my method. It isn't as scientific as some – feel free to check out wikipedia.com for other methods.

Decide on the overall proportions and size of the ellipse you want. Mark this out on your template material.

READYMADE



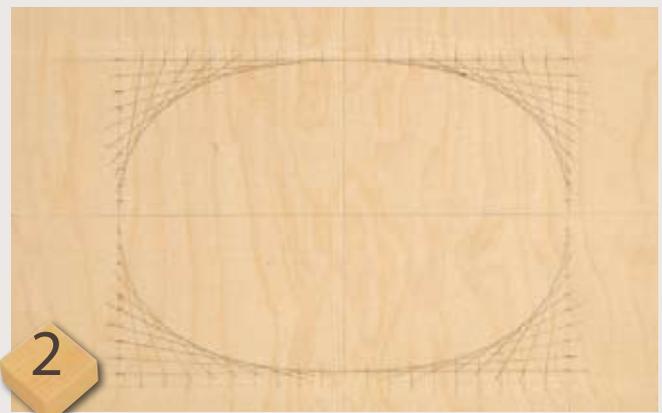
You can buy sets of ready-made templates such as these Trend ones. This allows you to quickly set up and machine shapes in given sizes. There are pinholes to locate them in place. These can be on the reverse of the job so any small hole fillings don't show. These templates allow you to do internal shapes, or external, if you want to create elliptical plaques or lids, for example.

PHOTOGRAPHS BY GMC/ANTHONY BAILEY



1

Mark the centrepoint on all sides and draw lines across. Now sub-divide all sides by an identical number of divisions. Draw lines across from the first mark in one quarter to the first in the adjacent side. Repeat from the next mark and so on



2

Repeat in all four quarters and you hopefully have a neat, regular ellipse. A flexible drawing curve is invaluable here as you can bend it to touch all the lines for a smooth curve



3

Cut the ellipse out with a jigsaw or, better still, a scrollsaw



4

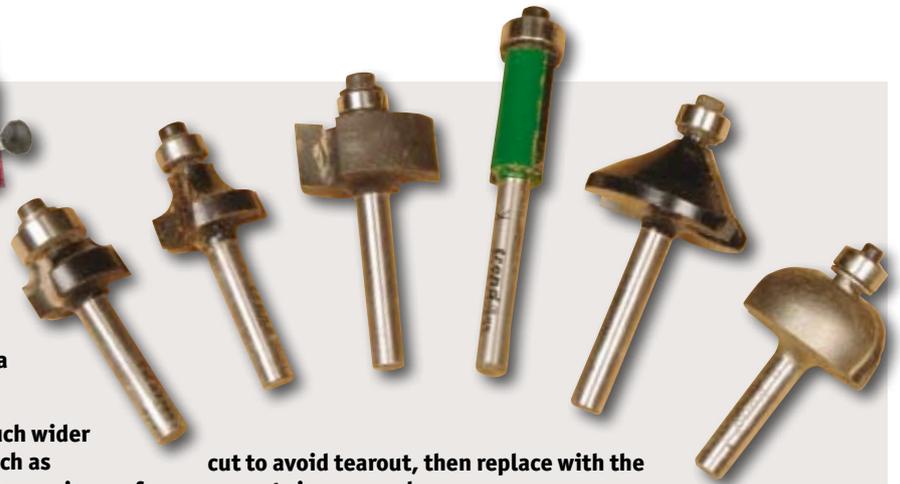
Use a half round woodfile to clean the shape up to the pencil line, and the template is ready to use



5

Machining the internal ellipse on the router table using the template and a bottom mounted bearing guided trimmer. Note the feed direction

THE CUTTERS



The cutters shown will create this frame design. From left to right there are two sizes of **roundover**, a small **rebater**, a bottom mounted bearing guided trimmer, a **bevel** and a cove cutter.

All these cutters will enable you to tackle a much wider range of work: anything from small projects such as jewellery boxes and photo frames, right up to large pieces of freestanding furniture. Square edges often need to be broken with a moulding to make them more comfortable to touch and easier on the eye. I tend to use quite small roundovers on modern style furniture because it is more subtle and yet comfortable to touch.

Rebaters are useful for inseting back panels, among other things, but if you buy a rebate set with a variety of bearings, you can create different width rebates, too. A useful tip is to fit a large diameter bearing so the first cut is just a scoring

cut to avoid tearout, then replace with the correct size one and re-pass.

Bottom mounted trimmers always have a place in template following work. A key point is the template material needs to be dense and not prone to breaking up, which is why we generally use MDF or multi laminate birch ply. Softwood, for instance, could split, dent or have knots, which the bearing would follow, creating a flawed result. If you do laminate or veneer trimming, there should be a small metal glue shield fitted next to the bearing to prevent the bearing clogging with glue.

MAKING IT...



This unfinished panel is made from two pieces of edge-jointed lacewood and has already been machined in the middle using the jig on page 13

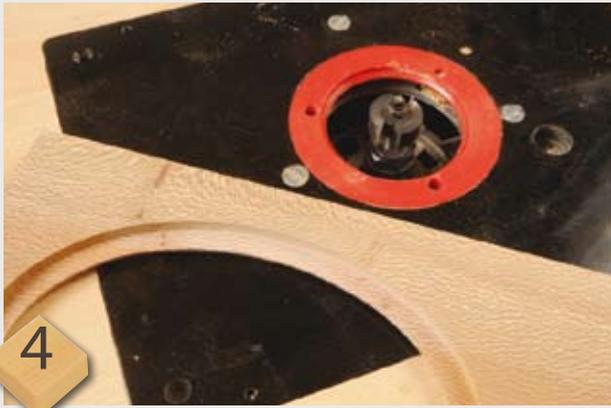
1 Your frame can be solid wood, painted MDF or ply. What you use will be governed by where it will be placed and how you finish the frame. I love lacewood, which is from the London Plane tree, quartersawn to reveal fantastic figure in the grain. There are plenty of other hardwoods that will do, or better quality pine. Here, the template was used to draw the ellipse on the edge jointed wood, which was roughly cut out on the jigsaw and then tidied with the bottom mounted bearing trimmer to give a smooth inside edge



A part moulded inner profile with the cutter set down to create a step. On the front you can use two moulding treatments: one to bevel or roundover the inside of the ellipse cutout; the other to mould the outer frame edge if you want to do that too



Repeated the process on the outer edge, this time with the cutter height set to give a roundover which can be sanded smooth afterwards



The rebate cutter needs enough 'land' on the inside edge of the frame for the bearing to run on



5 The finished bare frame sanded and ready for a clear lacquer coat



Depending on the material thickness you have chosen, you can rebate the reverse to set the picture and glass in – I generally use polycarbonate sheet instead, because I can shape it safely and easily – plus a thin backboard or card. You need some brass frame clips to hold it all in place and a cardboard leg to rest the frame on so it is slightly tilted back

Router torque



The Trend T11 comes with a winding handle for easy and accurate height adjustment in a router table

A T5 fitted with a winder making it precise for using in dovetail jigs or inverted in a router table



Q I find it difficult to raise and lower my router by small amounts in my router table. Is there a way of being able to achieve this with ease?

A This is a quite a big subject but, in short, if you have a router that doesn't come with any fine adjustment built in then you need to find a way of fitting a fine adjuster. Well known brands of machine can usually take an optional one. In the photos are two different types. Some come as standard, some are screwed into place, while others need some light machining in the baseplate before they can fit. It's as well to check this before you buy a new machine in case it isn't possible. There are methods we don't recommend such as using a board to lever the router body upwards, or even a car jack. Either of these could wreck your router!

We get most of our router cutters from these two British companies:

Trend. www.trend-uk.com

Wealden Tool Company. www.wealdentool.com

They both have comprehensive websites and catalogues of all their respective ranges.

Always buy good quality tooling for safety and satisfaction! ■