

Router Know-how

Face moulding



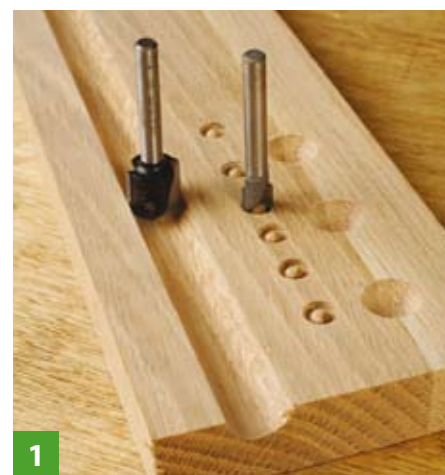
PHOTOGRAPHS BY GMC/ANTHONY BALLEW

This month **the Editor** takes a look at the type of cutter which creates effects that only a router or possibly a spindle moulder can; face mould cutters. Not content with plain unadorned surfaces we often want furniture and other items in wood that are decorated or 'improved' in some way



Face moulding is exactly what it suggests, moulding the wide face of a component. Unlike many routing operations which are functional or functional but combined with an element of decoration such as profile and scribe jointing sets for making frame and panel doors, face moulding is a separate operation which simply confers a moulded profile or pattern on a surface. This sort of moulding seldom if ever has any functional value and is done to fit in with a desired design style which is mainly traditional, as contemporary design invariably consists of flat unbroken surfaces and simplified smooth lines when viewed from any angle. However, even here it is possible to add a little detail, though it is very easy

to find yourself 'borrowing' stylistically from an earlier era without realising it. There is very little 'new under the sun' as the saying goes.



1 The corebox (left) can be plunged or long cut. The pip cutter can only plunge

TYPICAL USES

1 To face mould, a cutter either machines in a continuous line or 'indents' a shape by plunging into the face of the workpiece. Looking briefly at the latter shape first it could be a corebox cutter for example – see WPP70 – plunged and unplunged creating a hollow or a 'pip' cutter that creates a little mound shape or some other suitable profile with cutting edges at the tip that can create a roundel effect.



2

The cornice needs a good setup with pressure fingers

2 Returning to continuous straight line working, this is the most likely type of work you might wish to do. Examples could be cabinet cornice using a large profile, followed by a bevel cutter and rebater to complete the machining needed on the edges so it can be installed correctly against a carcass top.

3 Again, the corebox looked at in WPP70 effectively face moulds, as does a 'V' cutter if you want flute detail which often looks better with a 'stopped' cut.

4 Face moulding doesn't exclude working with a trammel either, so round shapes can be also be moulded using a suitable cutter.



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Tray jigs like this one control the movement of the router



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To obtain a 'stopped' effect, use a stop block clamped to the table fence

5 Face moulding requires some means of guidance of course and the standard straight fence isn't it, because the router can wander easily especially at edges of the workpiece, and you cannot see the exact start and stop points when machining.

6 Instead, either use a guidebush if the cutter has a small diameter or a top bearing guided version if required, both used with a suitable template.

7 Another method I have used more recently is the 'tray jig' where the router base sits in a special jig that limits the path of the router. This gives more scope for using a variety of face mould cutters but is limited to straight line cuts.



4

Use the last pass to clean away any burn marks present



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A straight fence can cause damage at the end of the workpiece



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Both types of cutter need a template

8 Lastly, you can do straight line face moulding on the router table but plenty of pressure fingers are required to keep the workpiece on the straight and narrow and not wandering off course.



8

A facemould cutter can wander, so pressure fingers are needed

TOP TIPS

1 Face moulding is invariably needed for very specific projects so buy only to suit each job as it arises and see if you can pick a profile that might have future use rather than one that has no other purpose. These multiprofile cutters will machine edges as well as faces and you can choose to use only part of the profile.



1

2 A large cornice mould requires a bevel added at top and bottom; this is done once the face mould is completed. You can use a large bevel cutter or an angled jig and face planing setup. It can then be attached to the face of the carcass using blocks on top of the carcass to fix it securely.



2

3 Face moulding is often a very dusty operation for which you need good extraction facilities, this homemade extraction base featured in WPP61 'Router Class' and again at the end of this article, or a machine with this sort of extraction already built in will help. Use a proper facemask in addition.



3

4 It helps tremendously if you hitch both the electric flex and extraction hose to the ceiling above where you are working so they don't trail awkwardly or impede progress. Tape or cable tie the two together for neat working so they stay put.



4

5 It can be difficult working out the exact positioning of a face moulding when machining. You obviously need to mark out the width of the mould to match the cutter diameter but test cuts help especially from an aesthetic point of view.



5

6 It makes sense with larger cutters to do multiple passes to final depth. Ensure when making the last cut that the jig is lying flat on the workpiece without any chippings

trapped underneath or the result may not be quite level all over. The larger cutter here will require more passes to final depth.

7 If you are creating a false frame and panel effect the 'panel' area in the middle will have nice square corners but the 'frame' will not. Professional CNC machining centres can remove most of the rounding at the internal corners. However, if you want it to look 'correct' then your

only option is to use a proper frame and panel cutting set and assemble the whole thing from separate components which will guarantee sharp, square internal corners.

8 Do not linger in one place when machining in order to avoid burns occurring. Typically this is most obvious in the centre because this area of the cutting edge is running the slowest compared to the peripheral edge speed.



6



7



8

DUST EXTRACTION SUB-BASE

This mimics several routers on the market that have inbuilt extraction, by making an add-on base through which the dust is drawn immediately sideways and up the extraction spout. It adds a little thickness to the router base but in most cases cutters will still project enough or you can fit a collet extender.

1 I used very thin 1.5mm birch ply for the top and bottom faces which are cut slightly larger than the intended router base size. The ply is so thin a Stanley knife and straightedge are best to score it and finally ‘crack’ the ply by bending so it parts cleanly.

2 Cut some pieces of softwood fillet to make the frame of the base ensuring all cuts are square and leave a slot for the extraction spout. Glue and sandwich the pieces between the top and bottom plies and clamp up carefully, wipe off any excess and leave to dry.

3 Trim the sandwich square and mark on both faces where the dust outlet slot is. Nip off the corners evenly with a saw. Make a hole roughly in the middle of both faces using a router and straight bit.

4 Now use a straight template trimming bit entering through the hole on the face and machine away the centre area running against the inside faces of the fillets. Any lumps of glue may foul the run but you can see them now to clean them off. Repeat machining from the other face. Take great care to stop at the dust outlet pencil lines or you will machine into the ply and ruin it. Use a Stanley knife and straightedge to cut along the unmachined portions.

5 Use contact adhesive to stick a piece of laminate sheet to the underneath face to protect it and allow the sub base to glide easily. Cut away waste overhanging the edges with a Stanley knife. Repeat step 4 to remove the centre piece of laminate.

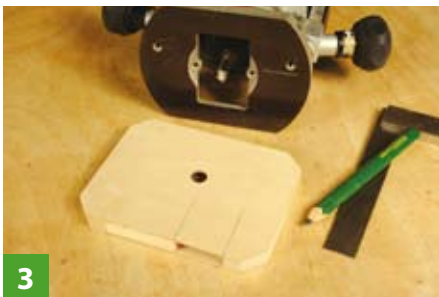
6 Use a bevel cutter to machine a small bevel on all outside edges but avoid the dust outlet slot. These



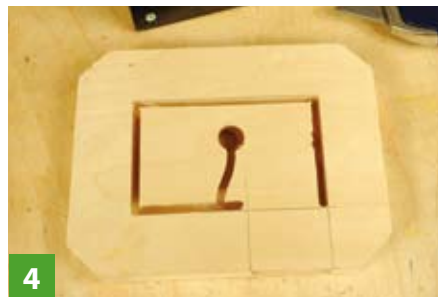
1 Score the laminate so it will ‘crack back’



2 The pieces of softwood placed in position



3 The sandwich glued together



4 Avoid the dust outlet when routing out



5 Apply contact adhesive to both surfaces



6 Trimming off the surplus laminate



7 The polycarbonate is carefully trimmed to fit



8 The white waste pipe makes the spout

last sections can be done with a hand file. Now you can mark, drill and countersink the holes for the fixing bolts to the router base.

7 The top side needs a tiny rebate to take a rounded rectangle of polycarbonate material that just sits in flush and is trapped by the router’s own base.

8 You need an extraction spout that keeps out of the way of the work

but is rigid. I decided to use an offcut of sink waste pipe and an elbow bend glued together with pipe cement. The bottom of the elbow is cut flat, sanded and a piece of plastic conduit bonded to the cut away underside and another flat piece glued over the portion that shows above the sub base. Once fitted into the sub base the setup is virtually complete and seems to give close on 100% dust removal when connected to an extractor. Next time we’ll be looking at glue joint cutters. ■