

Building Profiles

Steve Prescott shows how to combine mouldings to produce a model plinth



Display The plinth finished (above) and with track and coach

Adrian Prescott, our resident craftsman, Steve Prescott's dad, makes and restores railway models (moseleycottage.com). He was recently asked to work on a rather special Pullman coach, with the client wanting a display plinth. You can buy them ready-made, but this time Steve was commissioned to produce a base to show off the beautiful model.

It was, essentially, a profiling project, building up sapele mouldings to show off the carriage at its best. But it takes a methodical approach to do successfully. Using a 15-piece set of 1/2in Trend cutters, Steve created three profiles, joined together with 1.5mm ply splines. He started with the 12.7mm (1/2in) cove on the largest segment (A), taking shallow cuts so as not to tear nor burn the timber. He then rebated A for the ply top, using **Wealden's big tenoning cutter** in a router table. The moulding was big enough to be stable, but Steve faced

the router table fence with a sacrificial piece of scrap, and cut through that first. This reduces tearout and improves extraction through the cutter. Finally he routed the 1.5mm groove for the spline.

He then produced the 1/2in radius quadrant (B), by rounding over the edge of a wider board. Before cutting off the profile from the wider board he routed the 1.5mm groove for the spline. The trouble with cutting this profile off a wider board is that you are left with one rough face. This would be very difficult to smooth on its own because the thin moulding would be so awkward to hold. So at this point Steve glued A and B together with a spline, with the rough face on B facing downwards.

When the glued had gone off, the combined profile could be held on the benchtop with one of Veritas's threaded dogs, Steve prefers to do it this way, rather than trying to hold a profile in a vice, where it is likely to move and get bruised. Having

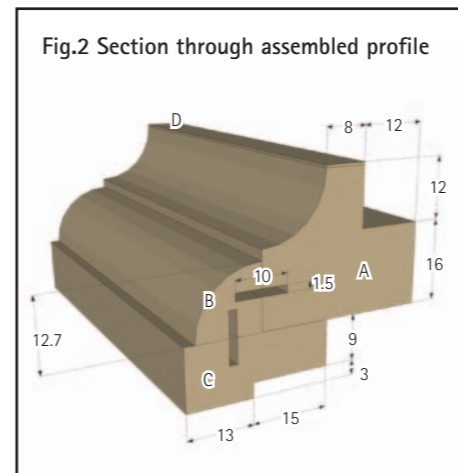
planed the bottom of A and B, glued together, Steve could rout the groove in the bottom of the quadrant, B. As you can see (Fig.2), there is very little material between the two grooves in B, but once it is glued to A the whole thing is stabilised.

Steve then routed the rebate for a baize-covered base in C, and then the offset 1.5mm groove that aligns B and C, with a quirk at the front of C.

Rebates and plaque

The top drops into the rebate at the top of the moulding, and is screwed in place from below, before the baize-covered base is screwed into place from underneath. Both the top and the bottom have to be removeable because there are electricians to run through the plinth for the lights inside the carriage.

Before he glued C to the combination of A&B Steve had to insert the plaque block. He did this by cutting the section of A&B

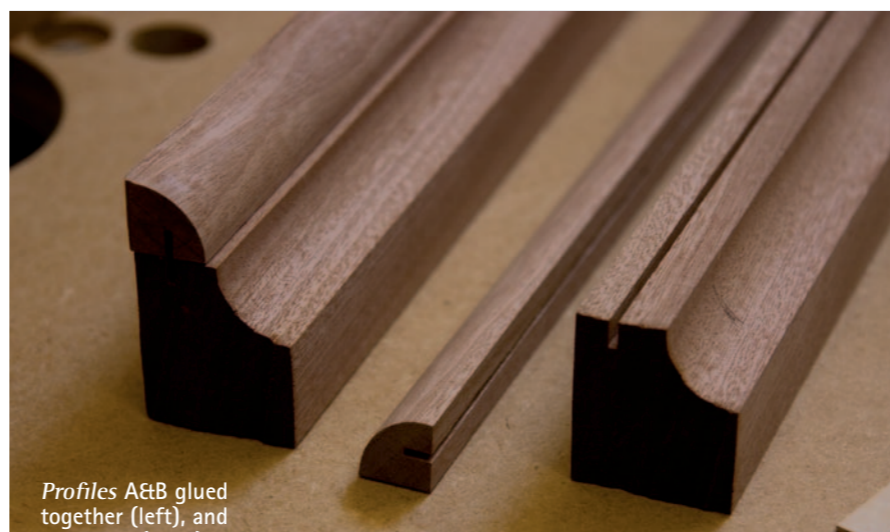
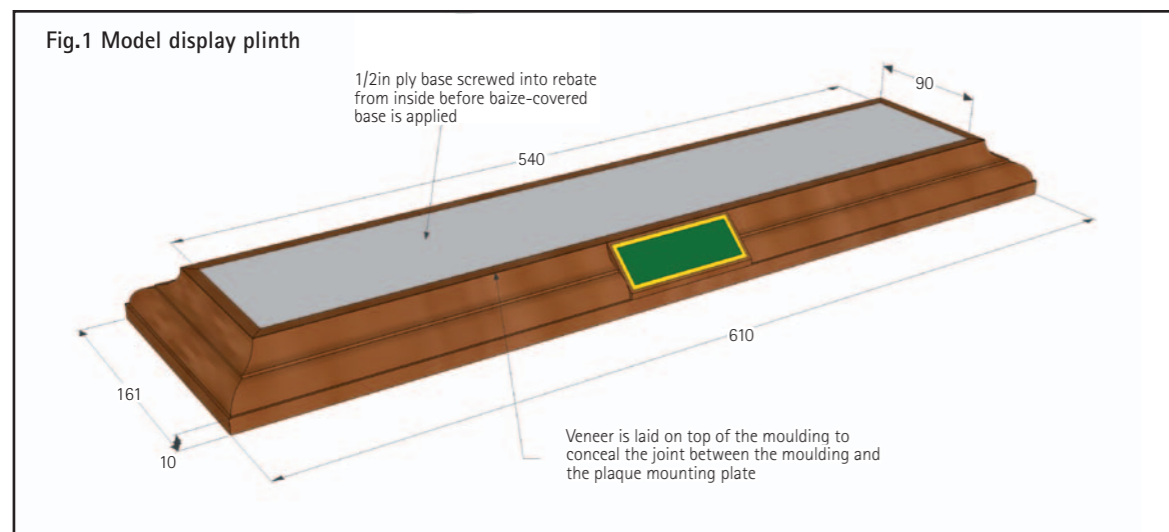


Cramp Steve uses a threaded dog to hold mouldings on the benchtop (right) rather than trying to hold them in a vice

for the front in half. He glued A&B and the plaque block to C all at the same time. But before mitring the mouldings, he glued a piece of sapele veneer (D) around the top edge of A to cover the joint between the profile and the plaque block.

Steve cut the mitres on his Festool Kapex mitresaw and then assembled the frame with a basic Tilgear frame cramp. Frustratingly, the nuts on the cramp were changed soon after he bought his version from standard knurled brass to quick-release ones, which make adjustment much easier.

To fit the commemorative plaque he had to relieve the plaque block by a couple of mm. Fortunately we had one of Veritas's new Miniature Router Planes in the workshop, and he tried that for size. First he knifed around the edge to leave a flat margin, and then with the little router set very fine, pared away the waste. "I had to take very thin shavings as it was quite jerky," he says, but it worked.



Profiles A&B glued together (left), and separated (right)

Making mitres in SU

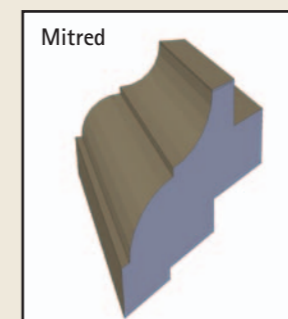
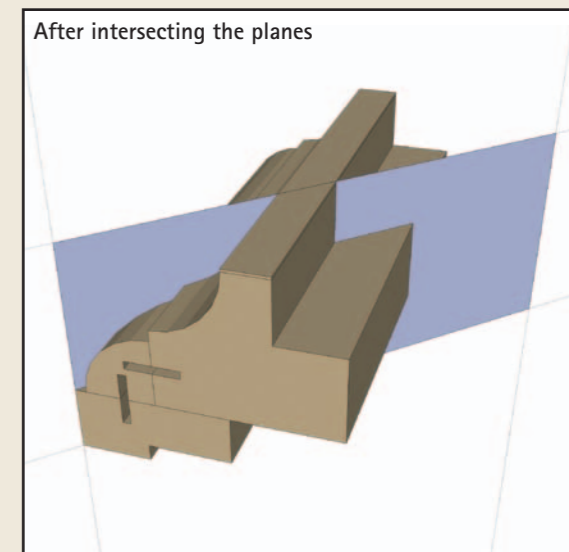
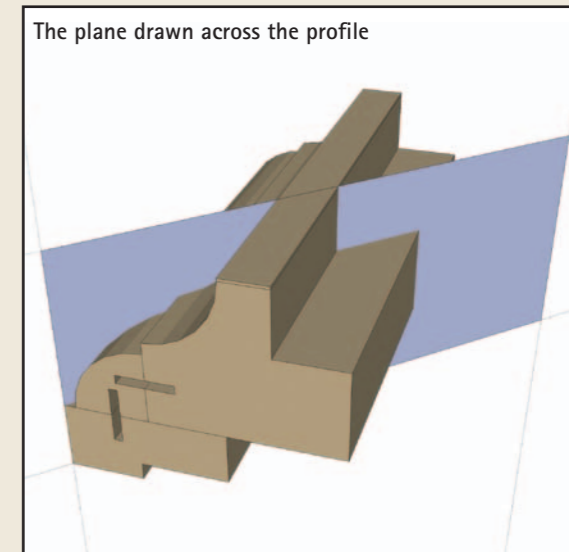
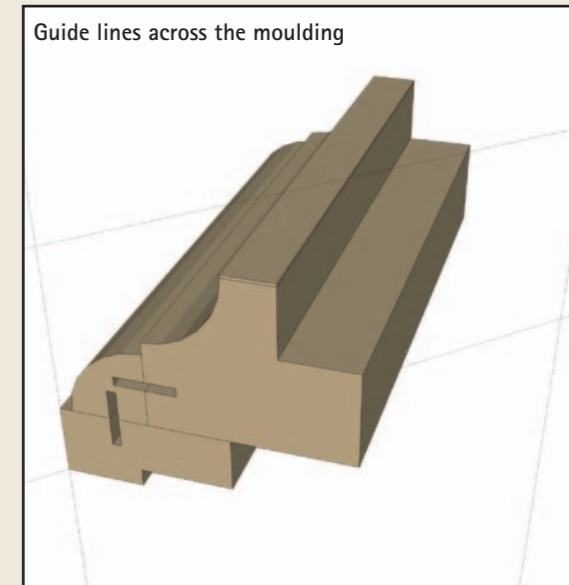
Transforming a profile into a mitre takes a few steps

Drawing a complex profile in SketchUp is relatively simple, but creating a mitre for a frame is more awkward, and you need to patiently go through a few steps. Effectively you are aiming to create a plane through the moulding at 45° (or whatever angle you need) so that you can then delete all the lines on one side of the plane to create the mitre.

Steve's way of doing this is to draw a guide line from one edge using the Protractor guide tool. Having clicked on that tool, click on an edge, making sure you are in the right plane. We did this on the bottom of the moulding. Click again along the edge, and turn the protractor to the angle you want. This will produce a guide line at 45°.

Now with the Tape Measure tool, looking from above the moulding, drag up a guide vertically, at one end of the moulding. By clicking the up arrow on your keyboard you lock this to the Blue line, and the side arrows lock to Red or Green. Drag the guide line till it is level with the top of the moulding. Do the same at the other end of the mitre. With the Pencil tool connect all these guide lines to create a plane at 45° to the moulding. Select the plane and right click to bring up the options. Choose Intersect Faces, With Model and that will produce edge lines around the profile.

Now you can erase all the lines to one side of that plane, to leave you with a mitre.



Mitred