

# Ebony cross banding and inlay techniques

Dennis Zongker adds inlay banding to his Queen Anne-style table



PHOTOGRAPHS BY DENNIS ZONGKER

In the first part of this article, I showed you how to make a stacked moulding for the table top edges and how to veneer the top. In this next

section, I will show you how to add an inlay to separate the two top veneers from each other by adding a solid ebony (*Diospyros spp.*)

banding to complement the maple (*Acer campestre*) burl centre and quartered sapele (*Entandrophragma cylindricum*) outer border.

## Templates



Sand the edges of templates A and B using sandpaper stuck to the falloff MDF made into sanding blocks



Draw in the pencil line around the entire top to ensure the same 10mm spacing, also blending the larger radiuses at the sides of the top



The pencil line represents where template A will be set

To insert the solid ebony banding you will first need to make both a routing and a bending template. It is best to make both templates now because they are very similar. First cut two pieces of MDF 20mm thick x 705.8mm square. To transfer the layout from the drawing templates A and B onto the MDF you will need a pair of compasses for the small radius and a set of trammel points for the larger radiuses.

To cut out the templates you can use a bandsaw or jigsaw by following the inside

edge of the pencil lines. Take your time and cut as accurately as possible.

To smooth out the small kerfs left by the bandsaw on the edges of the templates, use the falloff waste MDF, which has the same radius minus the blade kerf, to cut out a couple of sanding blocks. Then add 80 grit peel-and-stick sanding paper to the edges. This will give you really nice sanding blocks for smoothing out all blade kerfs left on the template edges.

To make sure that routing template A rests

accurately on top of all four corners of the top, set the template onto one corner so that the same space between the template and veneer seam equals approximately 10mm. Lightly draw a pencil line onto the sapele border using the template edges, then flip the template over to the opposing corners and blend the pencil lines at the larger radiuses on the four sides of the top. Using a 20mm bushing guide and a 8mm straight cutting bit, cut into the top and split the veneer seam down the middle.

## Routing in the plough

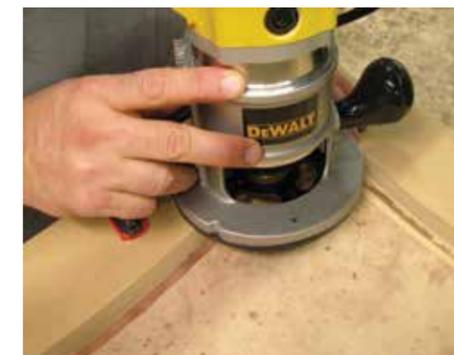
To rout in the 8mm wide x 3mm deep plough, start on any corner and clamp down template A using three small bar clamps. Set the depth of the router bit to cut into the top 3mm deep. Turn your router on with the bushing tight against the edge of the template leaving the bit to where it is not touching the veneer yet. Then slowly plunge the 8mm wide straight cutting bit into the top and slowly cut in the plough.

Note: because of the narrow width of the template the router base will run into the clamps, so always leave two clamps tight. Rout up to the clamp then turn off the router. Then move the clamp to the other side to where you just routed and tighten the clamp. Next, set the router bit back to where you stopped with the bit in the plough and turn your router back on. Then finish routing in the plough for that corner.

To rout in the next three corners of the top, flip over the template and line up the ends to the pencil lines. Then clamp and rout the plough for the remaining corners.



Clamp down template A using three small bar clamps

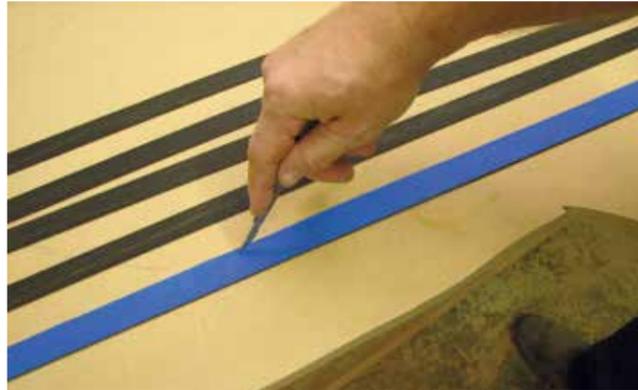


Rout in the plough by following the template edge with the bushing guide



The finished plough ready for solid black ebony banding

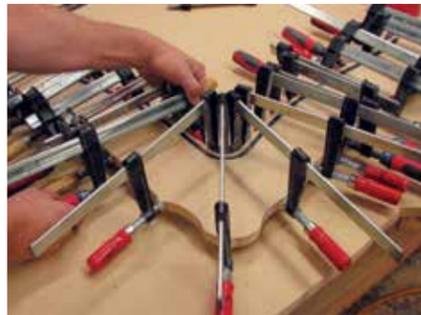
## ► Making the banding



Lay out five pieces of banding and apply blue painter's tape to one piece. This will give the inner layer strength and protect it from cracking when bending



Use a heat gun before gluing the layers together



Use the bending template B to clamp the ebony banding



Hand plane the ebony inlay flush to the template



Use a bandsaw to cut out the ebony banding

To make the inlay banding, cut 10 pieces of solid ebony 1.5mm thick x 20mm wide x 1,120mm long on the tablesaw. This will be enough to get two glue ups each consisting of five pieces. Next cut two pieces of bending plywood 10mm thick at 20mm wide x 1,120mm long. The plywood will be used to protect the ebony banding from clamping. Put the five pieces of ebony together, placing the one with blue painter's tape first with the tape facing the template. Then place the two layers of bending plywood on the outer face of the ebony. Using bending template B and a heating gun, slowly heat the layers at the centre and pull the banding

to the template. This step will help prevent the ebony layers from cracking when gluing them in place. Apply yellow glue using a paint roller and glue the ebony faces together. Don't glue the outer faces. Then, using several bar clamps and starting in the centre, tighten the banding firmly before working your way to the outer ends. After the glue has dried overnight, remove the clamps except for a couple to hold the banding to the template. Use a small block plane to flatten one face flush to the template. Remove the banding from the template and use a white pencil to mark a 4.5mm line

on the inside face. This will be the height of the banding. Next, use a bandsaw to raise the bearing guide up approximately 125mm so that the glued up banding will follow through when cutting the last section. You can get three pieces out of each glue up but to do this you will need to hand plane the inlay as before to make the glue surface flat again. Tip: be careful cutting the banding on the bandsaw. Make sure your hands keep the banding steady and always keep one section of the ebony touching the table top surface. When you are done, repeat the above steps to glue up the second inlay banding.

## Mitres

Insert the solid ebony banding into the corner plough. At both ends of the banding, use a small rule to draw in a mitre line and two pencil marks, one on the sapele and one on the maple burl. These marks will be used to draw the mitre line onto the filler piece that will be inserted later. Use a fine-tooth hand saw to cut the mitres onto the ends of the banding. Then set the banding on a 20mm platform on your bench and sand the mitres straight and smooth with a sanding block.



Mark out the mitre line on the top face of the banding



Use a sanding block to sand the mitred ends flat and even

## Glue up



Glue and clamp the solid ebony banding into the corner of the top



Brush yellow glue into the plough and ebony

To glue in the ebony banding, tape off the sapele veneer side of the plough so that no glue seepage will get into the pores of the wood. There aren't any open pores on the maple burl side so you can just wipe off the glue from the surface. You can then brush

yellow glue into the plough. Next, use several larger bar clamps and tighten. You need to space the clamps approximately 50mm apart. Wipe off any excess glue and leave to dry for a couple of hours. Then repeat these few steps to glue and clamp down

all four corners of the ebony banding. You can get four smaller insert pieces out of the extra pieces of ebony banding that were left over. Repeat the last steps to cut, fit, glue and clamp these four smaller pieces of banding.

## Finishing

To remove the bulk of the banding use a block plane slightly angled when cutting. Keep the plate of the block plane as flat as possible so that the corner of the blade won't gouge into the veneer. Use a cabinet scraper to take the ebony flat and smooth to the veneer. Take extra care the closer you get to the veneer surface so as not to cut into the veneer. Keep the cutting section of the scraper right on top of the solid ebony. Use your fingers as a resting guide on the veneer to protect the surface. For the last step for the top I use an orbital sander with 150 grit hook-and-loop abrasive disc and lightly sand the veneer and banding flush to each other. Sand the entire table and top with 150 grit abrasive. Stain the mahogany base, edge and sapele veneer border one colour. Leave the maple burl veneer to be a natural clear coat. Be careful when staining the top, only apply stain to the sapele border. The ebony banding will divide the two veneers keeping the maple burl clean from any stain. *F&C*



Use a cabinet scraper to take the ebony flat and smooth to the veneer



Remove the bulk of the banding with a block plane



Stained and ready for a clear coat finish