

# Stack moulding

**Dennis Zongker creates a stacked top for a Queen Anne-style table**



PHOTOGRAPHS BY DENNIS ZONGKER

## Clamping the aprons to the cabriole legs

When designing the top for this Queen Anne-style end table I was aiming for a simple yet elegant effect. Since the cabriole legs are carved, I wanted the focus on the table to be balanced and to not take away from any aspects of the design. The overall size of the coffee table needed to be rather large at 1,320 × 1,320 × 510mm tall, to fit into a large great-room elegantly.

The cabriole legs are also large so the top needed to accommodate the look. Designing a stacked top seemed appropriate adding depth and blending with the overall design.

The stacked trim for this top is made out of two layers of genuine solid mahogany (*Khaya ivorensis*) with a maple (*Acer campestre*) veneer-core plywood centre. The veneer on the top has a parquetry design with the centre being a maple burl

and the outside border with quartered sapele (*Etandrophragma cylindricum*) veneer. The two veneers are separated and enhanced by inlaying a 3mm deep × 8mm wide solid black ebony (*Diospyros spp.*) border. The combination of the two veneers and the ebony gives the finished top both the look of beauty and style blending with the coffee table base. In this article, I'll take you through the key techniques I use. ▶

## Initial steps



Parts for the stacked top showing top, edge and spline

Before beginning the table top, I completed the assembly of the base by attaching the apron to the cabriole legs. Then, using a few carving gouges and a mallet, blended the aprons with the upper section of the legs to create a nice even flow from each component.

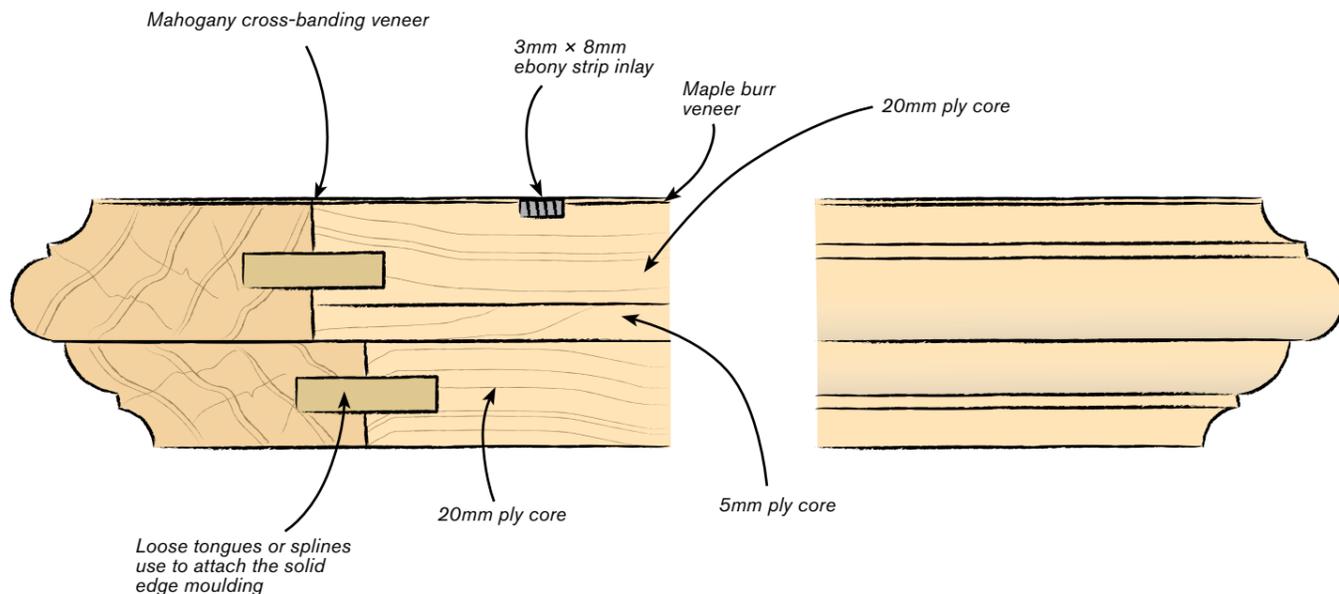
The groundwork for the tops is from 20mm-thick maple plywood. The lower piece is slightly smaller than the upper section to set the moulding back from the edge of the one above. To create more interest the upper stacked top is thicker at 25mm. Because

25mm-thick plywood is a special order, I took one piece of 20mm and one of 5mm and glued them together using a vacuum press bag. Around the outside edges of the plywood tops, spline and glue on a solid mahogany edge wide enough to accept the serpentine shape and the moulded profile.

I prepared the moulding to just over the thickness of the ply boards by roughly 0.8mm for both tops. Before cutting these to their exact length, set up a router in a router table with a spline bit 6mm wide x 12mm deep. Set the router bit to cut exactly into

the middle of the mahogany and rout in the plough for the 20mm, then adjust for the 25mm. Rout corresponding ploughs in the centre of the edge of the two ply tops to take the mouldings. Prepare enough material for the splines and use the tops to determine the location of the mitres within the ploughs.

Test fit each piece as you cut them by putting the spline into the plywood edge and pressing the moulding onto the spline butting up to the plywood making sure the 45° mitres line up on each corner.



## Gluing up



Brush yellow glue onto both ploughs and splines for each edge

The next step is to glue the mahogany edges to the plywood centre panels. Set down three large bar clamps onto your bench then place the plywood top down onto the bar clamps. Apply adhesive to the joint and tighten the clamps. Make sure the inside mitred corners line up to the plywood corners. Note: it is best to only glue two opposing edges on at the same time.

For gluing on the last two mouldings keep the mitred corners flat and even to each other. Use a G clamp with blocks across the mitre if necessary

at the tip of the mitre. Then with three bar clamps, two positioned right over the mitres and the third in the centre, apply enough pressure to close the joints. Level the mouldings using a palm sander with 80-grit sandpaper to the thickness of the plywood.

For both of the stacked tops, make a profile-cutting template out of thick MDF. Remove any saw marks from the edge of the templates with a sanding block. Use these to transfer identical lines in both directions along the side of the mouldings by flipping the template.



Clamping the mahogany edges to the top



Set template 'A' on the front edges of the stacked top and trace

## Waste wood



Screw down the layout template



Rout the mahogany flush to the template

Next, use a jigsaw and cut out all of the waste wood around all the edges for the lower top. Keep the blade approximately 3mm away from the pencil line. Then, using the layout template, screw it down to one of the top corners.

To rout the mahogany flush to the MDF

template, use a pattern bit or flush trimming router bit to follow the edges of the template. Note: for the lower and upper top you will need to reset the template eight times. Flip over the template onto the next corner and screw it down. For the profile on this stacked top edge I used a 'French Traditional' table-

edge router bit with a 12mm shank with a bearing guide to follow the edge of the top. For this bottom stacked top the profile goes on the bottom edge.

Place the lower stacked top onto the upper top. It is important to line up the mitres on all four corners. Use a washer that has a

## Waste wood – cont'd

- 10mm offset and use it to follow the radius edges. This will give you the exact larger top, size and radius.

To cut out and shape the upper top use the same steps that you used earlier by cutting out the waste wood with a jigsaw then routing the edges flush with the smaller layout template. Use a 10mm radius router bit and rout in the radius around the bottom edge of the upper top. After both upper and lower tops are routed in, stack the tops upside down making sure that all four mitres line up. Then screw them together on the bottom side of the top. After the tops are secured, flip them over to start on the veneer and inlay measurements. Note: before routing in the profile on the top stacked edge the top will need to be veneered first.



Rout in the profile edge into the bottom edge of the lower stacked top



Clamp the two tops together while drawing in the offset lines to ensure accuracy that the tops won't move



Use a washer and pencil to draw in the offset into the upper stacked top

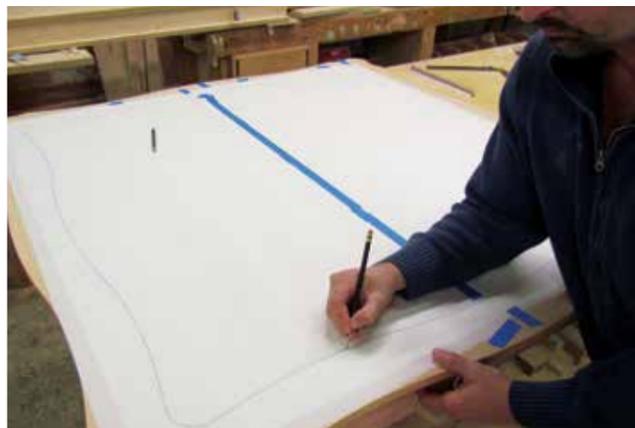


Routing the bottom edge



This photo shows the two stacked tops, which are stacked upside down

## Veneering from centrelines



Using a pencil, draw in the centre of the inlay line onto tracing paper



Cutting out the centre maple burl insert

Using a compass and trammel points, draw the centre of the inlay line on to the top by following your inlay top drawing. Then by using tracing paper taped down to the top, use a pencil and copy the inlay line onto the paper. Next, cut the inlay paper template with an X-acto knife or scalpel following the pencil line.

For the centre insert I purchased a 100 x 200mm sheet of wood-on-wood maple burl veneer. Before cutting it out, look for the

best-looking design on the veneer. Place the tracing paper inlay template on top of the veneer with the veneer design showing through and secure it with blue painter's tape.

To cut out the insert use a Swann-Morton scalpel with a 10A blade by following the edge of the tracing paper template. To cut through the veneer, take two or three light passes about 20mm long. Try not to apply too much pressure and let the knife do the

work. Cut around the tracing paper template until the veneer is completely cut out.

*Note: it's important to always use a sharp scalpel when cutting veneer. To sharpen a dull blade, place the blade upside down and use a sharpening stone to resharpen it. A few short strokes back and forth across the stone will maintain a sharp cutting edge.*

## Finishing touches

Around the borders of the top, draw in the corner pieces where the veneer will be placed. Each corner will have three pieces of quartered sapele veneer with the grain running inwards towards the centre of the top.

To make the veneer templates, place tracing paper onto one corner of the top and trace the lines onto the paper. Extend the pencil lines 6mm only on the outside edges to allow for fitting and trimming the veneer.

Then print a photocopy of the templates and use a spray adhesive to attach it to a piece of 6mm-thick MDF. Cut out the templates with a bandsaw or scroll saw and sand the straight edges flat and even with a sanding block.

To cut out the corner pieces of veneer, place the veneer template on top of the veneer with the grain running straight with

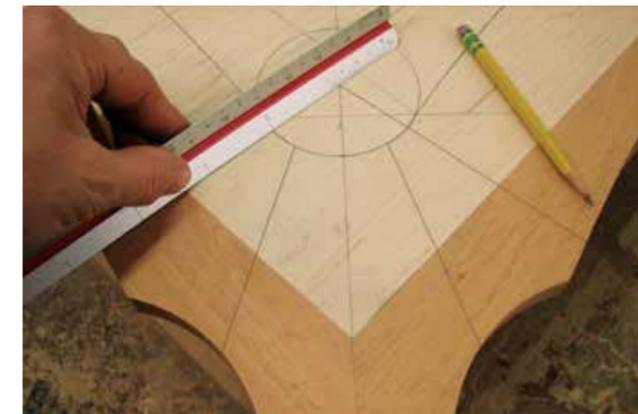
the template. Then press down on the veneer to align perfectly with each other, set the veneer on top of a piece of plywood. Slightly adjust the veneer's straight edge to hang over the plywood. Then use a sanding block, with 150-grit sandpaper glued to the surface, and sand the veneer edge flat to the desired angle for butting the seams right up next to each other.

Use the centre burl veneer insert as a template for cutting out the four large side borders. Place the burl on top of the quartered sapele veneer with the grain running to the centre of the insert. Tape down the opposing

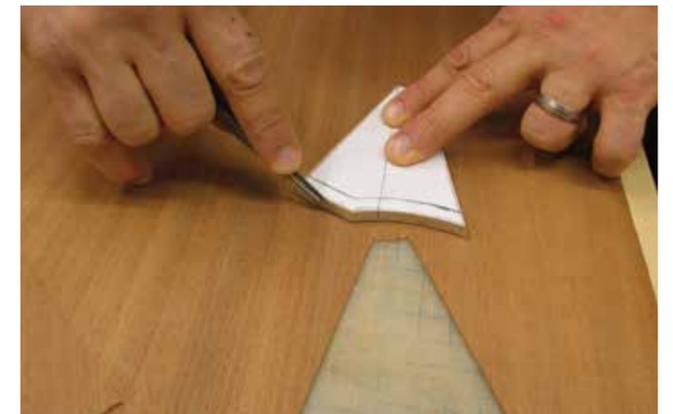
edges and cut one border out at a time with a scalpel, with the blade following the edge of the burl. Cut these large borders slightly larger by approximately 6mm on the ends and outside edges for trimming the veneer.

To fit the last few corners of the outside borders together, place a piece of veneer lapped over the top of the lower piece. Then, with a scalpel, follow the edge of the veneers to cut both pieces of veneer flush to each other.

Once all the veneer is cut and fit, place the entire piece face down and stick blue painter's tape on all the seams on the back face. Then flip the sheet back over with the veneer face up and apply water gum tape to all the face veneer seams on top. After the gum tape dries, flip the veneer over and peel off the blue painter's tape. The top veneer is now ready for gluing. *F&C*



On the top draw the lines for the corner pieces of veneer



Cutting out the corner veneers (1)



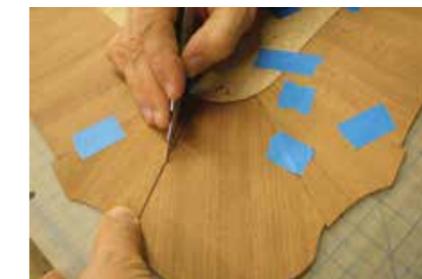
Cutting out the middle corner veneer (2)



Use a sanding block to adjust the angle if needed and straighten the veneer edge



Use the centre maple burl veneer as a guide to cut out the four large borders



Cut the veneers flush to each other



Rub down the water gum tape using a fine bristle brass brush