

Do It Yourself

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Drum Table: Curved Legs and Support Assembly

From "[Wood Works](#)"

episode WWK-612 -- [More Projects »](#)

David Marks creates a drum table that serves as both a coffee table and a functional drum. In this segment, with the case and "drum skins" already assembled, the distinctive curves are cut in the legs of the drum table, and the table is assembled.

Materials:

Bubinga and poplar stock

Table saw

Tenoning jig

Band saw

Hand-held drill; screwdriver attachment

Hand scraper

Shinto rasp

Pattern-maker's rasp

Wood screws

Yellow woodworker's glue

Clamps

Safety glasses or goggles



The legs and body of the drum table are made from African bubinga, while the top is a thin sheet of maple. The legs are curved to complement the straight lines of the case.

Safety Alert: *Always* wear safety goggles or safety glasses, and follow proper safety precautions, when working with wood, power-tools, saws, drills, routers, etc.

Creating the Curved Legs

The legs of the table are curved to complement the straight lines of the case. The bubinga stock for the legs was cut and milled 12-3/8" long by 2" square. To create the curves, fashion a curved template out of 1/2" MDF.

- **Design Tip:** When creating the solid wood legs, it's important to pay close attention to the grain orientation of the legs. Align the leg stock on end as shown and arrange the pieces so that the end-grain on all the pieces forms a symmetrical pattern (**figure A**). If you keep this orientation as you cut and attach the legs, it will result in a more pleasing and professional look.

- Set the template on the leg stock, referencing off the side and bottom of the stock, and trace on the shape (**figure B**).
- Rotate the stock and template onto the adjacent side, and again trace on the curve.



Figure A



Figure B

- Next, lay out the marks for the tenons on two sides of the top of each leg. The tenon measures $1/8$ " from the inside corner, and is $2-7/8$ " long by $3/4$ " thick (**figure C**).
- Make the layout marks for cutting the tenon. The X's in our markings indicate the area that will be cut away to reveal the tenon (**figure D**).



Figure C



Figure D

- At the table saw, with the blade set $1/8$ " high, score the shoulders on two adjacent corners. Then reset the blade to 1" and score the remaining two corners (**figure E**) that will become the outside faces (**figure F**).



Figure E



Figure F

- Using the tenoning jig, cut away the cheeks (**figure G**) to reveal the tenon.
- To prevent the blade from getting damaged by cutting into the clamp, add a wood shim to the clamp to bump it over (**figure H**).



Figure G



Figure H

- With the tenons made, the curved shape of the leg can be cut using the band saw. Make the first cut, cutting the curve close to the line (**figure I**).
- When one side is complete, reattach the fall-off with tape, then cut the curve on the other side (**figure J**).



Figure I



Figure J

- Once both curve-cuts have been made, remove the fall-off to reveal the finished leg (**figure K**). The curved legs will serve to complement the straight lines of the case.



Figure K

- With the leg clamped in a vise, use a Shinto rasp to remove any saw marks left by the band saw (**figure L**). Then use a hand scraper to smooth the sides.
- Follow the hand-scraping with some light sanding (**figure M**).

- Chamfer the area below the tenon using a file followed by a sanding block.
- Repeat the steps to cut the curves on the other three legs.



Figure L



Figure M

- Now that the glue on the banding around the bottom of the base has dried, trim off the excess using a small hand-saw (**figure N**).
- Next, with the case on its side, remove any excess dried glue using a hand scraper. Smooth the sides using sandpaper (**figure O**).



Figure N



Figure O

- Now you can dry-fit the legs in the case (**figure P**). With the legs inserted, turn the table upright so that it rests on the legs.



Figure P

- The tenon, which rests alongside the walls at the corner (**figure Q**), will be secured to the walls with glue and will be reinforced with a bracket made of poplar (**figure R**). The bracket will then be secured using both screws and glue to ensure a very stable support.



Figure Q



Figure R

- To make the four reinforcing brackets, start with blocks of poplar that are 2-1/2" wide by 3" long by 2" thick. Cut in a 90-degree angle on one side to fit around the tenon, then cut off the two outside corners (**figure S**).
- Next, cut the remaining two sides flat (**figure T**) so that they will rest parallel to the case.



Figure S



Figure T

- With the bracket clamped in a vise, pre-drill the pilot holes in the bracket (**figure U**) for the screws that will secure the bracket to the case.
- Position the bracket around the tenon, and carefully pre-drill pilot holes into the case (**figure V**).



Figure U



Figure V

- Once the pilot holes are all drilled, you can attach the legs. First, apply yellow glue to the sides of the case and to the tenon.
- Secure the leg with a clamp, then apply glue to the wood bracket on the faces that will contact

the tenon.

- Position the bracket around the tenon and secure it with screws (**figure W**).
- Repeat the steps for each of the remaining three legs. The wood brackets will do a fine job of securing the legs.
- Add long bar-clamps to seat the legs securely (**figure X**) as the glue hardens.



Figure W



Figure X

In the segment that follows, following final assembly, the table is given a wood finish. It is then given test-run with a skilled percussionist to see how it sounds as a drum.

RESOURCES:

Woodworking Techniques: Best Methods for Building Furniture from Fine Woodworking

Model: 1561583456

Author: Fine Woodworking Magazine

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David Marks Website

David Marks, DIY's *Wood Works* host, is a master woodworker. For more information on cut sizes and project details, please contact him via his Website at www.djmarks.com

Woodworker's Guide to Wood: Softwoods, Hardwoods, Plywoods, Composite, Veneers

Model: 080836878

Author: Rick Peters

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