

Do It Yourself

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Drum Table: Bottom "Skin" and Sound Hole

From "[Wood Works](#)"

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

DIY Wood Works host David Marks creates a *drum table* -- a multi-functional piece of furniture that serves as both a functional table and a percussion instrument. In this segment, the table is given its "voice" by creating the top and bottom "skins" and sound-hole.

Materials:

Maple-plywood stock

Table saw

Plunge router

Hand-held drill; 5/8" Forstner bit

Square file

Straight-edge

Tape measure

Carpenter's pencil

Carpenter's tape

Yellow woodworker's glue

Double-stick tape

Clear packing tape

Hand scraper

Hand saw

Clamps

Safety glasses or goggles



The drum table has a deep, resonant sound created by the upper and lower "skins" made from 1/4-inch maple plywood, and a sound-hole cut in the bottom surface.

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

Bottom Skin and Sound Hole

With the case finished, the plywood can be cut for the top and bottom of the table. We used **A-grade**

1/4" maple plywood with book-matched curly grain on one face and a rotary-cut veneer on the back side.

- On the sheet of plywood, mark a center-line on a seam to center the pattern, then measure out 7-1/2 inches on either side of that line and draw two side lines that run parallel (**figure A**).

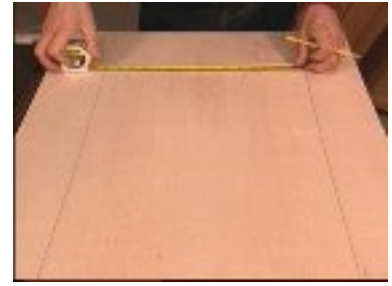


Figure A

- At the table-saw, cut the top and bottom skins 1/8" oversized on each side.
- In order to create the drum sound, you'll need to cut a **sound hole** into the bottom skin so that the percussive vibrations can escape the sound chamber. To accomplish this, fashion a hole-template from MDF. Measure and mark the center on the bottom plywood skin. Then double-stick tape the template to the skin by aligning the layout lines with the lines on the template (**figure B**) and clamp the template in place.
- With the template aligned, cut out the center using a plunge router (**figure C**).



Figure B



Figure C

- Now you can attach the bottom skin to the case using yellow woodworker's glue. Apply glue around the edges of the bottom skin (**figure D**).
- Raise the case up on wood cauls and apply glue to the bottom edge of the case (**figure E**). Use a glue-roller to ensure that the glue is spread evenly.



Figure D



Figure E

- Align the edges to ensure that the bottom edge is centered (**figure F**).

- Tape the corners square using blue carpenter's tape (**figure G**).



Figure F



Figure G

- With the case assembled and the bottom skin and banding in place, you can clamp the assembly. Add cork-lined cauls and clamps to ensure even pressure (**figure H**) and allow the glue to dry thoroughly.



Figure H

Attaching the Legs

As seen on the prototype (**figure I**), the legs are attached at the bottom using integral tenons. Holes must be cut in the corners of the bottom skin to accommodate the tenons. The tenons extend up through the bottom skin; they are glued and screwed in place against the inside walls of the case.

- A jig can be fashioned out of MDF to help with the alignment. We created a small jig designed to reference off the corners. Using the jig as a guide, trace the square layout marks on all four corners (**figure J**).



Figure I



Figure J

- Once the layout marks are made, use a hand-held drill and 5/8"-inch Forstner bit to drill out each hole (**figure K**).

- Once the holes are drilled, use a square file to true the corners (**figure L**), using the layout marks as a guide.



Figure K



Figure L

- To prevent the unfinished edges of the plywood from showing, band the edges with some 1/4" wooden strips. We used 1/4" of maple.
- Using a plunge router with the fence referenced against the sides (**figure M**), cut a rabbet 1/4" square around the entire perimeter of the case.
- Add yellow glue to the rabbet, then position the two long strips first (**figure N**). Allow the strips to pass the ends about 1/2". Since the maple strips are so thin, secure them with clear packing tape until the glue cures. This tape works well since it stretches without breaking.



Figure M



Figure N

- Measure the shorter side-strips to fit into the rabbet (**figure O**) and cut them to proper length at the table saw.
- Apply glue, position the short strips and secure them with packing tape (**figure P**).
- Allow the glue to cure fully. Later, you'll trim off the ends of the strips with a hand saw. You'll also clean away any excess with a hand scraper, then sand the edges smooth.



Figure O



Figure P

In the segment that follows, the distinctive curves are cut in the legs of the drum table.

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

(2000)

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New York, NY 10016

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