

Do It Yourself

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Butcher Block Table: Shelf, Joinery and Base-Assembly

From "[Wood Works](#)"

episode WWK-506 -- [More Projects »](#)

With the tabletop and base (including legs, aprons and stretchers) all made, and a dry-fit conducted to ensure that the elements fit properly, the next phase in the butcher-block project is to create the slats that will form the bottom shelf. Once the shelf-slats and their joinery have been cut, final assembly on the table-base can get underway.

Materials:

Ash stock for stretchers

MDF for spacers

Table saw; cross-cut sled

120-grit sandpaper

Yellow woodworker's glue

Clamps

Belt-clamp

Safety glasses or goggles

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

Shelf and Joinery

- With the assembly still clamped together in dry-fit, take the measurements for the exact dimensions of the shelf (**figure A**).

Tip: To ensure that the legs fit squarely, make some spacers from MDF that are the same length as the long aprons. Clamp them in position when dry-fitting (and later gluing up) the assembly.

The shelf will be made of three slats. They will be laid out on the stretchers so that a 1/2-inch gap will be left between the slats. They will also be cut so that there is a 1/2-inch overhang on each side. Each slat measures 3/4-inch thick by 3-1/2 inches wide by 23-1/2 inches long (**figure B**).



Figure A



Figure B



Figure C

The slats are attached to the stretchers using half-lap joinery. The slats will fit into a dado cut into both the stretchers and the slats (**figure C**). The dados are created using a special cutting technique at the table saw.

- With the slat-stock clamped to the stretchers, lay out the marks where the joinery will be cut (**figure D**).

Half-lap joinery is basically where two pieces of wood are notched so that they fit together. Create the notches (i.e., dados) in the stretchers by raising the blade on the table-saw to 1/8-inch. With stop-blocks clamped to the fence of the cross-cut sled to define the length of the cut, slide the stock across the rotating blade to create the first notch (**figure E**), moving the sled forward 1/4-inch at a time.

Flip the stock and repeat the process to create the corresponding notch on the other side. To create the center-cut, adjust the position of the stop-block and slide the stock back and forth, following the same technique.

To cut the matching notch on the slat-stock, leave the blade still set to 1/8-inch and remove the stock by making a series of kerf cuts (**figure F**).

With the shelf-stock and joinery cut, ease all of the base-stock pieces by hand using 120-grit sandpaper.

Conduct one more dry-fit -- this time with the shelf stock in position -- before beginning glue-up. The glue-up is conducted in two stages. First, glue the two sides and allow them to dry. Complete the assembly by connecting the two sides using the aprons and shelf-slats.

Apply glue to the mortises in the leg and apron stock, and on the tenons. Assemble the two sides.

Once the two sides have dried, assemble the frame on its side (**figure G**).

Add the spacer stock to keep the assembly square (**figure H**), then add a band-clamp to pull the joints together tight.



Figure D



Figure E



Figure F



Figure G

Set the assembly upright, and place clamps on each corner to bring the joints tightly together. Leave the spacers in position to keep everything aligned (**figure I**) while the slats are added to form the bottom shelf. Allow the glued assembly to dry for several hours.

In the segment that follows, the tabletop is attached to the base and the finishing touches are added.

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- **ALSO IN THIS EPISODE:**

[Butcher-Block Table: Tabletop](#)

[Butcher-Block Table: Base](#)

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[Butcher Block Table: Finishing Touches](#)



Figure H



Figure I