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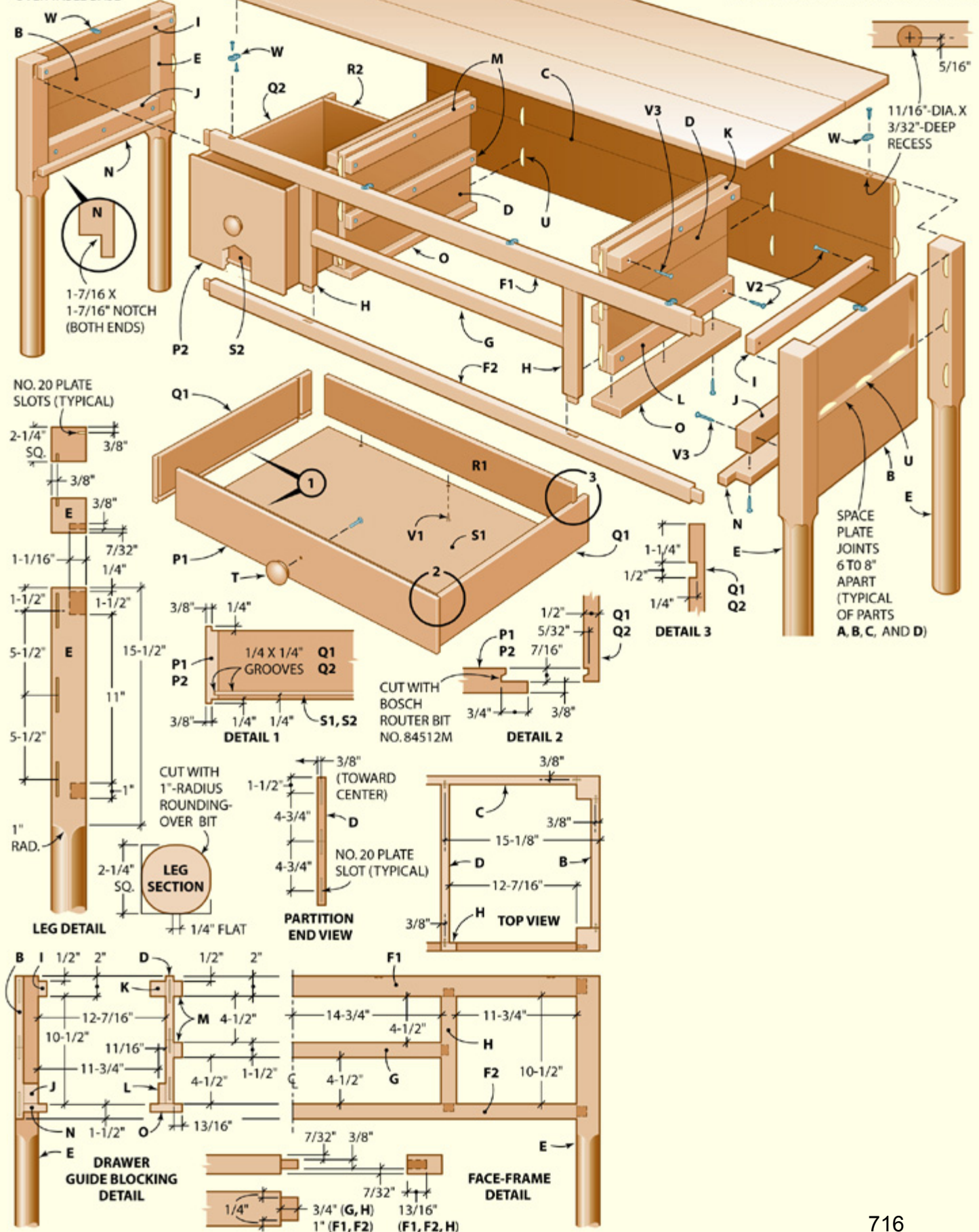
# SHAKER STYLE TABLE



# SHAKER UTILITY TABLE

22" DEEP X 35-5/16" HIGH X 68-1/2" WIDE

**NOTE:**  
CENTER TABLETOP  
OVER TABLE BASE



# **MATERIALS LIST--SHAKER TABLE**

<b>Key</b>	<b>No.</b>	<b>Size and description (use)</b>
A*	1	13/16 x 22 x 68-1/2" maple (top)
B*	2	13/16 x 14 x 15-1/2" maple (end)
C*	1	13/16 x 14 x 56" maple (back)
D*	2	13/16 x 12-1/2 x 18-3/8" maple (partition)
E	4	2-1/4 x 2-1/4 x 34-1/2" maple (leg)
F1	1	13/16 x 2 x 58" maple (top rail)
F2	1	13/16 x 1-1/2 x 58" maple (bottom rail)
G	1	13/16 x 1-1/2 x 31" maple (center rail)
H	2	13/16 x 1-1/2 x 12" maple (mullion)
I	2	13/16 x 1-1/2 x 18-3/8" maple (runner)
J	2	1-7/16 x 2 x 15-1/2" maple (runner)
K	2	1-1/2 x 1-1/2 x 18-3/8" maple (runner)
L	2	11/16 x 2 x 18-3/8" maple (runner)
M	4	13/16 x 1-1/2 x 18-3/8" maple (runner)
N	2	13/16 x 2-1/4 x 18-3/8" maple (runner)
O	2	13/16 x 3-1/8 x 18-3/8" maple (runner)
P1	2	13/16 x 4-15/16 x 29-7/8" maple (drawer face)
P2*	2	13/16 x 10-15/16 x 12-1/8" maple (drawer face)
Q1	4	1/2 x 4-7/16 x 19-3/16" maple (drawer side)
Q2*	4	1/2 x 10-7/16 x 19-3/16" maple (drawer side)
R1	2	1/2 x 3-15/16 x 28-7/8" maple (drawer back)
R2*	2	1/2 x 9-15/16 x 11-1/8" maple (drawer back)
S1	2	1/4 x 17-3/4 x 28-7/8" plywood (drawer bottom)
S2	2	1/4 x 17-3/4 x 11-1/8" plywood (drawer bottom)
T	4	drawer pull
U	as reqd.	No. 20 joining plate
V1	as reqd.	1" No. 6 rh woodscrew
V2	as reqd.	1-1/2" No. 8 fh woodscrew
V3	as reqd.	2" No. 8 fh woodscrew
W**	10	tabletop fastener, Rockler No. 21650



## Stock Preparation

The first step is to straighten, or joint, the edges of the pieces you'll glue together to make the wide panels. To do the job with a router, first make a straightedge guide. A 4- or 5-in.-wide piece ripped from the edge of a sheet of plywood or hardboard should work.

Clamp the straightedge guide to each maple piece and run the base of the router against the guide to trim the edges of the boards (Photo 1).

Determine the widths of the pieces you'll need for the tabletop and the side and back panels. Then, use a circular saw with a ripping guide to cut the stock to width. Leave each piece about 1/16 in. wider than necessary so you can joint the cut edge and remove the saw marks. Crosscut the pieces at least 2 in. longer than the finished panel lengths.

While you don't need them for strength, your assembly will be easier if you use joining plates to align the panels. Mark the locations of the plates and cut the slots (Photo 2).

Apply glue to the mating edges of the panels and also spread glue in the plate slots and plates. Assemble the panels, clamping the joints to pull them tight (Photo 3). After the glue on each panel has set for 20 to 30 minutes, scrape off any excess.

When the glue has completely set, remove the clamps and crosscut the panels to length (Photo 4).



Install a straight 1/2-in. bit in your router and use a straightedge guide to joint the edges of the maple stock.



Clamp your work to the table, and cut the joining plate slots for assembling the wide top, side and back panels.



Use clamps to pull the panel joints tight. A clamp every 10 to 12 in. should provide adequate pressure.



Clamp a straight board squarely across each panel and use it as a guide for crosscutting with your circular saw.

## Making The Legs

While your circular saw may have the capacity for a 2-1/2-in. cut, maple is very hard and can be tough on a saw. It's best to rip the table legs in two stages. Using a ripping guide, cut halfway through the stock, then flip the piece over and finish from the other side (Photo 5). Repeat for each leg. Rip the leg blanks 1/16 in. wider than finished dimension and use a plane to bring the pieces to correct size. To make shaping the legs easier, leave the leg blanks several inches longer than required.

Mark the round-to-square transition points on each leg, and leave at least 2 or 3 extra inches at the bottom end of the blanks for clamping. Clamp one of the blanks to your worktable and use a 1-in.-rad. rounding-over bit to rout each corner of each leg (Photo 6). Stop the cuts about 1/4 in. shy of the transition points.

After routing all of the legs, use a gouge or rasps and files to shape the transition between the rounded and square portions of the legs (Photo 7).

Note that the legs won't be perfectly round, but will have a small flat surface on each side. When sanded smooth, however, you'll barely notice that they are not shaped to a perfect cylinder.

## Cutting The Joints

Lay out and rout the mortises in the legs and square the ends with a chisel (Photo 8). Then, crosscut the legs to finished length. Locate and cut the plate slots for joining the back and side panels to the legs (Photo 9).

Rip and crosscut the face-frame parts to size, and lay out the mortise-and-tenon joints according to the plan. Rout the mortises in the mullions and the top and bottom rails, and square the ends with a chisel.

Install a straight bit in a router table, and use a miter gauge to guide the pieces as you cut the tenon cheeks (Photo 10).

Mark the tenon shoulders on each piece, and use a dovetail saw or backsaw to make these cuts. Test fit each joint. If one is too snug, sand the cheeks until the parts slide together smoothly. If a joint is too loose, glue a veneer shim to the tenon cheek.



Use a ripping guide to help saw the leg stock. Cut half the depth from each face to avoid overloading the saw.



For the look of lathe-turned legs, use a router with a 1-in.-rad. rounding-over bit on each leg corner.



Use a gouge or rasps and files to shape

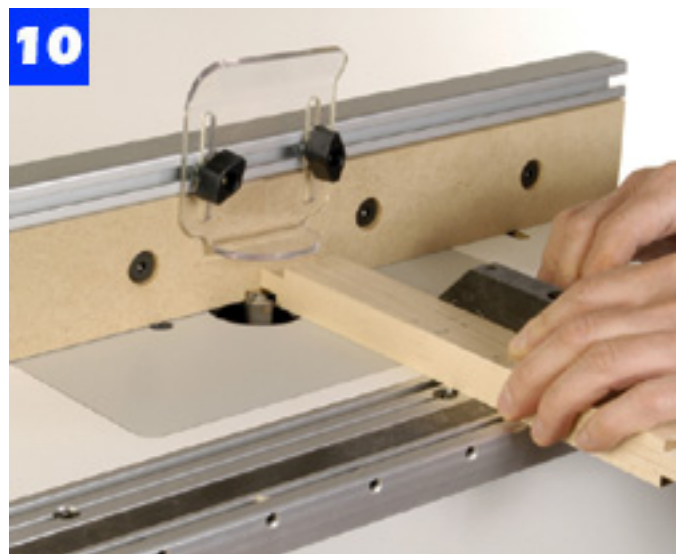
the transition between the round and square sections of each leg.



Rout the leg mortises with a 3/8-in.-dia. spiral up-cutting bit. Then, square the mortise ends with a sharp chisel.



Cut the plate slots in the legs for joining the sides and back. Cut corresponding slots in the side and back panels.



Use a router table and a 1/2-in. bit to shape the tenons on the face-frame ends. A miter gauge guides each cut.



**Assembly**

Spread glue in the face-frame mortises and on the mullion and center-rail tenons (Photo 11). Assemble the frame, apply clamps, and compare opposite diagonals to see if the frame is square. Next, glue and assemble the leg/face-frame parts (Photo 12).

Glue and clamp the rear leg to the back-panel joints. When the glue has set, lay out the positions of the partitions and joining plate slots. Clamp a straightedge to the back and face frame as a guide for cutting these slots.

Apply glue for securing the sides and partitions with the face-frame assembly. Position the panels, clamp them to the frame, and use a square to check that the panels are perpendicular to the face (Photo 13). Next, join the back-leg assembly to the side and partition panels. Apply clamps and check for square (Photo 14).

Cut the drawer runners to size. Bore and countersink pilot holes in each piece and install them to the side and partition panels (Photo 15).



Coat all face-frame joint surfaces with glue. A small brush and wooden applicator make the job go smoothly.



After assembling the face-frame parts, join the frame to the front legs. Keep the clamps in place until the glue has set.



Join the partitions and sides to the face-frame assembly with plate joints. Check the assembly with a square.

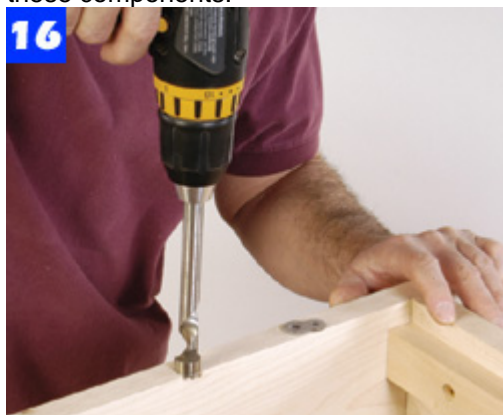




Complete the table base by joining the back subassembly to the sides and partitions. Then check for square.



After cutting the drawer runners to fit, bore the pilot holes for the screws and install these components.



Mark the locations of tabletop fasteners along the top edge of the table base. Use an 11/16-in.-dia. multispur bit to bore the 3/32-in.-deep recess for each fastener (Photo 16), then bore pilot holes for the screws and install the hardware.

Invert the tabletop on a padded surface and position the base over it with the proper overhang on each edge. Bore holes for tabletop-fastener screws, and attach the top to the base.

### Drawer Construction

Glue up the face, side and back panels for the deep drawers, then rip and crosscut all drawer parts to size. We cut the joints between the drawer sides and faces with a

Bore recesses for the tabletop fasteners.<sup>723</sup>  
Install the fasteners and mark their

drawer-lock-joint router bit (Bosch No. 84512M). Install the bit in the router table and use it to cut the locking joint on the drawer-face ends (Photo 17). Since this is a deep cut, take two or three passes to reach the full profile.

Readjust the router table to cut the mating joints on the drawer sides (Photo 18). Clamp a backer board to the trailing edge to prevent chipping.

Use a 1/2-in.-dia. straight bit in the router table to cut the rabbet at the top and bottom edges of the drawer faces, and the dado in drawer sides for the backs. Then, install a 1/4-in. bit and cut the grooves for drawer bottoms.

Assemble the drawers with glue and clamps (Photo 19). When the glue has set, remove the clamps and slide the bottoms in place. Fasten them with screws driven into the drawer backs. Bore pilot holes for the drawer pulls and install them.

## Finishing

Remove the tabletop from the base and sand all table parts to 220 grit. To achieve our golden brown color, we first applied a coat of Bartley Country Maple Gel Stain. Spread the stain with a brush or rag, allow it to set for a few minutes, then wipe off any excess. Allow the stain to dry overnight.

Then, apply two coats of Zinsser Bulls Eye amber shellac. Use a good-quality, natural-bristle brush, and avoid excessive brushing. Allow the shellac to dry for at least 2 hours before lightly sanding with 220-grit sandpaper. Remove any dust and apply two more coats.

Burnish the dry surface with 4/0 steel wool and then buff with a soft cloth. Reattach the tabletop to the base and install the drawers.

positions on the underside of the top.



Use a drawer-lock-joint bit in the router table to shape joints on each end of the front drawer panels.



Hold the stock on end to rout the drawer joint on the drawer sides. A backer board clamped in place prevents tearout.



After routing the drawer-face rabbets and the grooves for the bottoms, apply glue and assemble the drawers.