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The Caribbean Deck Table: Nautical Joinery Comes Ashore

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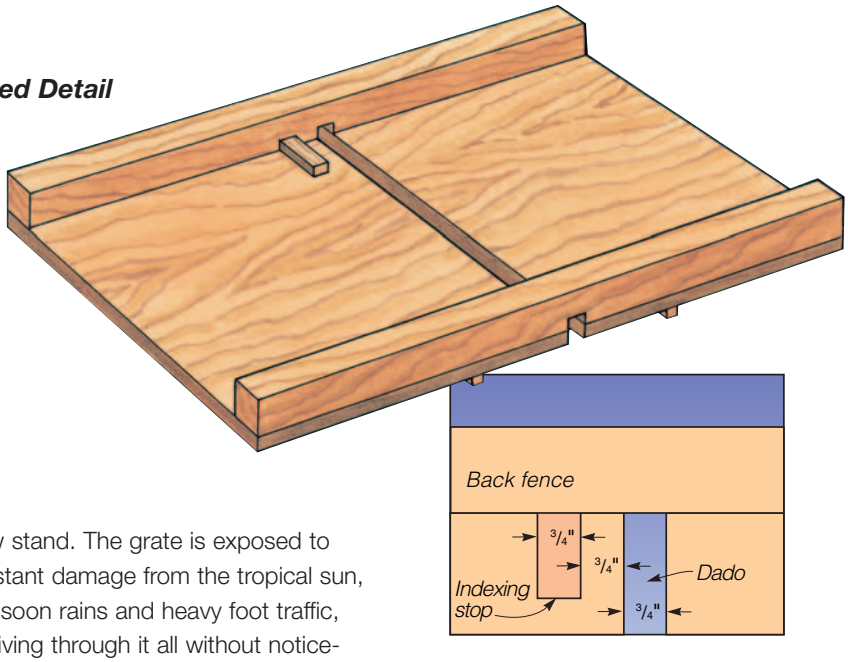
The Caribbean Deck Table: Nautical Joinery Comes Ashore

A decade of woodworking in the tropics and sailing the Caribbean tradewinds left its mark on this author, who's finding new applications for his nautical know how. The top of this table forms a half-lapped grate — a common feature under the feet of a sailboat's helmsmen and the cockpit crew. Used for an outdoor tabletop, the table will shed water and dry quickly after a rain. It's as durable as it is good-looking.

Sled Detail



For most people the dream of quitting their 9 to 5 job, buying a sailboat and escaping to the Caribbean is only an elusive fantasy. For our author, it became reality and led to the beginning of his professional woodworking career. As he quickly learned, however, sailing in the Caribbean was easy compared to making a living from a bag of tools.

Nevertheless, work as a boat carpenter kept him going for several years, until he settled down on St. John, in the U.S. Virgin Islands, and opened a woodworking shop. By the time he left the island ten years later he had learned a great deal about boats, furniture and how wood behaves when exposed to the elements.

Perhaps the most impressive example of nautical joinery is the cockpit grate — the quick-draining platform on which the helmsmen and cockpit crew stand. The grate is exposed to constant damage from the tropical sun, monsoon rains and heavy foot traffic, surviving through it all without noticeably shrinking, swelling or warping. Our author built and repaired many of these grates, so he knows how durable they are. When he was asked to build a set of deck tables, he saw a wonderful opportunity to incorporate this key nautical element into his design.

If built out of decay-resistant mahogany or teak, these tables will last many years with only minimal care. Teak is the best choice for projects exposed to the elements, but at one-third the cost, mahogany is more than adequate. This table can be completed in a weekend and the design can be altered easily to suit other shapes and sizes.

Figure 1: *Use a sled equipped with an indexing stop to position your wide stock while cutting all the equally spaced dadoes. Trim the grate strips after all the half laps are cut.*

Making the Grate

Cutting all the half-laps in the strips that make up the grate assembly (pieces 1) depends on a simple, but very accurate jig (see *Sled Detail*, preceding page). Using the jig will ensure that the half-laps align perfectly and guarantee a square tabletop. Remember, even small errors add up rapidly with repeating joints like these. To make the jig as accurate as possible, cut sled runners to fit your table saw miter gauge slots snugly and install the back fence precisely at a 90° angle to the blade. In addition, make sure the width of the indexing stop matches the cut of your 3/4" dado blade and is secured exactly 3/4" from the dado cut, as shown in the *inset detail illustration* on page 143.

We recommend that you cut your dadoes in wide stock and then rip the boards into the strips. Cut four pieces of 6"-wide by 15¾"-long lumber and plane them to exactly 3/4" in thickness. Next, install a 3/4" dado blade in your table saw and set your jig into position. Raise the blade 3/8" above the sled surface and butt one end of a board up to the indexing stop. Make the first dado cut in the board, then slip the dado over the indexing stop and make a second cut, and so on until you reach the end of the board (see *Figure 1*, above). Our author likes to tap the board down with a mallet each time he slips a dado onto the indexing stop. The sound made by the tapping tells him whether the board is flat on the jig or hung up on a wood chip. Continue this operation until the four boards are dadoed from end to end.

Now switch to a standard blade and rip each board into 13/16"-wide strips. This will yield 24 strips, four more than you need for the grate. Make it a practice to cut extra strips just in case you have a problem with tear-out or somehow ruin a piece. If the strips are still around after the grate is assembled, you can make handy trivets to go with the table. Plane 1/32" off each edge of the strips to clean up the saw marks and bring the stock to its final width. Proceed slowly with this step, and test-fit the pieces as you go—it's more important that the pieces fit together snugly than match the final dimensions listed in the *Material List*. You should be able to push the parts together by hand, but just barely.

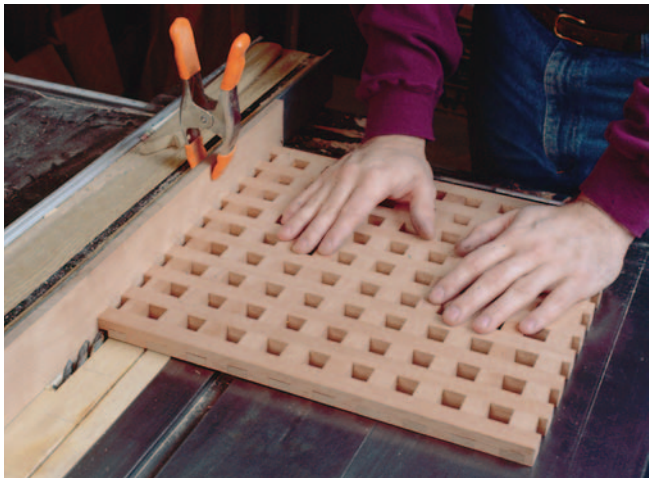
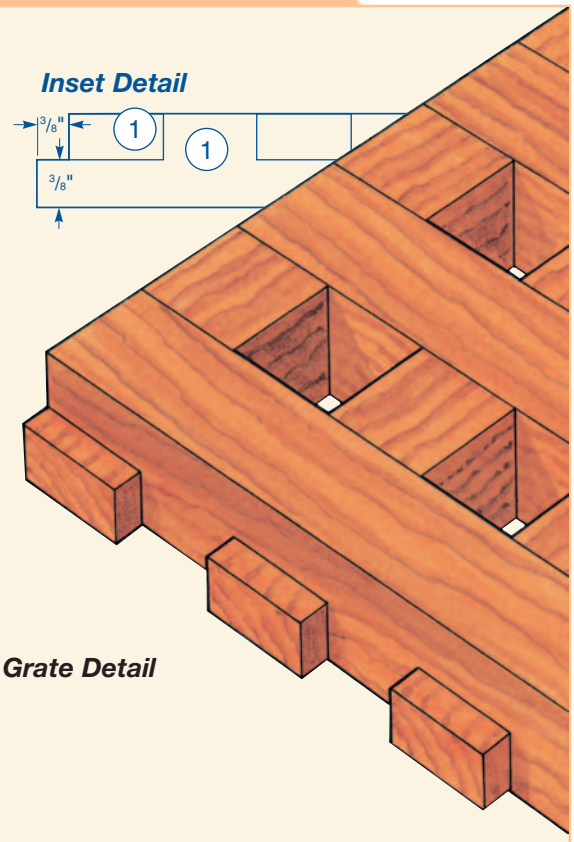


Figure 2: *Cut tenons on the assembled grate after clamping a sacrificial wood face to your saw's rip fence.*

Technical Drawings



Once the strips are sized, glue them together to make up the grate assembly. Watch out though—it's easy to use too much glue on this assembly. For one thing, if the half-laps fit tightly you hardly need glue at all, and for another, if you put more than a dab of glue on each half-lap you'll end up with a real mess in all the openings. (Our author has seen the glue fail on many boat grates, yet they were still quite serviceable for years afterward.)

Since this is an outdoor project, using water-resistant glue is a must. Titebond II or III works well for mahogany, but epoxy is best for oily woods like teak. Be sure to have all your clamps and pads ready, because Titebond glues set up fairly quickly. Epoxy is more forgiving, in terms of setup time.

Put glue in the half-laps and tap the strips together with a mallet. When all the pieces are joined, clamp the assembly between pieces of 3/4" plywood covered with waxed paper to keep the parts from sticking.

Making the Frame

While the glue dries in the grate assembly, machine stock for the top frame (pieces 2). Rip four pieces to width and let them run long for now (you'll miter them to length later to fit the grate exactly). Next, install a 3/8" dado blade in your table saw and machine one edge of each piece, as shown in the *Frame Detail* illustration on the next page.

Remove the clamps from the grate and choose its best side for the top surface. Now trim the grate to 14¼" x 15" and prepare to cut tenons on two edges of the assembly, as shown in the *Grate Detail* illustration on the facing page. Be sure to cut away the waste on the correct edges or your tenons will fall off the assembly (see *Inset Detail*). Install a 3/8" dado blade and clamp a wood face to your saw fence (see *Figure 2*). Raise the blade 3/8" and push the fence so it just touches the blade, then run the two edges of the grate over the blade.

Figure 3: *A drill press attachment will make short work out of mortising the legs. As the coarse drill bit removes most of the waste, the chisel shapes each hole into a square.*

Leg Detail

With the tenons cut, miter the frame stock to fit around the grate. Reinforce each miter joint with a biscuit (pieces 3), or use a spline of the same wood instead (see *Spline Option Detail* on page 146). If you do use splines, be sure the grain runs across the joints and not parallel with them, to prevent the splines from splitting along the grain.

The grate provides a luxury seldom found with solid wood construction—it isn't affected by airborne moisture like a solid wood panel is. Glue the frame and grate together without worrying about wood movement, then use a belt sander to flatten the top. Finish up with an orbital sander and 120-grit paper.

On a boat, it's customary to round-over the corners and edges of any woodwork to save the crews' shins on a turbulent sea. In keeping with this tradition, rout the tabletop edges with a 1/4" roundover bit.

Constructing the Base

The table base construction is about as straightforward as can be. Start by gluing the leg parts (pieces 4 and 5) into pairs, as shown in the *Leg Detail*, left, carefully choosing well-matched pieces for each assembly to help blend in the leg joints. While the glue dries, cut your rails (pieces 6) to overall size.

Once you've cleaned the glue off the legs, cut them 20¾" long and lay out the mortises for the rail tenons. To form the 1½"-deep mortises, use a hollow chisel mortising attachment in your drill press (see *Figure 3*, above). These attachments are easy to use, they're inexpensive and the results are very good. You'll find them in most woodworking supply catalogs and stores. There's no reason, however, that you can't rout or drill the mortises and clean them up with a chisel if you prefer.

Table Exploded View

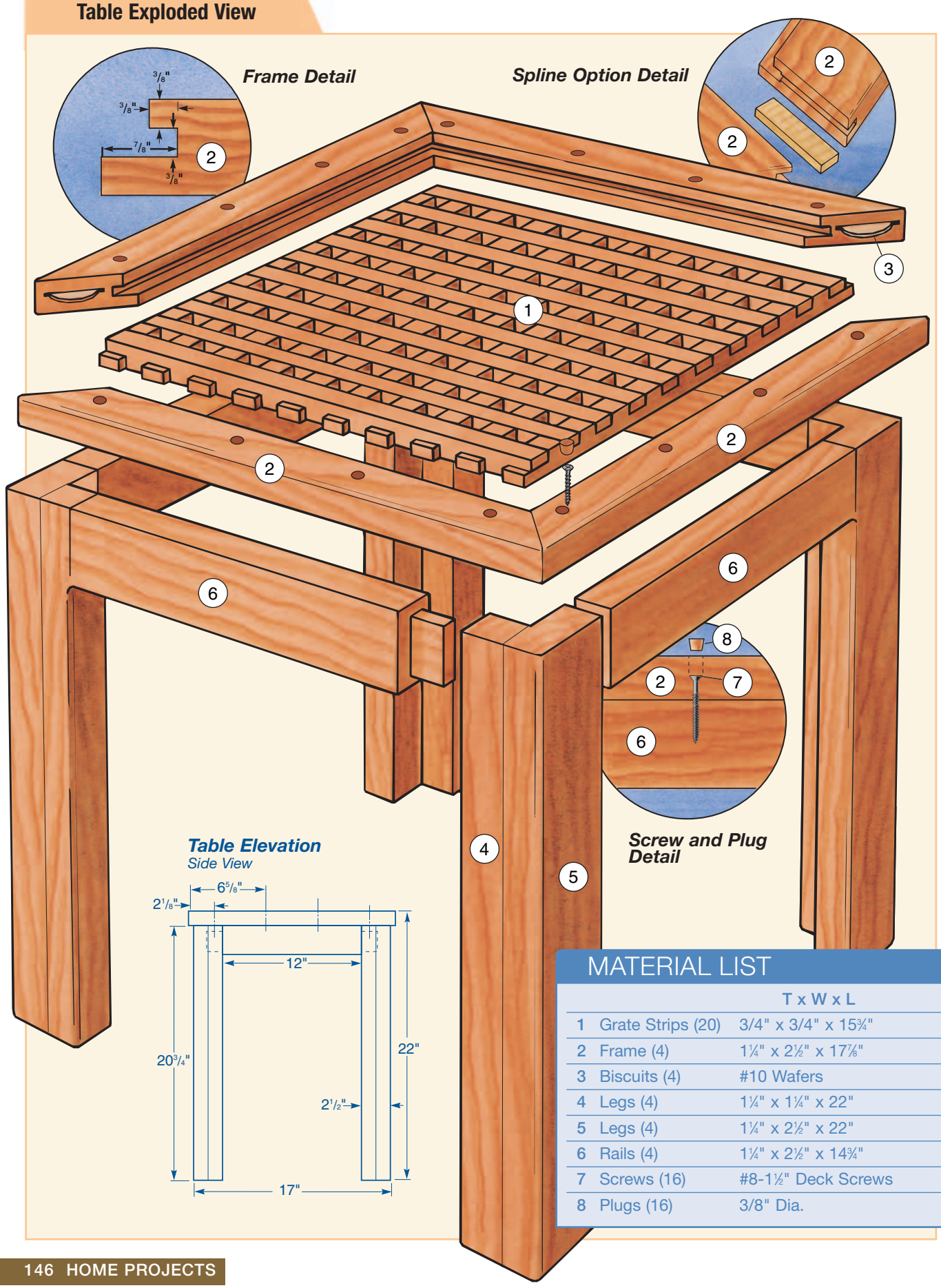


Table Elevation
Side View

MATERIAL LIST

		T x W x L
1	Grate Strips (20)	3/4" x 3/4" x 15¾"
2	Frame (4)	1¼" x 2½" x 17⅞"
3	Biscuits (4)	#10 Wafers
4	Legs (4)	1¼" x 1¼" x 22"
5	Legs (4)	1¼" x 2½" x 22"
6	Rails (4)	1¼" x 2½" x 14¾"
7	Screws (16)	#8-1½" Deck Screws
8	Plugs (16)	3/8" Dia.

Next, install a 1/2" dado blade in your table saw, raise the blade 7/16" and cut the rail tenon cheeks, as shown in the *Rail Detail*, at right. Be sure to clamp a set-up block to your fence while making these repetitive cuts. After cutting the cheeks, adjust the blade and cut the edge shoulders.

Pare the tenons to fit the mortises, as shown in *Figure 4,* below, then glue the legs and rails together. Sand the base and rout its edges (except along the top) with the 1/4" roundover bit. Then rout around the bottom of each leg to prevent chipping when the table is dragged across the floor.

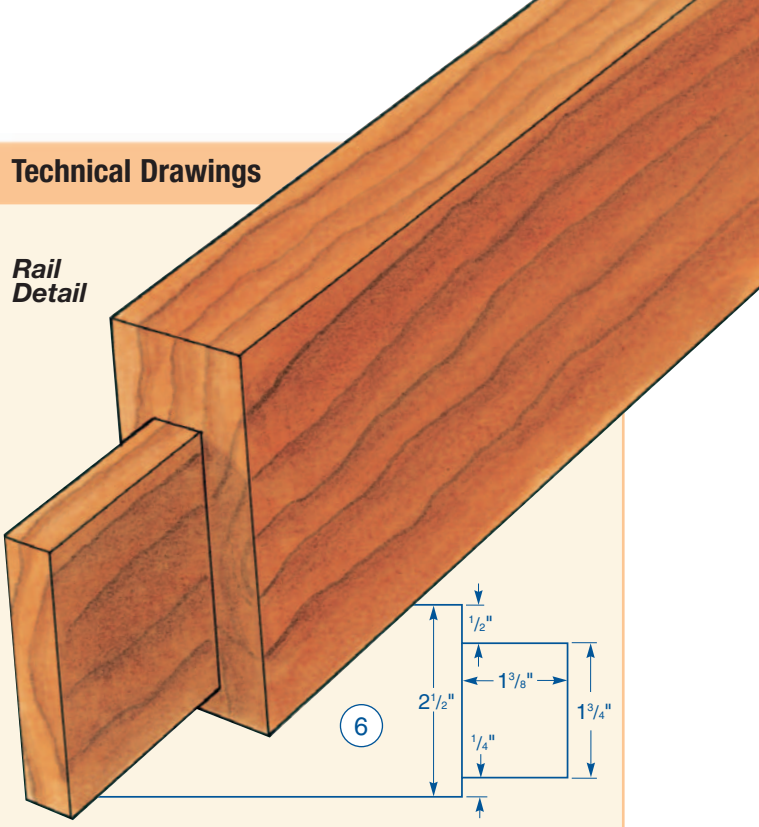
Assembling the Top and Base

In keeping with the nautical theme, secure the top to the base with screws and plugs. Drill the counterbored pilot holes, as shown in the *Screw and Plug Detail* on the facing page, then drive in the non-corrosive deck screws (pieces 7). Next, make your own wood plugs (pieces 8) using a 3/8" plug cutter in your drill press, and glue them into the counterbores. Thousands of wood plugs are used on a boat, so care is taken to match the grain and color of the surrounding wood. On your deck table, however, you may want to deliberately use wood of a slightly different shade to highlight this detail. Plugs are usually glued in with white glue, which isn't water-resistant, so that someday the plugs can be removed to get at the screws if the piece needs repairing. Even after years of exposure, white glue bonds well enough to hold the plugs.

Figure 4: *Pare the tenons with a 3/4" chisel. At the point when you can slip a dollar bill between the tenon and the mortise you'll have a perfect fit.*

Technical Drawings

Rail Detail



Sanding and Finishing

Pare the plugs flush with the tabletop using a wide, sharp chisel. To avoid tearout during this process, test each plug to determine which way the grain runs. Next, sand the entire table up through the grits to 220 grit.

When you first consider finishing your new table you may reach for spar varnish, but our author recommends a marine wiping varnish called Deks Olje (pronounced "decks olya" — for the name of a local supplier call the manufacturer at 1-800-321-3444). He has used this product on his boat for over ten years with good results. Spar varnish provides the maximum UV protection and will last the longest, but it must be stripped off before refinishing every couple of years. A project finished with Deks Olje will require regular maintenance, but it's easy to apply after a light sanding. If you live in northern climates we recommend wiping on a coat each spring, and in the southern states you'll want to recoat every four months. The thin viscosity of this product allows it to penetrate deeply, which means that the initial application will require many coats for an adequate build up.

Another option is to simply leave the wood bare and allow the wood to take its natural course under the elements. Teak and mahogany will last many years without finish. The wood will turn a silvery gray color with exposure to sunlight.

So what's left to do? Set yourself up with a cool drink, relax on your deck and dream about sailing the Caribbean. But be careful, the last time our author tried this he didn't return for 10 years!