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## In this plan you will be getting:

- Step by Step construction instruction.
- A complete bill of materials.
- Exploded view and elevation drawings.
- How-to photos with instructive captions.
- Tips to help you complete the project and become a better woodworker.



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## Outfeed/Assembly Table



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# Outfeed/Assembly Table

A must for every shop with space limitations, this project is an outfeed table for your saw that transforms into a low-height assembly table for your larger projects. It also provides plenty of storage for blades and saw accessories. The design is perfectly suited for contractor's saws with motors that extend behind the base.





Working in a one-man shop can have its drawbacks. We all know what handling large sheets of plywood or MDF alone on a table saw is like: It's not only awkward, it can be dangerous. An outfeed table is essential, but it takes up a lot of room, especially in a small shop situation.

Most of us don't have a comfortable place to assemble large projects, either. Your workbench may be too high while the floor is too low. This outfeed table unit solves both problems: it does double-duty as outfeed support for your table saw while also being a low assembly bench. Dual functionality makes it perfect for a small shop.

The outfeed/assembly table has a pair of extra-deep drawers for storing saw accessories such as push sticks, earplugs and table inserts. But our favorite feature is the blade storage caddy that includes a special space for a dado set. This portable caddy is a safe and convenient device for carrying blades to the sharpener's shop.

### Making the Tabletop

We used white oak with walnut accents to build this piece, but any stable hardwood would do. To make the tabletop, cut all the parts to size according to the dimensions given in

the *Material List* on page 24, then install a 3/8" dado cutter in your table saw. Using a 12" high auxiliary fence, create spline slots on the ends of the side aprons (pieces 1). Now use your miter gauge to make matching dadoes in the faces of the front and back aprons (pieces 2) at the locations indicated on the *Technical Drawings* (see page 30). Glue your apron splines (pieces 3) in place and check the subassembly for squareness by measuring diagonally. When both measurements are the same, tighten your clamps.

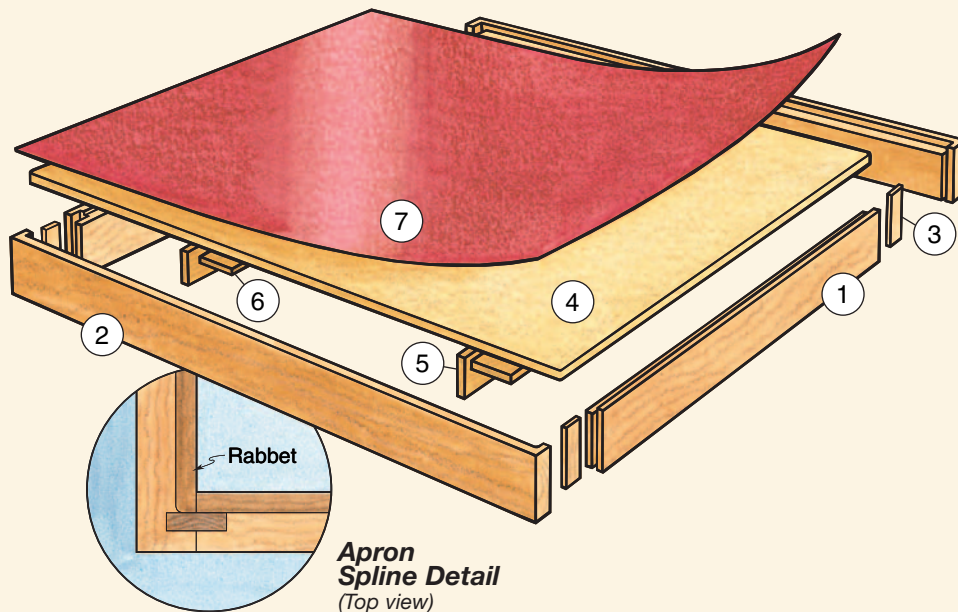
The next step is to create the rabbet for the particleboard tabletop (piece 4) with your router. Run a 3/4"-deep by 7/16"-wide rabbet all the way around the inside edge of the frame. Round the corners of the tabletop to match, then glue top into place.

Next, install



*As an outfeed table, this dual-purpose project keeps large panels or long boards from tipping off the saw. Dropped down into an assembly station, it brings larger projects within easier reach and saves a lot of backache.*

## Tabletop Exploded View



### MATERIAL LIST – Tabletop

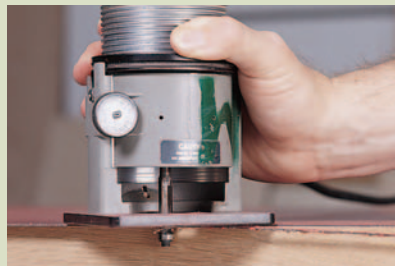
	T x W x L		T x W x L
1 Side Aprons (2)	1¼" x 3⅞" x 27½"	5 Tabletop Supports (2)	¾" x 2⅞" x 24"
2 Front and Back Aprons (2)	1¼" x 3⅞" x 42"	6 Support Cleats (2)	¾" x 2⅞" x 24"
3 Apron Splines (4)	3/8" x 1¼" x 3⅞"	7 Tabletop Laminate (1)	1/16" x 31" x 43"
4 Tabletop (1)	¾" x 28⅞" x 40⅞"		

## APPLYING PLASTIC LAMINATE

Working with laminate is not too complicated, but you should keep in mind that the adhesive is very unforgiving. The plastic must be positioned correctly the first time: Once contact is made, it can't be repositioned.



Use dowels or thin sticks to separate the two surfaces while positioning laminate on the substrate. Remove them one at a time, starting in the center.



Expose as little of the bit as possible for a clean, safe, error-free cut. Work in a counterclockwise direction at a constant speed to avoid burning or chatter marks.

the tabletop supports (pieces 5) and their cleats (pieces 6). Screw and glue the cleats to the supports and position them on the underside of the tabletop as shown in the *Technical Drawings*. Screw the cleats to the underside of the top using 1¼" wallboard screws. Countersink the heads, but don't go too deep or the screws will interfere with installing the laminate. You'll also want to make sure that the screws don't fall where the miter slot extension grooves will be cut in later.

### Applying the Plastic Laminate

If you haven't worked with laminate before, the process may sound more difficult than it really is. The first thing you need to do is check that the joint

between the aprons and the tabletop is flat, and sand it if necessary.

You can use a brush to apply your contact cement, but we've had much better luck using a serrated trowel. Spread a coat of cement on the tabletop and your laminate (piece 7), and let it dry to the touch. Place dowels or thin sticks about every eight inches along the tabletop as shown in the *tint box* on the previous page, and gently lay the laminate in position, centering it over the top. If you followed the *Material List*, you'll notice that the laminate is 1" longer and wider than the tabletop to allow for trimming. Remember that the adhesive bonds on contact, so there is no room for mistakes: You must have everything lined up right the first time.

Working from the center out, remove the dowels and press the laminate down firmly. When the last dowels are removed, roll the entire surface with a 3"-wide hand roller, applying heavy pressure from the center out to the edges.

Before trimming, it's important to use a scraper to remove any adhesive that ran down the sides of the tabletop: The laminate-trimming bit in your router must have a clean surface to run against. Keep in mind that a minimum amount of the bit's cutting edge should be exposed to reduce the possibility of damage in case the router tips.

### Making the Base Frames

The front and back of the base are frames with floating panels. Their stiles and rails receive 3/4"-wide grooves (see *Technical Drawings*) that house both the panels and splines. Forming those 7/16"-deep grooves is the first milling process and it is done with a dado set in the table saw.

The front and back rails (pieces 8) are milled along their full length, as are the short stiles (pieces 9). However, the

cuts on the long stiles (pieces 10) are stopped at the 14" mark. This is because these two stiles extend beyond the bottom rails and become the assembly table's legs. After the grooves are made, square their ends with a sharp chisel. Now chamfer the bottoms of the long stiles, and you're ready for assembly.

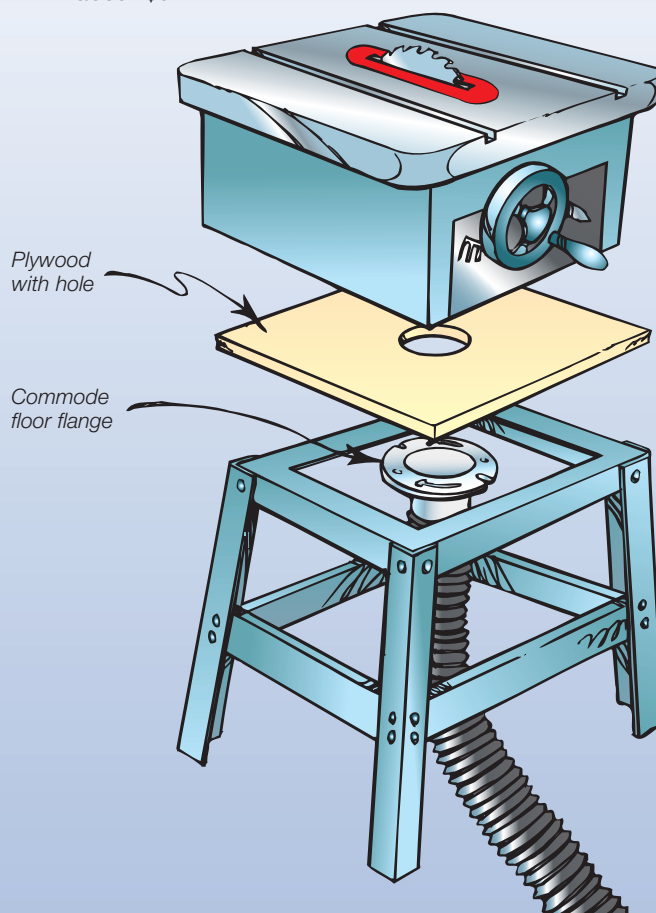
Assemble the frames and panels using the base splines (pieces 11) and glue, but don't glue the panels (pieces 12) in place—they float freely to allow for expansion and contraction. Be sure to check for squareness as you tighten the clamps.

Once these two subassemblies are dry, go back to the dado cutter and mill

## QuickTip

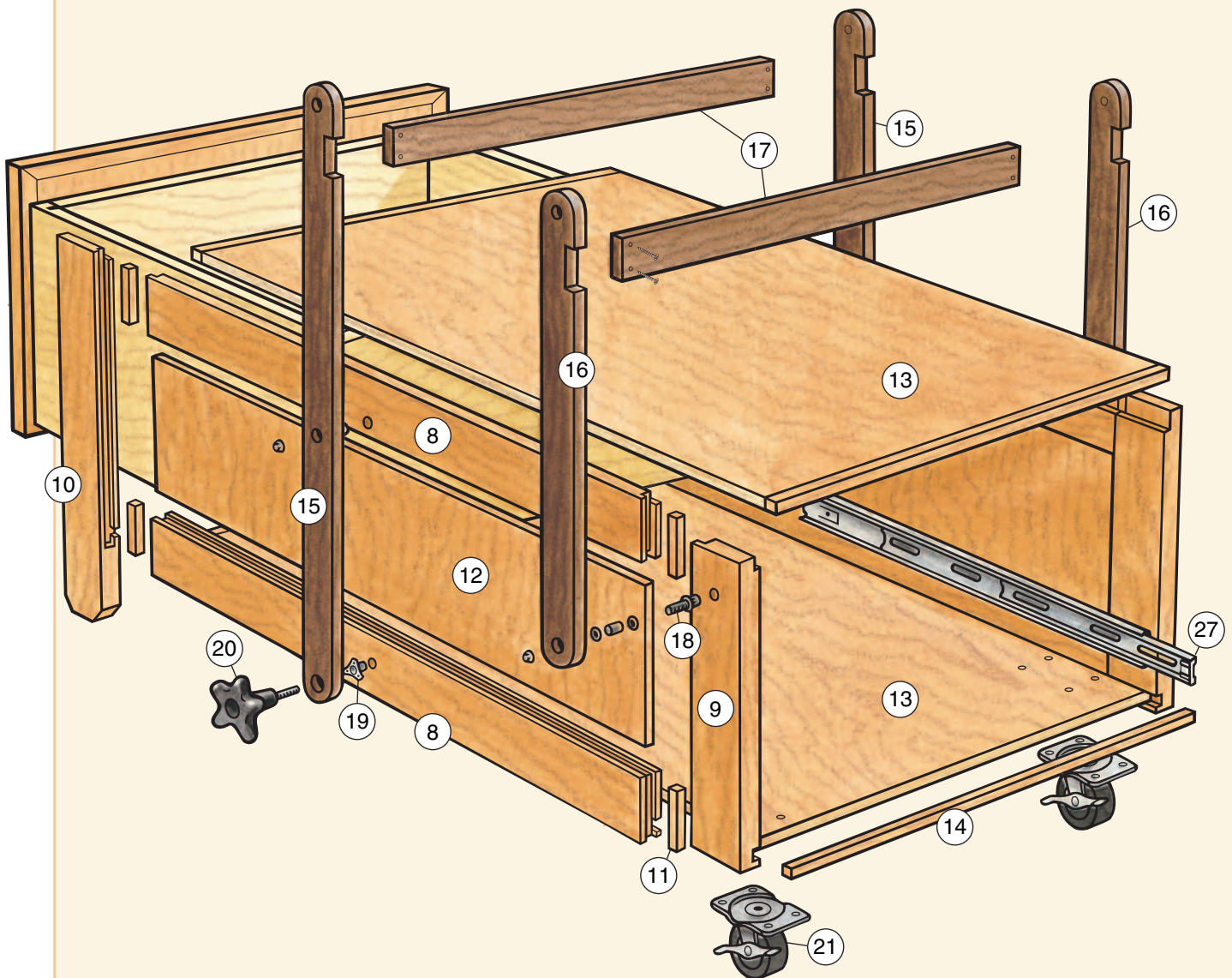
### Flush your Dust!

A commode floor flange fits a 4" dust collector hose perfectly. Screw one to a piece of 3/4" plywood in order to hook up your contractor's saw to your dust collection system. This low-cost coupling will cost you about \$5.



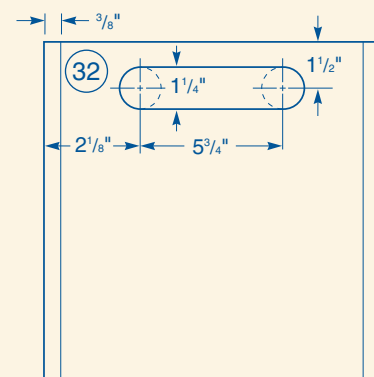
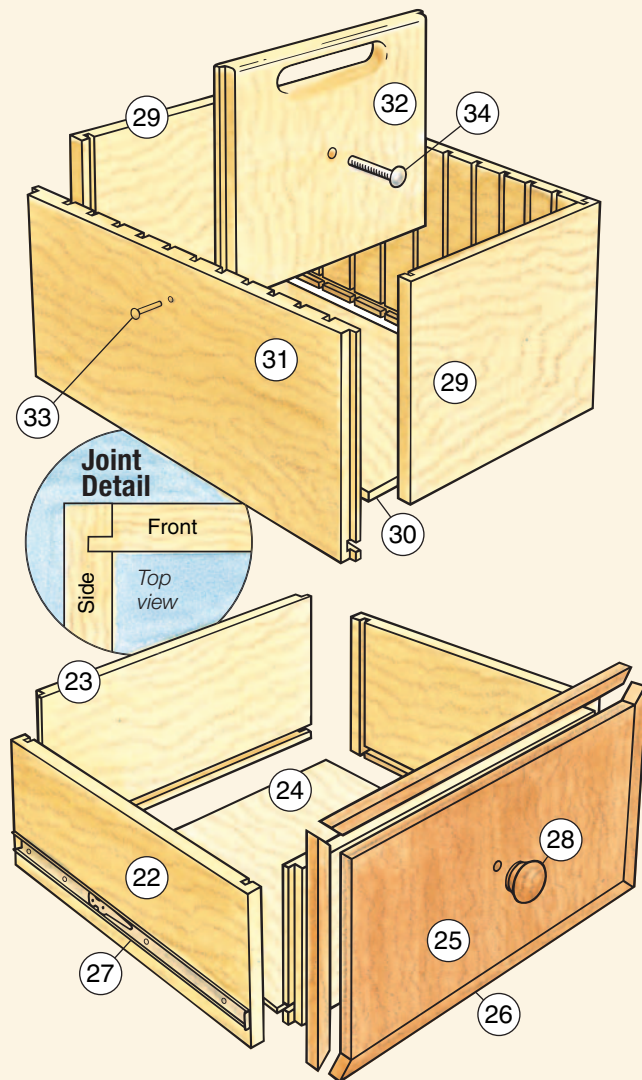


## Base Exploded View



### MATERIAL LIST – Base

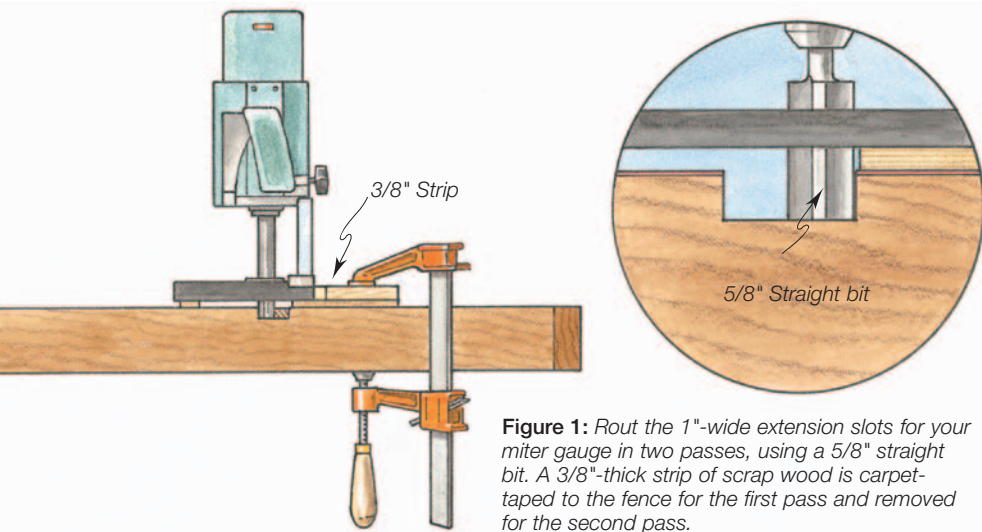
	T x W x L		T x W x L		
8	Front and Back Rails (4)	1¼" x 3" x 32"	18	Pivot Hinges (4 pairs)	Rust-resistant
9	Short Stiles (2)	1¼" x 3" x 14"	19	Threaded Inserts (2)	Screw-on T-nuts
10	Long Stiles (2)	1¼" x 3" x 17¾"	20	Star Knobs (2)	5/16" x 1" Stud
11	Base Splines (8)	3/4" x 3/4" x 2 <sup>9</sup> / <sub>16</sub> "	21	Heavy-duty Locking Casters (2)	3" Dia.
12	Front and Back Panels (2)	3/4" x 32¾" x 8¾"	22	Drawer Sides (4)	3/4" x 10½" x 17¾"
13	Base Top and Bottom (2)	3/4" x 23½" x 36½"	23	Drawer Fronts and Backs (4)	3/4" x 10½" x 21½"
14	Top and Bottom Edging (1)	3/4" x 3/4" x 96"	24	Drawer Bottoms (2)	1/4" x 21½" x 16 <sup>15</sup> / <sub>16</sub> "
15	Long Pivot Arms* (2)	3/4" x 2½" x 29½"	25	Drawer Faces (2)	3/4" x 21¼" x 10¾"
16	Short Pivot Arms* (2)	3/4" x 2½" x 18½"	26	Drawer Face Edging (1)	3/4" x 3/4" x 144"
17	Stretchers (2)	3/4" x 2½" x 27¼"	27	Drawer Slides (2 pairs)	18" Full Extension



Caddy Handle  
Elevation

### MATERIAL LIST – Drawer/Caddy

	T x W x L		T x W x L
28 Drawer Knobs (2)	2" Dia.	33 Handle Locking Pins (2)	2 3/8" x 1/4" Tie Pegs
29 Caddy Sides (2)	3/4" x 11" x 10 3/4"	34 Dado Blade Holder (1)	1/2" x 2" Carriage Bolt and Nut
30 Caddy Bottom (1)	1/2" x 9 15/16" x 19"		
31 Caddy Front and Back (2)	3/4" x 11" x 19 1/8"	* Lengths shown are for a 34"-high table saw. Adjust this dimension to fit your saw.	
32 Caddy Handle (1)	3/4" x 9 15/16" x 10"		



**Figure 1:** Rout the 1"-wide extension slots for your miter gauge in two passes, using a 5/8" straight bit. A 3/8"-thick strip of scrap wood is carpet-taped to the fence for the first pass and removed for the second pass.

the rabbets for the base top (piece 13) and the grooves for the base bottom (also piece 13) as shown in the *Technical Drawings*. To prevent chip-out, be sure to back up these cuts with some scrap.

Attach edging (piece 14) to the base top and bottom with glue and finish nails, drilling pilot holes through the oak for the nails. Set the nail heads, fill the holes and sand the edging flush. Complete the base carcass by gluing and clamping the top and bottom to the front and back, checking for squareness as you go.

### Building the Drawers

We used aspen to make the drawer sides (pieces 22) and the fronts and backs (pieces 23). Cut them to size and mill the 1/4"-wide by 3/8"-deep grooves that hold the bottoms (pieces 24). Stop the grooves on the fronts and backs 3/8" from each end.

Now create a 1/4"-thick by 3/8" tongue on each end of the drawer fronts and backs. These tongues fit into the dadoes on the drawer sides (see *Technical Drawings* for locations). Cut these dadoes on your table saw, and

you are ready to assemble the drawers with glue and clamps. Remember to measure diagonally for squareness, and don't glue the drawer bottoms.

The drawer faces are plywood panels (pieces 25) that are edged with mitered solid oak (piece 26). Make the faces now, but don't attach them until the drawers have been installed—that way you can align them perfectly. Installing the drawers is a matter of following the instructions that come with the drawer slides (pieces 27). However, before you can install them, you'll need to attach the casters (pieces 21), so that you're working on a level surface.

Once the drawers are in, align the faces and secure them from the back with screws. Install the knobs (pieces 28) next and you're ready to make the removable blade caddy.

### Constructing the Blade Caddy

Making the caddy is fairly easy because it uses the same dado setup several times. It is sized for ten 10" blades and an 8" dado set, but you can change that to suit your own saw or collection of blades.

With the parts cut to size, plow

two vertical dadoes on the inside face of the sides (pieces 29), using a 1/4"-wide dado head set for a 3/8"-deep cut (see *Joint Detail* on page 27). Next, cut the dadoes for the blades and handle. The first two cuts run down the inside center of the front and back (pieces 31), then additional cuts are made to the left and right, each 1/2" on center from its neighbor.

The last operation to perform with this setup is making the grooves on the bottom of the front and back to hold the caddy bottom (piece 30). Because you're using a 1/4" dado, you'll have to take two passes. The corresponding grooves in the sides are best done on a router table, as these are stopped at each end.

Now it's time to make the tongues on the ends of the front and back. Raise the blade height to 1/2" and set the fence for a 3/8" cut, making two passes with the miter gauge.

With the same setup, create the rabbets on both ends of the caddy handle (piece 32). Now use the *elevation drawing* on page 27 to create the cutout for the handle. This handle slips into the center groove and is held in place with two wooden locking pins (pieces 33). Inserting the pins allows you to take the caddy out of the drawer (perhaps for a trip to the sharpener). Your dado set mounts on the handle with a carriage bolt and nut (pieces 34).

### Making the Pivot Arms

Making the pivot arms (pieces 15 and 16) the correct length is not really as complicated as it seems. The dimensions given in the *Material List* are for a saw that is 34" high, so adjust that measurement to suit your saw. For example, if your saw is 36" high, add 2" to each arm. With that length determined, cut the arms to size. Use your



## CONNECTING THE TABLE TO THE BASE

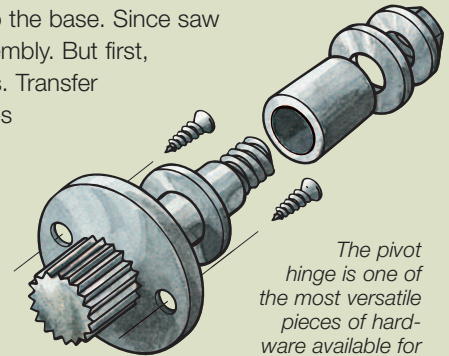
With all the parts made, there's still one step left—connecting the top to the base. Since saw heights vary, some of the hinge locations have to be determined during assembly. But first, check the *Technical Drawings* for the known hinge and scribed line locations. Transfer these to the inside of the table aprons and the upper base rails, drill the holes and install the pivot hinges (see *illustration*, right) and arms.

To find the location for the lower hinge on the long arm, center the table on the base and move the arm in an arc until the hole for the hinge intersects the scribed line on the base rail. Mark this location, repeat the procedure on the other side, drill the holes in the rails and install the hinges, as shown in *Step 1*.

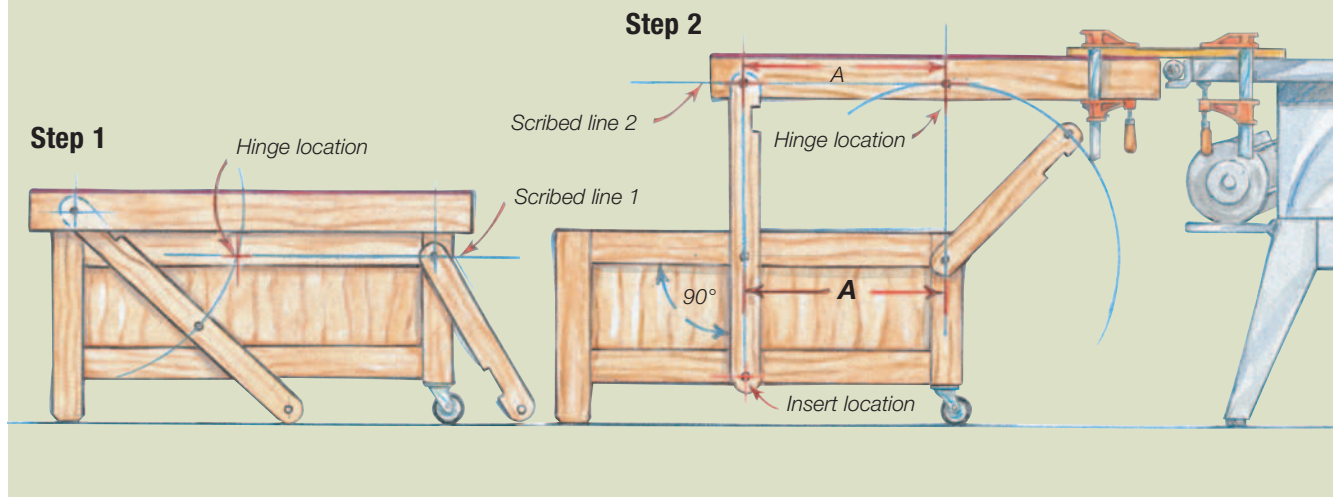
To establish the threaded insert location, begin by elevating the top to its full outfeed height, as shown in *Step 2*. Keeping the top level, use an awl to mark the insert location on the bottom rail. Use a framing square to keep the arm perpendicular during this operation. Drill the holes, install the inserts and lock both arms in the up position with the star knobs.

To find your final pivot hinge location on the inside of the table apron, simply measure the distance between the two hinges on the base rail (shown as “A” below) and transfer this measurement to the scribed line on the inside of the apron. With that point established, you can drill for the final hinges.

The last step is to glue and screw the two stretchers (pieces 17) in place to add extra stability to the assembly.



The pivot hinge is one of the most versatile pieces of hardware available for shop projects.



bandsaw to round both ends of each arm, then sand the kerf marks. You can now use the *Pivot Arms* detail on page 31 to mark the drilling locations for your hardware. While you're at it, lay out the cuts for the two stretchers (pieces 17).

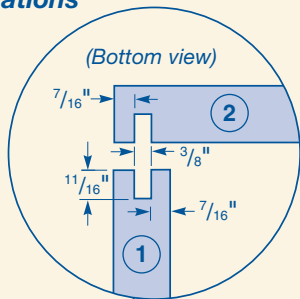
Follow the instructions that come with the pivot hinges (pieces 18) and drill the arms at the locations you just

marked. Remember that the top hinges are installed on the outsides of the arms, while the bottom ones are located on the insides. Then, using your bandsaw, make the cuts that house the stretchers.

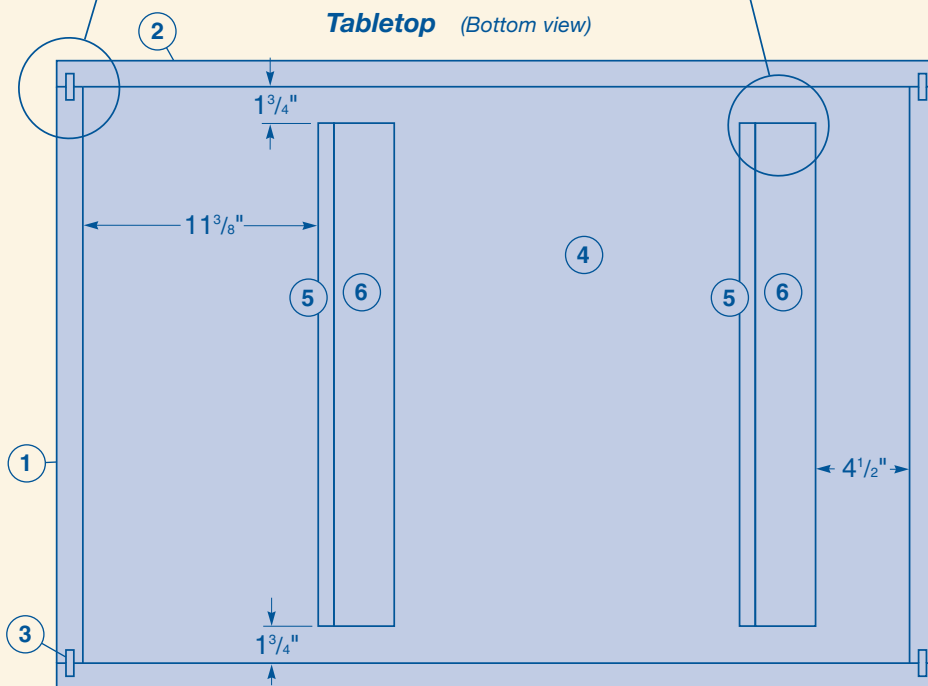
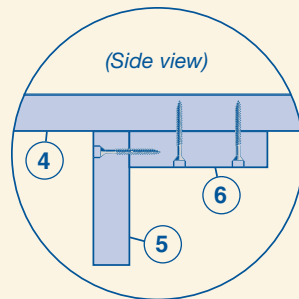
Refer to the *tint box*, above, for your final assembly instructions. Once the table is all together, roll it over to

your saw to lay out and cut the miter slot extensions, as shown in *Figure 1*, page 28. With that done, you can wrap up your outfeed/assembly table with three coats of a durable finish, then go to work on all those large projects you thought your small shop couldn't handle. Now you've got support to spare.

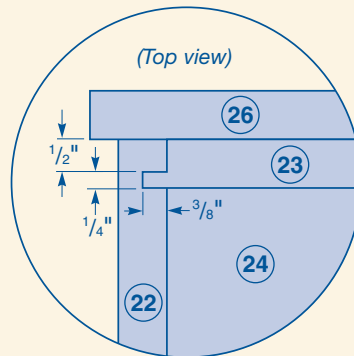
**Apron Spline Dado Locations**



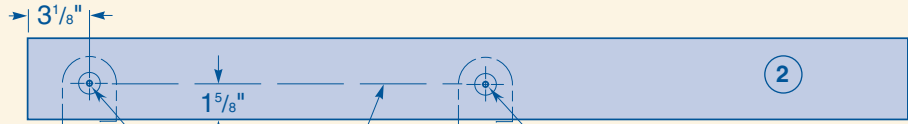
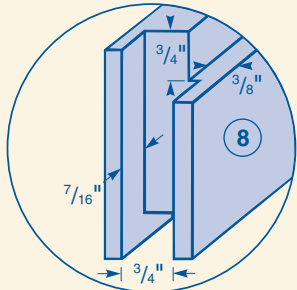
**Tabletop Supports**



**Drawer Assembly**



**Upper Front and Back Rail**



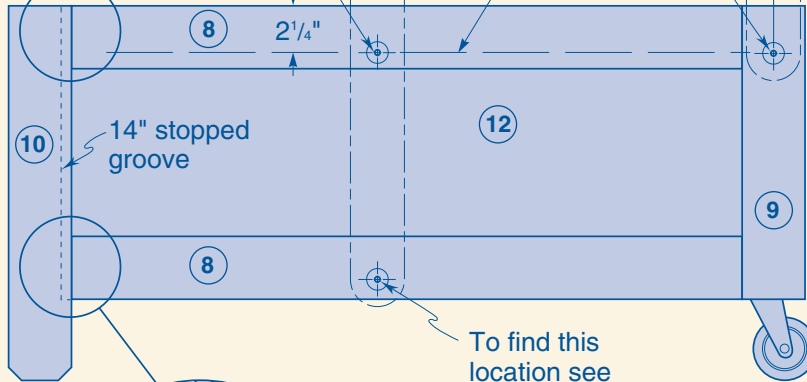
To find this location see sidebar on page 29.

Known hinge locations

To find this location see sidebar on page 29.

Scribed line #1

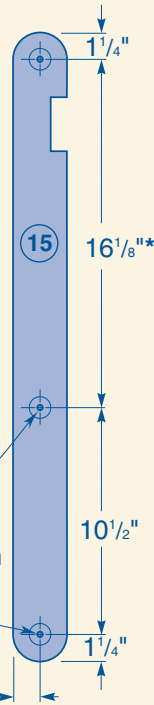
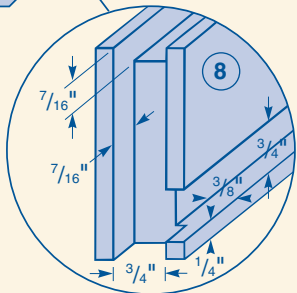
1 1/2 inch



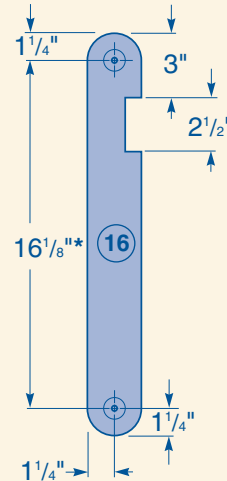
**Outfeed Table Assembly**

To find this location see sidebar on page 29.

**Lower Front and Back Rail**



**Pivot Arms (Side view)**



\* This measurement is only correct for a 34" table saw. You'll have to adjust for your own saw; for example if your saw is 32" high, this measurement would be 14 1/8".