



Ultimate Outfeed Table

This shop upgrade has it all — a large worksurface, ample storage, and a unique sheet goods lifting system. Plus, it's easy to roll-around the shop.

Outfeed support is essential when cutting long boards or large sheets of plywood at the table saw. But what if the support could offer a helping hand at other times, too? That question was the spark that led to the table you see here.

For starters, the outfeed table has a large, flat top so it's ideal for outfeed purposes. But it's also plain to see how this table might be used as an assembly table, finishing station, auxiliary work-surface — you get the idea.

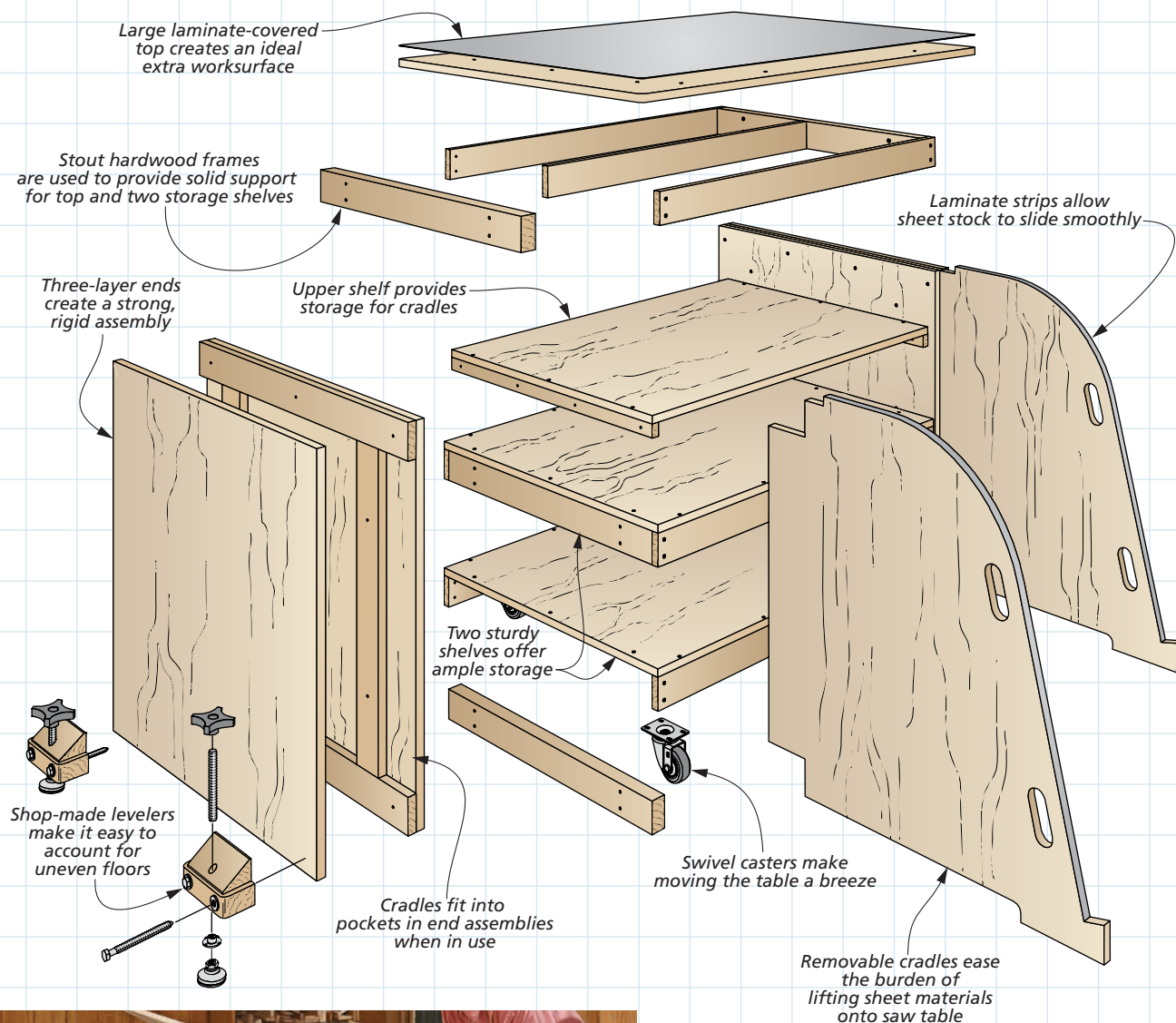
Below the table, two heavy-duty shelves add some much-appreciated storage space. Casters on the table, and a mobile base on the table saw, allow you to arrange the shop space for any task. Shop-built levelers let you lock the table in place with a few turns of the knobs.

The two curved extensions in the photo above are sure to catch your eye. These removable cradles are a back-saving solution for one of the most challenging parts of cutting plywood and

other sheet goods — lifting them up to the saw table. In the left photo on the next page, you can see how the cradles carry the lion's share of the weight. You just need to tilt the sheet back, and it rocks onto the saw table with a lot less effort.

Before getting started, there's one item to note: I sized the height of the table (and the cradles) to match the height of my saw. Double-check your table saw, so you can make any modifications to the plans as you go along.

Construction Overview / OVERALL DIMENSIONS: 48"W x 34"H x 36"D (cradles stored)



- ▲ The curved cradles carry the weight of a sheet of plywood to make it easy to tilt it up onto the table. Then just slide it over to the table saw to make a cut.



- ▲ To save space, the cradles tuck away on the top shelf of the table when you aren't using them. Handholds make them easy to grab.

Strong, sturdy END ASSEMBLIES

One of the interesting construction features of the outfeed table is its simplicity. Two basic assemblies combine to form the table: End assemblies and shelf assemblies. You can see both types in the drawings on this page and the next. In a nutshell, solid-wood frames provide a rigid skeleton, while plywood panels form stable surfaces.

While I used Baltic birch plywood and maple, feel free to use other types of plywood and solid wood to suit your needs and budget. The key is making sure the materials are flat and straight.

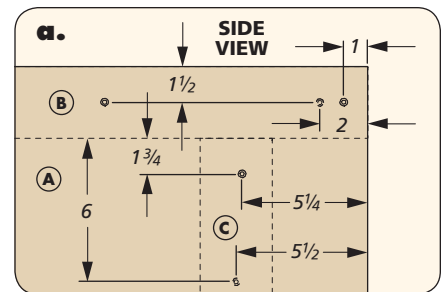
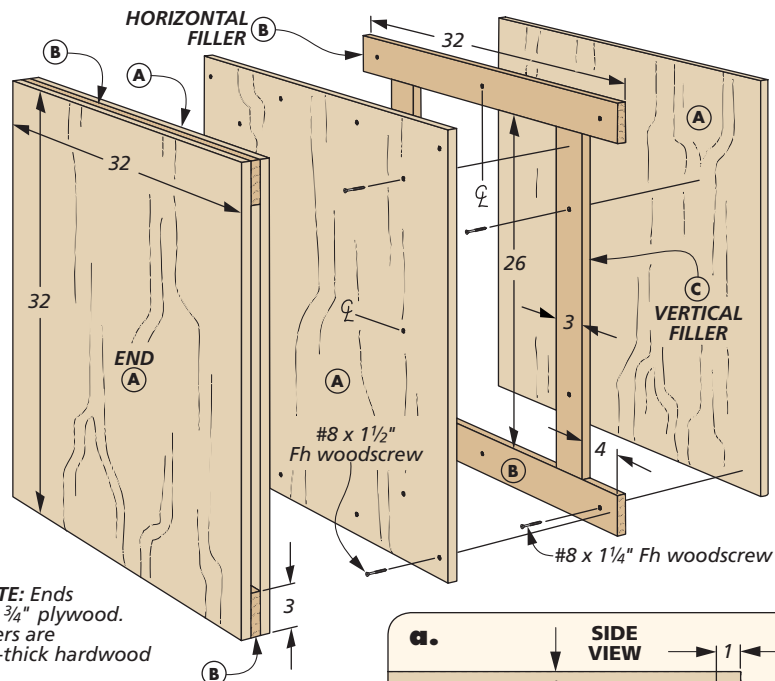
END ASSEMBLIES. I began by making the two end assemblies. The drawing at right shows the arrangement. A pair of plywood panels sandwich a hardwood frame to create a flat, rigid structure. What's nice is that you don't need to cut any joinery. Large glue surfaces and screws solidly join one layer to the next. The key is cutting the corresponding parts to a consistent size.

In order to keep the outside face free of visible screw heads, start with the outside end face down on your workbench. Add the horizontal fillers so they're flush

NOTE: Ends are $\frac{3}{4}$ " plywood. Fillers are $\frac{3}{4}$ "-thick hardwood

with the top and bottom ends. Use the dimensions in detail 'a' as a guide for drilling the screw holes.

The vertical fillers come next, but notice they're inset from the edge, as shown in the drawing above. This creates a pocket for registering the plywood lifting cradles. The inner end panel completes the assembly sandwich. Apply a bead of glue to the filler pieces and set the inner end panel in place. Once the edges are all aligned, drive the screws home.



SHELF ASSEMBLIES

The second type of assembly joins the ends into a single unit, and these are the two shelf assemblies. A third, slightly modified shelf assembly supports the

Materials, Supplies & Cutting Diagram

A Ends (4)	$\frac{3}{4}$ ply. - 32 x 32
B Horizontal Fillers (4)	$\frac{3}{4}$ x 3 x 32
C Vertical Fillers (4)	$\frac{3}{4}$ x 3 - 26
D Aprons (6)	$\frac{3}{4}$ x 3 - 39 1/2
E Rails (6)	1 1/2 - 3 x 30
F Shelves (2)	$\frac{3}{4}$ ply. - 31 1/2 x 39 1/2
G Brace (1)	$\frac{3}{4}$ x 3 - 36 1/2
H Top (1)	$\frac{3}{4}$ ply. - 36 x 48
I Leveler Bases (4)	1 1/2 x 2 1/2 - 6
J Leveler Supports (4)	1 5/8 x 2 1/4 - 5
K Cradles (2)	$\frac{3}{4}$ ply. - 32 x 33 7/8
L Cleats (2)	$\frac{3}{4}$ x 1 1/4 - 29 1/2
M Cradle Shelf (1)	$\frac{3}{4}$ ply. - 29 1/2 x 39 1/2
<ul style="list-style-type: none"> • (28) #8 x 1 1/4" Fh Woodscrews • (98) #8 x 1 1/2" Fh Woodscrews • (24) #12 x 3" Fh Woodscrews • (4) 3" Swivel Casters • (16) #12 x 5/8" Ph Woodscrews • (4) 1/2"-13 T-Nuts • (4) 1/2"-13 Swivel Mounts 	

- (4) 1/2"-13 Knobs
- (1) 1/2"-13 x 36" Threaded Rod

- (8) 3/8" x 5 1/2" Lag Screws
- (8) 3/8" Washers

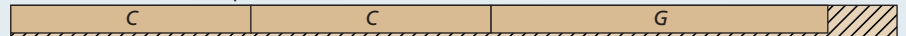
$\frac{3}{4}$ " x 5" - 84" Hard Maple (2.9 Bd. Ft.)



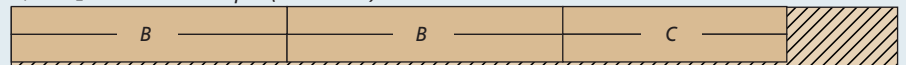
$\frac{3}{4}$ " x 6 1/2" - 84" Hard Maple (3.8 Bd. Ft.)



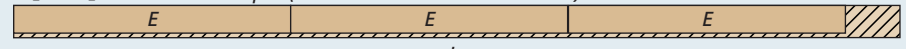
$\frac{3}{4}$ " x 3 1/2" - 96" Hard Maple (2.3 Bd. Ft.)



$\frac{3}{4}$ " x 6 1/2" - 96" Hard Maple (4.3 Bd. Ft.)



1 1/2" x 3 1/2" - 96" Hard Maple (Two boards @ 4.7 Bd. Ft. each)

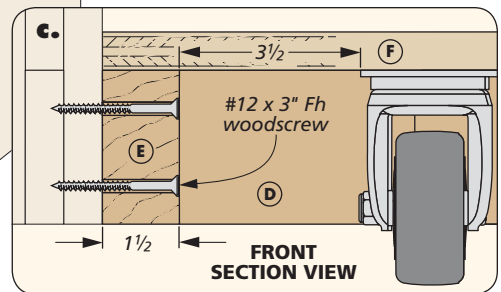
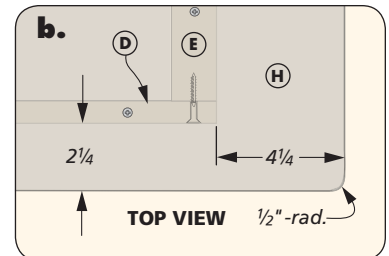
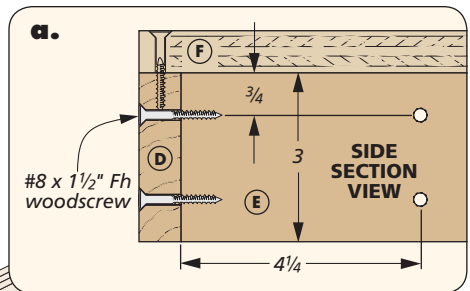
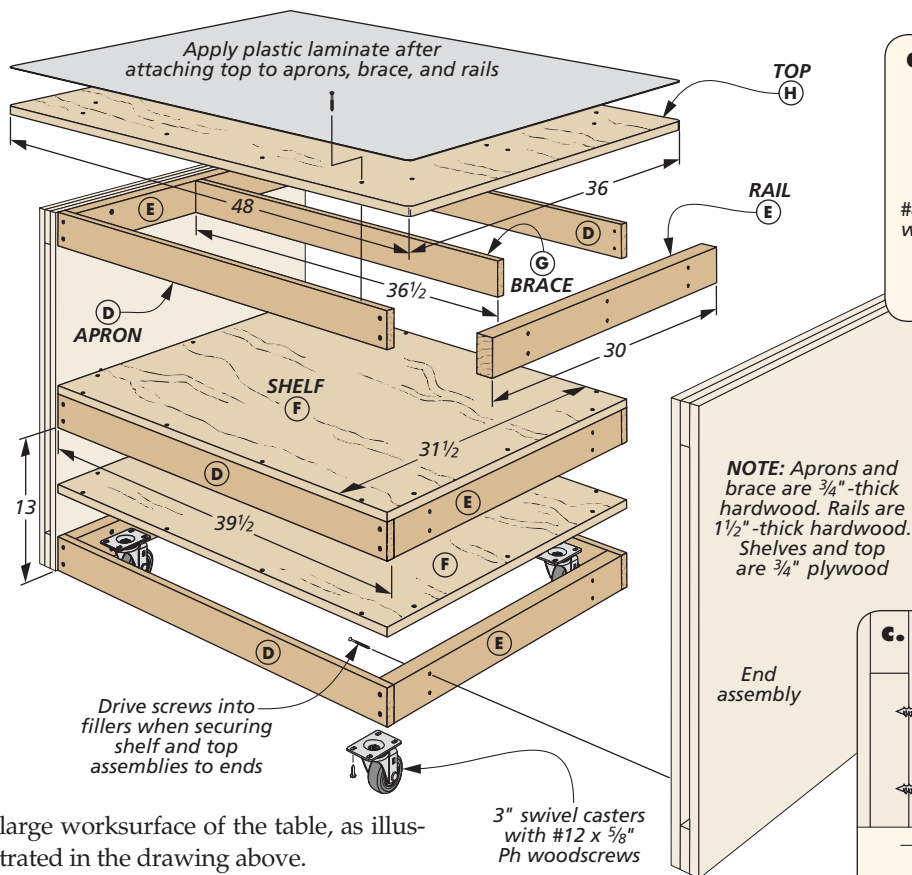


1 3/4" x 3" - 48" Hard Maple (2.0 Bd. Ft.)



ALSO NEEDED: Five 48" x 96" sheets of birch plywood. One 48" x 60" sheet of plastic laminate

NOTE: Parts 'I' planed to 1 1/2" thick. Parts 'J' planed to 1 5/8" thick



large worksurface of the table, as illustrated in the drawing above.

HARDWOOD FRAMES. The hardwood frames that support the plywood shelves come first. Each frame consists of a pair of aprons and a pair of rails. Here again, glue and screws take care of the joinery, as shown in detail 'a.' I used two different thicknesses for the aprons and rails. Since the assemblies are screwed to the ends through the rails, thicker material creates a stiffer connection, as you can see in detail 'c.'

Once the frames are complete, glue and screw the plywood shelf to the top. Working from the bottom up, join the shelf assembly to the two end assemblies. (The shelves are centered side to side.) Locate the holes for the screws for the upper shelf so they anchor into the vertical fillers, as in detail 'a.'

TOP FRAME. The frame that supports the top includes a centered brace to provide

additional support for the worksurface. It's screwed into the rails.

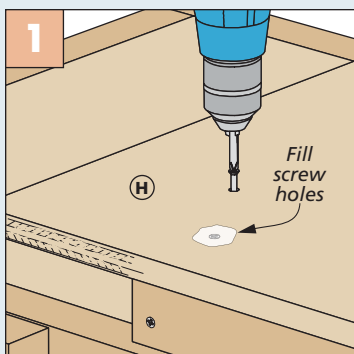
The top is a large piece of plywood that overhangs the frame on all sides. This maximizes the work area and makes it easy to clamp workpieces to the top.

I covered the top with plastic laminate for a durable, smooth surface. The laminate reduces friction when the table is used for outfeed support. When pressed into duty as an assembly and finish station, stray drips of glue and finish pop off without any trouble.

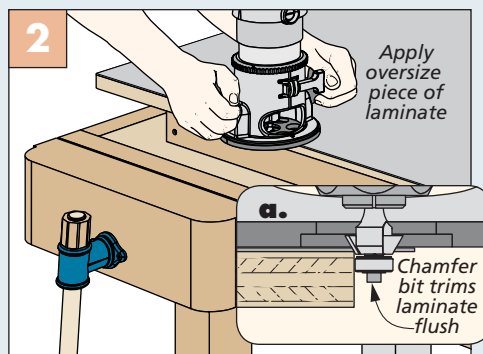
The top is attached to the frame before the laminate goes on, as in detail 'b.' To prevent the screw holes from telegraphing through the laminate, I filled them (Figure 1). An oversize piece of laminate is applied with contact cement. A hand-held router makes quick work of trimming the laminate flush, as in Figure 2.

CASTERS. One other addition is a set of swivel casters added to the underside of the lower shelf. This way, you can position the table to reconfigure your workshop to suit a wide variety of tasks. On the next page, you'll see a way to lock the table in place.

How-To: APPLY LAMINATE



Smooth. Fill the screw holes with wood filler and sand the surface smooth.



Trim & Chamfer. A chamfer bit trims the laminate flush with the top and eases the edge in one simple step.

Heavy-duty LEVELERS

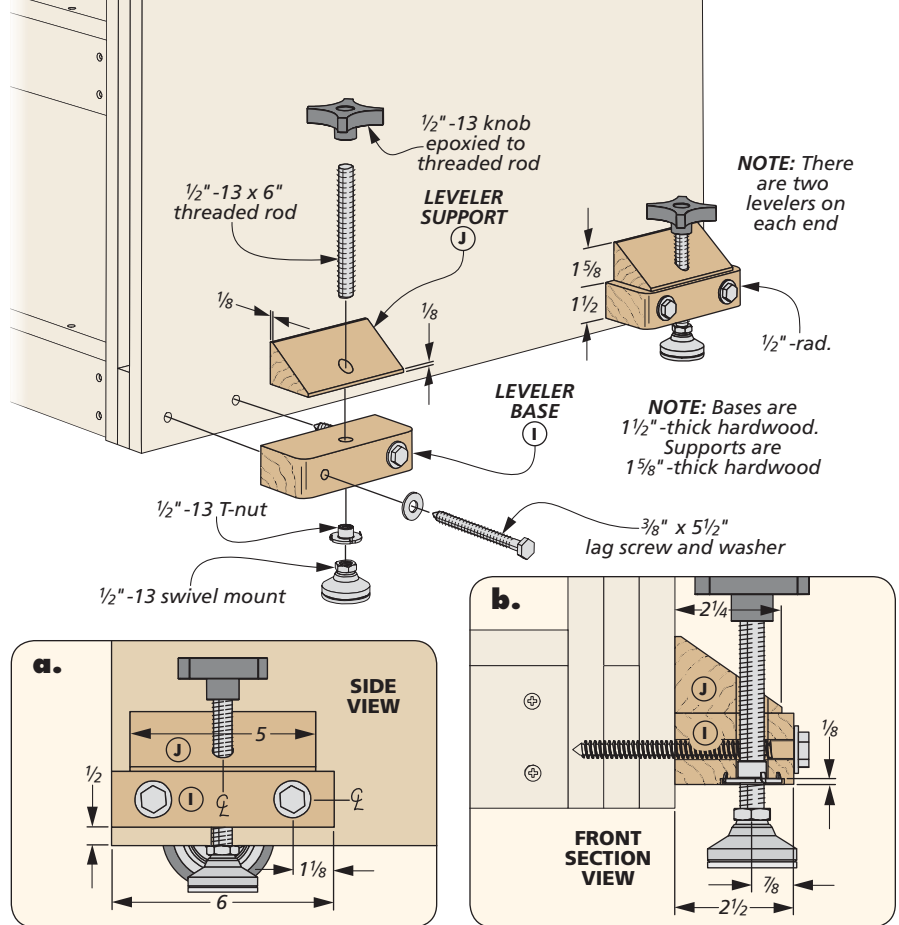
Casters are great for rolling a large table like this around the shop. But when you want to use it as an outfeed table, the casters may lead to the table shifting. Also, if your shop is anything like mine, the floor is uneven. That can cause problems when trying to align the outfeed table with the top of your saw table.

What's needed is a way to park the table securely and easily level it with your table saw. There are commercial levelers available, but considering the weight of the table and any workpieces on it, those solutions just wouldn't work.

Instead, I came up with a shop-built leveler that combines two stout wood blocks with heavy-duty hardware. The result is an easy-to-adjust system that's also strong and stable.

HARDWOOD BLOCKS. Building the levelers begins with the two hardwood pieces — the base and support. Since the levelers are attached to the ends of the table, it's a good idea to round the corners of the base to ease the sharp edge.

The base has a pair of mounting holes drilled into the edge. While you're at the drill press, you can drill the counterbore and through hole to accept a T-nut and



a length of threaded rod, as you can see in detail 'b' and Figure 1 below.

The second hardwood piece reinforces the base to keep it from flexing under the weight of the table, as in detail 'a.' The upper surface is beveled to provide clearance, as shown in detail 'b.' After gluing the two blocks together, take a

look at Figure 2 to see how to extend the hole through the support block.

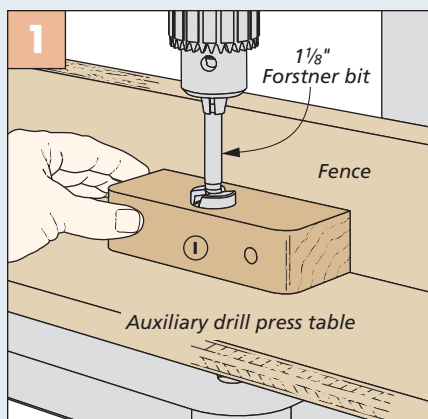
SOME HARDWARE. Now it's time to add the hardware. First, a T-nut is tapped into the counterbore. The adjustable portion of the leveler consists of a piece of threaded rod, a large knob, and a swivel mount. The size of the knob makes positioning the leveler much more comfortable. I cut a length of threaded rod and attached a knob to one end with epoxy. Once the epoxy cures, thread the rod through the block and add the swivel mount on the opposite end (drawing above).

To attach the leveler to the table, I used long lag screws. These thread into all three layers of the end assembly for the strongest connection, as in detail 'b.'

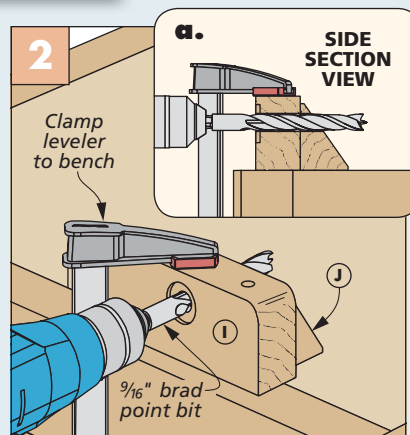
CRADLES

The feature that sets this project apart from an ordinary outfeed table is the system that helps you lift heavy sheets of plywood or MDF onto your table saw with less effort. The surprising solution comes in the form of two cradles shown in the drawing on the next page. The cradles slip into the pockets in the ends.

How-To: MAKE THE LEVELERS



Drill It. Drill the counterbore for the T-nut first, then use the centerpoint to drill the through hole.



Support Hole. After gluing up the base and support, use the existing hole as a guide to complete the hole.

A foot formed at the bottom of the cradle provides a place to set the sheet and give you clearance for your hand below.

The curved profiles of the cradles support some of the weight of the sheet as you lift and swing it to the table top. From there, you can slide it into position on the table saw to make a cut.

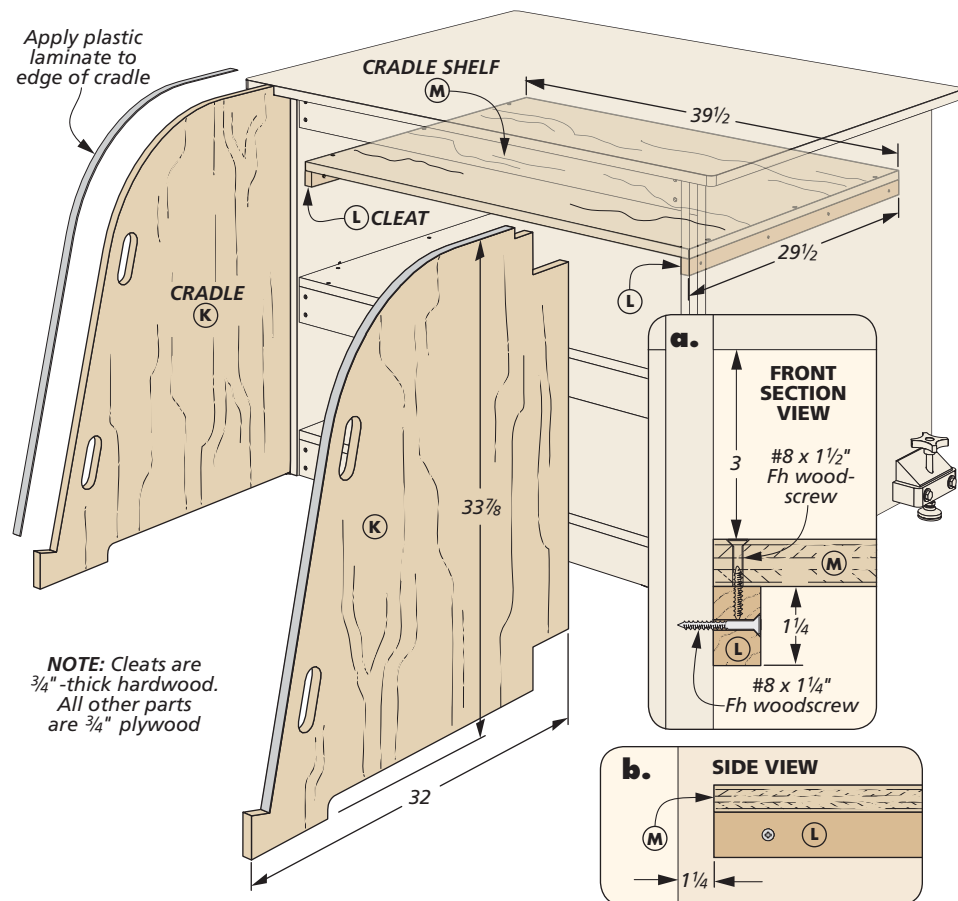
MAKE THE CRADLE. Due to the size and shape of each cradle, you can't cut them out at the table saw. Instead, you shape just one then use the technique on page 65 to make a duplicate.

For the first cradle, lay out the various shapes on a blank that matches the overall length and width of the finished cradle. The lower right drawing has the details.

With the layout complete, make the cuts with a jig saw. I recommend using a fine-tooth blade rated for making "clean" or "extra-clean" cuts. These blades leave a fairly smooth surface that reduces the amount of sanding you need to do. Cut as close as you can to the layout lines in slow, steady passes.

The drawing below shows the process I used to make the handholds. Then remove any blade marks and smooth the cut edges with files and sandpaper.

LAMINATE EDGING. I didn't want the cradles to mar the surface of the sheet goods as I hoisted them up, so I applied strips of laminate to the curved edges. To do this, cut strips of laminate that are just slightly wider than the thickness of the plywood. Glue them in place with



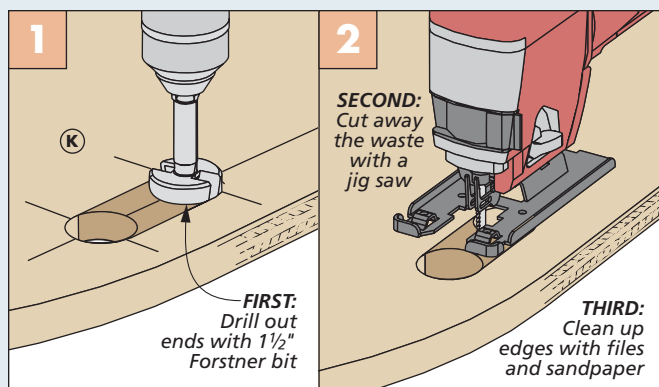
contact cement, working from the bottom to the top. A file makes quick work of trimming the excess laminate flush with the faces of the cradle.

SIMPLE SHELF. A shelf just below the top holds the cradles when you aren't using them. This shelf doesn't need to be as rugged as the others, so it's made from a

piece of plywood screwed to hardwood cleats, as shown in details 'a' and 'b.' The shelf is centered side-to-side in the table.

After all the plywood cutting you've done to build this outfeed table, you'll realize just how helpful this project will be the next time you tackle a plywood project. Your back will thank you. **W**

How-To: CREATE HANDHOLDS



Cut Out Handholds. A Forstner bit creates smooth curves at each end of the handholds and provides access for a jig saw blade to cut away the waste.

