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# **LUMBER CUT-OFF STAND**





The stand is remarkably simple to build. Make the lower support using  $\frac{3}{4}$ "-thick hardwood of your choice that's glued and screwed together using butt joints. The slotted post supporting the top section is formed by cutting, then regluing the pieces – no complicated router work. The top is  $\frac{1}{2}$ "-thick Baltic birch plywood pieces nailed together to form a torsion box for extra strength.

## From the Bottom Up

To make the stand easily adjustable in height, I chose a post-in-sleeve design. Start with the post. The finished size of the post is given in the materials list, but start with a length of wood that is  $\frac{1}{4}$ " wider, thicker and longer than the finished size. This leaves room for saw cuts to form the slotted post and fitting room for overall size.

Next, take a look at the square  $\frac{1}{4}$ "-20 nut you have for the locking hardware. Measure the width across the nut and add a fraction of an inch to that dimension. This will be the gap that you want to leave in the center of the post. The square nut will need to move freely up and down the gap, but not turn in the space.

Form the post by ripping the board into three lengths, with the two outer pieces being equal in width, and the center piece being the same width as the nut. Then crosscut the narrow piece into two  $1-\frac{3}{4}$ "-long pieces. Glue those between the long outer sections and your post is almost complete.

Once the glue has dried, remove it from the clamps and run it through your planer to fine tune the thickness. Trim the post to length and move on to the sleeve.

The sleeve is formed by cutting the pieces to size, then simply gluing the four pieces together to form a rectangular column. Be careful to align the pieces to avoid cleanup and provide a square (and glue-free) center sleeve.

## Lock-n-slide

The locking mechanism for the post is a length of threaded rod with nuts, a couple of fender washers and a handle slipped through the column. To make the clearance holes in the column, measure down  $1-\frac{1}{2}$ " from the top on the front side and make a mark in the center of the column. Take the column to your drill press and, using a  $\frac{5}{16}$ "-diameter drill bit, drill completely through both sides of the column.

Now switch to a  $1-\frac{1}{2}$ "-diameter Forstner bit and, using the  $\frac{5}{16}$ " hole on the back side as your center, drill a larger hole in the back.

The rest is hardware. Spin the two hex nuts onto the end of the threaded rod and use wrenches or pliers to tighten the nuts against one another to lock them in place. Then slip one fender washer on the long end of the rod and against the pair of hex nuts.

Now thread the square nut on after the washer and tighten it against the washer and hex nuts. Insert the assembly (long end first) into the larger hole in the back of the column, threading it into the center slot in the post (which you've slipped into place).

When the threaded rod pokes out the  $\frac{5}{16}$ " hole on the front side, add another washer and the star handle. You're done. Make sure the square nut is rotated to slip into the slot to make a tight fit.

## Add the Feet

The last part of the base is the feet. These are just four boards screwed to the bottom of the column. I trimmed a long taper on the top of each to make it a little more aesthetically pleasing.

When you drill the clearance holes for the screws, pay attention to where the screws are located, or you'll end up drilling into another screw. Offset them slightly and you'll be fine.

With the feet attached, I added four adjustable leveler feet to make sure the stand would



To form the post, the rough piece is ripped into three pieces, the center piece is cut to form two small blocks, and then the whole thing is glued back together.



As you glue up the column, use the post to check the spacing. The post should slip easily into the sleeved column. You want the post to move easily, but don't make it too loose or you'll make the stand wobbly.



The feet are attached to the column with flat-head screws. Watch the screw alignment or you'll drill into another screw.



Some simple hardware from your local home center store allows you to lock the post solidly, but quickly loosen the post and readjust for any height. The hardware is shown at right, resting on top of the

sit solidly on my uneven garage floor.

## Torsion-box Top

I wanted to make the top of the stand as lightweight and strong as possible, but still stable. To accomplish this I used ½"-thick Baltic birch plywood and built an open-front torsion box.

Before making the box, locate the center position on the bottom plywood piece and mark where the top of the post will meet the box. Then screw two 1-¼" x 1-¾" x 5" solid-wood blocks to the underside of the plywood, centered and on either side of the post's location. Use these two mounting blocks to attach the table to the post after you have completed the table.

To form the box, simply assemble it with a brad nailer, making sure to align all the edges to keep things square. The two tops are held flush to the outside ends, leaving a 3"-wide gap in the center to allow plenty of room for a circular saw or jigsaw blade. The space in "the valley" ends up at a 2-½" depth, which should allow clearance for almost any jigsaw blade and lots of room for the blade of a circular saw.

With the table frame complete, nail ½" x 2" x 4-½" backs into the spaces at the rear of the box, closing up the opening. The hardwood fence is next. Drill four clearance holes and screw the fence to the back of the box, screwing into the backs.

To avoid any concern of binding a saw blade during the first few uses, cut a notch in the fence 1" wide and as deep as the blade depth you're most likely to use.

You're now ready to attach the table to the base. Drill clearance holes in the center of the mounting blocks under the table, then screw the table to the post.

## A Little Something Extra

The roller is really inexpensive, and is quick to put together and attach. Simply drill two ¼" clearance holes in the 1-1/8" x 2" x 9-½" roller block, 1-½" from each end, and centered on the block. Use a ½"-diameter drill bit to countersink the top of the holes to fit the head of a machine bolt and a locking washer. Then flip the block over and use a 1-½" Forstner bit to countersink the bottom of the hole to accept a hex nut.

Before attaching the hardware, place the block in the table valley and use a pencil to mark the hole locations on the table bottom. Then drill oversized ¼" holes at those locations.

With the bolts inserted and tightened down, screw the roller mounting brackets in place on the block. The ends of the bolts will slide easily into the holes in the table, and the roller can then be attached using two wing nuts. When the roller isn't needed, it fits snugly inside any one of the open-end spaces in the table.

No matter where you use this stand, you'll find rough-cutting lumber a more pleasant experience. I'm pretty sure there are a few other uses for this stand as well. Just give me some time.

column before being attached through the holes.



This shot shows the partially assembled table, with three exposed dividers and the other side covered with the top. You can also see the screws through the bottom that hold the mounting blocks in place. While the box itself is nailed together, the fence is attached with screws to allow for replacement if it gets cut up too much in use.