TAKE YOUR CHOICE:
Two Designs

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One of the great advantages of a radial-arm saw is the ease with which you can make cuts on long pieces of material. But this feature is like a seed: You must nurture it to make it wholly operational. You must provide a long enough platform for work support.

Contractors, who use machines outdoors and have no space limitations, do this by adding roller-type extensions. It's then no chore to square off the end of two-by stock 20' or more long. Though this example may seem extreme, the fact is that you need a similar setup on your radial-arm saw even if the lengths you ordinarily work with are 8' or less.

Two solutions are offered here. Both extensions are permanently attached to the

Roller version, based on a conventional design, uses materials that are readily available. With additional leg assemblies, you can make it longer.

Wood plugs in ends of roller are cut for tight press fit; pivot bolts are installed (inset) before plugs are driven in place.
saw, but the roller extension can be knocked down by removing a few screws, and the hinged extension flips down when not in use, taking little more room than the saw itself. This version won't interfere with mobility if you have the tool on casters.

Building the roller type. Though the drawing gives specific dimensions, you can change them to suit. Two of these units, attached at either side of a 3' saw table, will give you over 11' of work support. You can make the extensions longer by providing more leg assemblies. If you work regularly with heavy structural lumber, you may prefer a stronger frame—substitute two-by-fours for the 5/8" side pieces used.

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Material for the rollers can be any rigid tubing or pipe. There is no lack of suitable material, ranging from antenna masts to seamless tubes. The idea is to get something inexpensive with a good wall, of at least 1½" outside diameter. I settled for a 10' length of clothesline mast, costing about $3. To get square ends when cutting, I scribed a mark with a tube cutter, cut with a hacksaw, and touched up sharp edges with a disk sander and file.

**The wood plugs.** Cut the ¾"-thick plugs with an adjustable hole saw if you have one available. The tight press-fit you'll get with such plugs is ideal since it's all you need to keep the plugs in place—and the hole saw, with a ¼" pilot drill, also provides an accurate center hole. Seating the plugs will be easier if you chamfer one end first, and then make a drive block by drilling a ½" hole through a piece of scrap hardwood. If you lack a hole saw, cut plugs as accurately as possible and, after inserting them, drill several small holes through the tubing and lock each plug in place by driving brads into its edge. The bolt axles, of course, are secured before the plugs are inserted.

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Two Designs for Saw-Table Extensions

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The rest of the job is fairly straightforward. But do an accurate job of drilling the holes for the roller axles. Best bet here is to drill a ¼" hole, but make the slot 5/16" so the rollers will turn freely.

The flip-down version. The length of the extension table must be related to the distance from the saw-table surface to the floor if the table is to store out of the way. Since this imposes limitations, a slide was incorporated in the design. Thus, with one table attached on each side of the main saw table, you can achieve a total work support of close to 13' without sacrificing the space-saving advantage.

Start off by shaping the guides, and the block that attaches to the saw table. Next, cut the slides, using the dimensions in the drawing but dressing just enough so the slides will move freely in the guide grooves. Attach the guides to the block by using 3" T-hinges, and set this assembly on a flat surface.

Cut the extension table to size and use clamps to make a temporary table-slide assembly. Put this in place on the guides and adjust until you are sure the extension table will move freely. Make the assembly permanent by using 1½" No. 8 flathead wood screws. Locate the extension table so its forward edge lines up with the forward edge of the saw table.

Cut and attach the cleat to the outboard end of the inner slides. This can be done with screws or with glue and nails. Then make the leg assembly, adjusting the height to match the distance from the saw-table surface to the floor. Attach to the cleat with 1½" butt hinges.

Hold the block to the saw table with clamps and drill for, and drive home, the 2" No. 12 screws that secure it.

To get the most from this project, it's a good idea to sand all parts thoroughly before assembly. Brush on a coat of resin sealer after assembly and, when dry, polish with 00 steel wool. Finally, apply a generous coat of Butcher's wax and rub down. For best results, repeat the waxing operation.

If radial-saw mobility is important in your shop, the extension table can be fitted with brake-type casters to retain this flexibility. The flip-down version does not require them.