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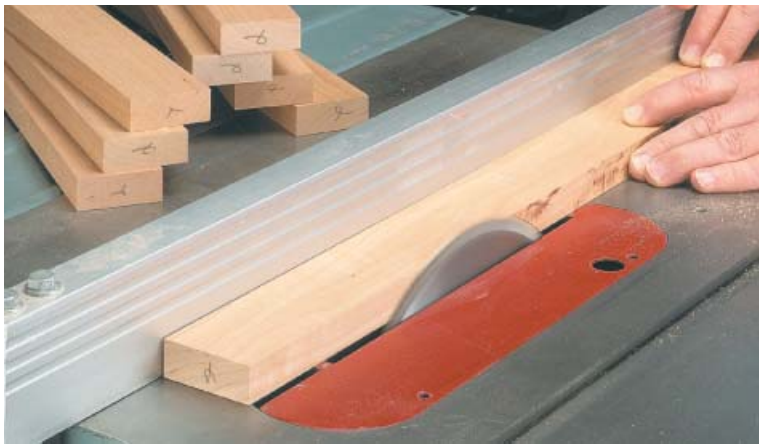
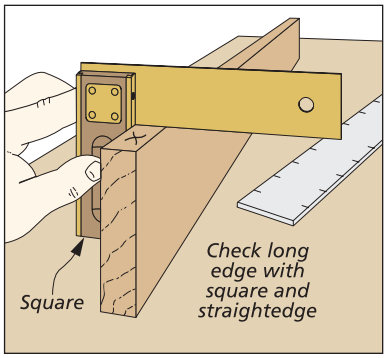
CUTTING TO SIZE ON THE TABLE SAW



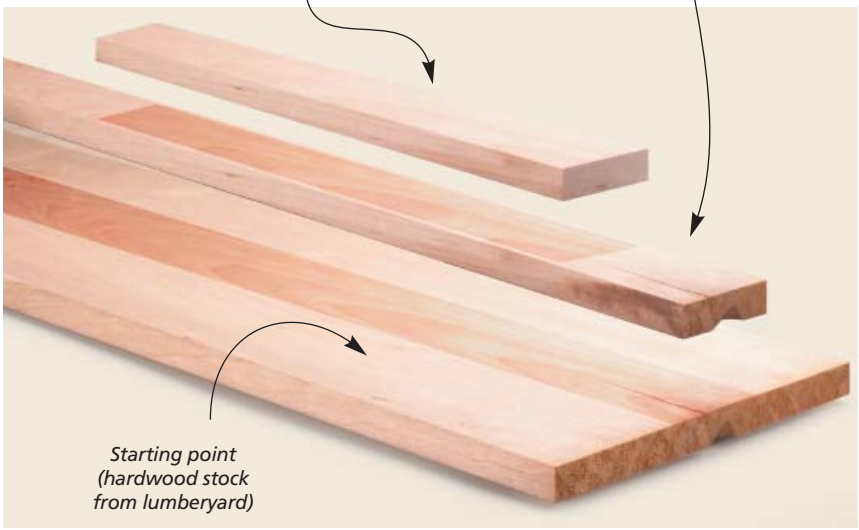


Straight and Square. *To get started right, you need one straight and square reference edge to work from.*

"Start by cutting the workpiece to size." It sounds easy, doesn't it? But just about every woodworker, myself included, will admit to having goofed at this supposedly simple task on a few occasions. A piece of stock ends up too short, not straight, or out of square. Sometimes this isn't a big deal, but other times it comes back to bite you.

So now I have a simple routine that I follow when cutting stock to size on the table saw. And for the most part, it limits the amount of wood that ends up in the scrap bin.

SIZE AS YOU GO. Usually, when building a project, you're working on one assembly or step at a time. For example, doors, drawers, or case parts. So this is how I like to approach cutting parts to size. Just size the pieces that you need for the job at hand. It's easier to keep things straight and you can make minor "size" adjustments as you work through a project.



A CUT LIST. Before you start cutting, you need a goal. And for me, this is a cut list. I jot down a list of the parts that I need to cut and their dimensions (thickness, length, and width). Even when I'm only cutting a part or two, I write down the dimensions. It's too easy to remember a "wrong" measurement.

And if you have a lot of pieces to cut to size, check them off the list as you complete them. Then all you'll need to do is take a quick glance at your cut list to tell if you have all the parts you need. You don't want to get halfway through the joinery and realize that you're short one door rail or drawer side.

ROUGH CUT. Once I know what size pieces I need, I rough-cut the parts from the stock at hand. At this point, all you're trying to do is get in the ballpark. It's easier for me to work with and acccurately size smaller pieces. I just try not to skimp here. For example, if I need a 2" by 24" stile, I try to give myself about a $2\frac{1}{8}$" by 25" piece to work with. But the rough dimensions you use will depend on the stock you're working with (end checks, knots and width of the boards).

ONE STRAIGHT, SQUARE EDGE. With the rough-sized pieces in hand, the next

goal is to give each piece one straight and square edge. This edge will guide your first rip cut. A straightline rip jig on the table saw, a handplane or a pass over the jointer will do the job. Before moving on, make a quick check with a straightedge and square and then mark the straightened edge (box below left).

THE FOUR STEPS

Now you're ready for the four dimensioning cuts that you see illustrated in the drawings at right.

TWO PARALLEL SIDES. The first step is to rip the workpiece *close* to its final width (Step One). I never try to hit the final dimension right on the money. The purpose is just to make sure that both long edges are straight and parallel. An extra $^1/_{32}$" or $^1/_{16}$" in width is plenty. This leaves enough material to allow you to come back later and clean up this face — eliminating saw marks, burn marks, or tearout from crosscutting. And with straight, parallel edges to work from, you'll have a much easier time getting square ends when you crosscut to length.

ONE SQUARE END. Once you have two straight edges, begin cutting the workpiece to length by making a clean, square crosscut on one end. But don't get carried away here, this is usually just a light trim cut. Be sure to leave yourself enough length for the final cut.

The ends of the workpieces are often where the joinery takes place, so it pays to get this step right. And the key to accurate crosscuts is control of the workpiece. For this I rely on a miter gauge with a long auxiliary fence as shown in Step Two. This gives you a solid backing for the workpiece that allows a controlled feed and limits tearout. A smooth, steady feed produces the best crosscuts. Too slow and the wood burns — too fast and you'll end up with a ragged or inaccurate cut.

If I've got a stack of parts to cut to length, I'll square one end of all the pieces before cutting any to final length. It's just more efficient. A mark on the squared end will help keep things straight (see main photo).

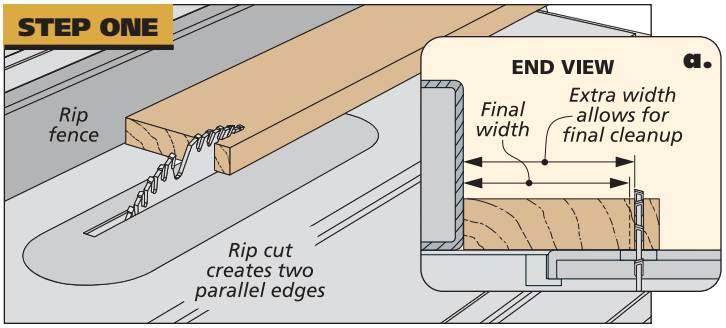
CUT TO LENGTH. Now you can make the final crosscut to length. And more often than not, you're going to want to cut several pieces to identical lengths. Door rails and stiles, and face frame parts are a good example.

So rather than measure and cut each piece and hope for the best, I set up to cut "multiples." This involves measuring and marking one piece and then using this piece to set up the saw for cutting the remaining identical pieces to length. A stop block on the miter gauge can be adjusted as you sneak up on the length of the measured piece, as shown in Step Three. The length of the pieces that follow will be exactly the same.

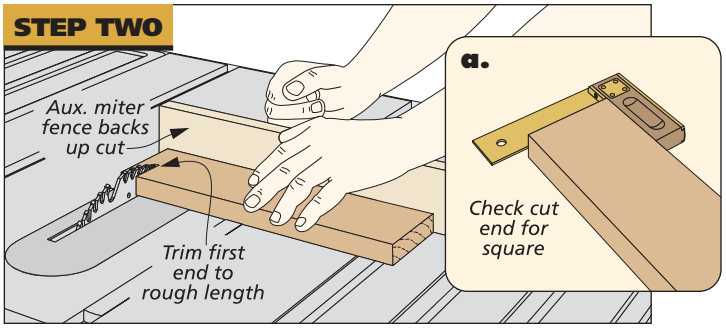
THE FINAL EDGE. At this point your workpiece is cut to length and has one clean, square edge. But it's still a little overwidth. A light rip cut removes the extra width and cleans the final edge (Step Four and main photo).

That's all there is to it. At this point, the workpieces are square and true to size. But the best thing is that you can move on with one less thing to worry about. W

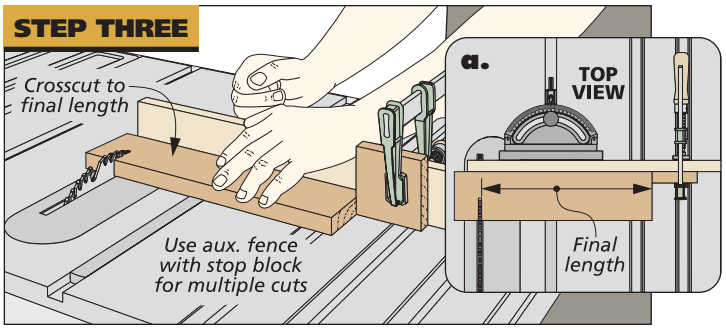
4 Steps for Perfect Pieces



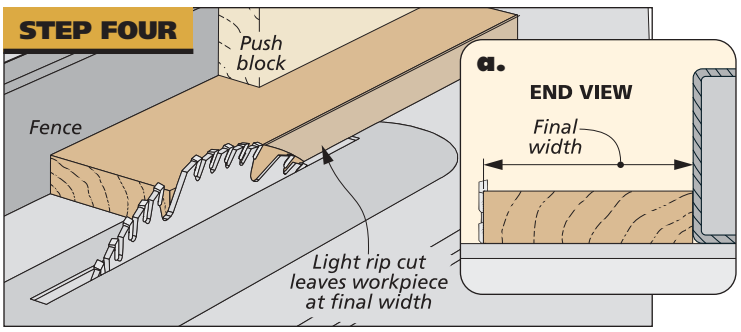
Rip Close to Final Width. *With the straight, square edge against the fence, rip the workpiece close to its final width. The extra width allows you to clean up this face with the final cut.*



Square One End. *Once you have two straight, parallel edges, you can begin crosscutting the workpiece to length. Start with a square, trim cut across one end of the piece.*



Final Length. *A second crosscut on the opposite end gives you the final length. An auxiliary miter gauge fence with a stop block clamped to it makes multiple cuts quick and accurate.*



A Clean Rip. *Once the piece is cut to length, a light rip pass on the face you cut in step one, will give you the final dimension. Any rough saw marks, burn marks, or tearout will be removed.*