Using a tablesaw or power miter saw to cut small parts may seem akin to chopping a twig with an axe. That’s one reason we so often reach for hand tools that are better sized for the job. However, if used correctly, a large power saw provides a perfectly good approach to cutting small parts. In fact, if you’re not deft with handsaws, planes, and chisels, a stationary saw will quickly yield the kind of clean, square cuts that you’re unlikely to accomplish by hand.

The difficulty in cutting small-scale parts with large-scale tools is securely holding the parts while keeping your fingers a safe distance from the blade. And when you want to cut identical multiples, the problem is compounded by the fact that stop blocks may sit too close to the blade for comfort, and that workpieces pinched between the blade and stop block may kick back after the cut. But not to worry; here I’ll show you how to safely and securely handle tiny tablesaw tasks and chop saw challenges with aplomb. (Instead of with an axe.)

About our Author
Senior editor Paul Anthony is the author of Taunton’s Complete Illustrated Guide to Tablesaws (Taunton Press).
Ripping pieces from a short length of wood on the tablesaw can be dicey because the wood may be completely or nearly separated before it reaches the splitter, inviting kickback. It’s usually best to crosscut shorter pieces from a long ripping. However, sometimes only short pieces of your chosen wood are available.

It is certainly feasible to rip short pieces in the regular fashion–just make sure to use a shoe-style push stick with a straight sole to maintain firm contact along the length of the workpiece (Photo A). You can glue a strip of fine sandpaper to the sole to improve friction and aid in holding the piece sideways against the fence. It’s best to outfit your saw with a zero-clearance throat plate to provide maximum bearing for very narrow pieces.

If you’re ripping pieces from a wide board, it’s safer to use a crosscut sled, as shown in Photo B. To ensure a ripping of consistent width, make sure that the ends of the board are square to its edges. The drawback of using a sled is that making multiples of identical width isn’t as easy as when feeding against a rip fence because you don’t have the immediate registration that the fence offers. If you need to rip short multiples using a sled, you can set up the cuts with a stop block and spacer, as shown on page 32.

If you often work with small pieces, you may want to invest in a Gr-r-ripper™ (Photo C). This tool is a highly configurable pusher with a non-skid bottom, an adjustable center leg to keep the offcut from straying after the cut, and an outer leg that can be adjusted up or down to create solid, level footing on the workpiece and saw table. In my experience, it’s the quickest, safest way to rip most small pieces.

**Tip Alert**

If the prospect of ripping small pieces makes you nervous, soothe your nerves by practicing the maneuver a few times with the blade fully lowered below the saw table.
It’s a normal enough tablesaw operation to crosscut small pieces from the end of a stick guided by a miter gauge. The problem is that the “keeper” pieces—which are actually the offcuts in this case—tend to dangerously cluster around the running blade, getting thrown when they wander into it. The easy fix is to outfit your miter gauge with an auxiliary fence that extends a few inches beyond the blade (Photo D). The extra length will push the offcuts past the blade, where they’ll sit safely until you’re done.

The real challenge when crosscutting small pieces arises when you’re working with stock that is short to begin with. This is often the case when making drawer pulls and other small parts from offcuts of precious woods you’ve saved. In these cases, I’ve found that the best trick is to employ what I call “bridge-clamping,” in which the workpiece is held down with a stick that bridges over from a piece of riser scrap that is exactly the same thickness, or just a hair thinner than the workpiece.

This is most safely done on a crosscut sled because the sled supports all of the components completely throughout the cut, with no frictional drag against the saw table (Photo E). Alternatively, you can set up the cut in a similar fashion against a sandpaper-faced miter gauge fence that extends all the way to the blade (Photo F).

A power miter saw is a great crosscutting tool, but it may need to be accessorized to work with small pieces. The problem is that the blade slot and the gap in the fence tend to be fairly wide. Therefore, small workpieces are prone to flight when cut free. The solution is to outfit the saw with a zero-clearance auxiliary deck as shown in Photo G.

An auxiliary miter gauge fence that extends past the blade will safely carry small offcuts completely past the blade.

Bridge-clamping can also be done against an auxiliary miter gauge fence that extends all the way to the blade.

This small ebony workpiece is held down on a crosscut sled using a stick that bridges over from a scrap riser.

An auxiliary deck on a power miter saw makes for cleaner cuts, and prevents “keeper” offcuts from being thrown backwards by the blade.
You can cut identical multiples on a sled using a stop block and spacer. Using a spacer prevents trapping the offcut between the blade and stop block at the end of the cut, which can cause a piece to kick.

Begin by placing your workpiece in position for the desired rip cut, and butt a short piece against it to serve as a spacer (Photo 1). Then butt a stop block against the spacer and clamp the stop block to the sled fence (Photo 2). Keeping the workpiece in position, remove the spacer and make the cut (Photo 3). Pull the sled back away from the blade before taking away the newly cut piece, and then repeat each subsequent rip in the same manner.

As the workpiece gets narrower, keep it perpendicular to the fence by placing a squared panel against its edge. Use a panel that is the same thickness as the workpiece so that it also serves as a riser to help support a thick hold-down block (Photo 4).

Tips for Cutting Puny Pieces:

Mind your blade: Use a sharp, gunk-free, premium-quality blade to produce pieces that need minimal sanding or other clean-up. Provide backup: To minimize tearout and provide maximum workpiece support, outfit your tablesaw with a zero-clearance insert, and use an auxiliary deck on your power miter saw. Prevent slap-downs: Keep thin strips from slapping and possibly shattering by covering them with a thick piece of scrap that extends nearly to the blade to serve as a hold-down.
Crosscutting Multiples with a Fence Block

When crosscutting short multiples, never use the rip fence as a stop block. This is because the offcut "keeper piece," which is pinched between the blade and fence at the end of the cut, will kick back once freed. Instead, register the work against a set-up block, that gives the freed piece room to move. To begin, place the piece against the miter gauge fence and align the teeth with the cutline. Clamp the stock to the miter gauge, and pull it forward of the blade a distance equal to the width of the stock plus an inch or so. Clamp a thick, wide set-up block to the fence, with the block's leading end approximately aligned with the leading edge of the workpiece (Photo 1). Carefully slide the rip fence over until the set-up block touches the end of the stock, and lock the fence in place. Now make each cut by registering the end of the workpiece against the set-up block before advancing it across the blade (Photo 2).

Crosscutting Multiples on a Power Miter Saw

You can crosscut short multiples on a power miter saw employing the same spacer-and-stopblock principle as shown on the previous page for ripping short multiples on a sled. It's best when cutting very small pieces to outfit your saw with an auxiliary deck to fully support the offcuts and to minimize tearout.

To set up for the cut, place the workpiece on the deck and align the cutline with the blade. Without nudging the workpiece, carefully place a spacer against its end, and then place a stop block against the spacer. Finally, clamp the stop block to the fence of the auxiliary deck, as shown in Photo 1. Remove the spacer and make the first cut. Set up each subsequent cut against the spacer as well, removing it before making the cut (Photo 2).
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