

Slicing Wood

A Practical Guide to Successful Resawing

To begin at the beginning: resawing is cutting a sawn plank of wood into thinner planks on a bandsaw. Thus the cut runs through the plank's width, which distinguishes bandsaw resawing from ordinary bandsaw rip cuts where the blade runs through the stock's thickness. It's all ripping in any case, and the techniques we'll review here apply just as well to ripping 8/4 stock as to sawing 10" veneers or 5" drawer sides. The bandsaw is the ideal tool for this job. It's far safer than a circular saw, because it doesn't cause kickback. Its narrow kerf and vertical blade movement make it extremely efficient, wasting minimal wood and cutting relatively easily and quickly even with a low-power saw. Resawing on a bandsaw is easy; all you have to do is cut straight lines (very straight indeed). This requires nothing more complicated than appropriate bandsaw blade selection, adequate tension, effective stock control, and practice.



Bandsaw Blade Selection: No Contest

As you saw through very thick stock, each saw tooth shaves out an enormous amount of waste. In order to maintain a reasonably productive feed rate, there has to be somewhere for that waste to be stashed out of the way until the teeth emerge from the cut. Otherwise the gullets between the teeth fill up and stall further advance until they've cleared the stock. Blades with about 3 teeth per inch (tpi) have large gullets which can accommodate as much waste as you'll generate by sawing through thick stock, and they'll handle anything less substantial with no trouble at all. You've made the best choice of all with our Wood Slicer, whose thin-kerf, variable pitch 3-4 tpi design makes it the smoothest and quietest resaw blade on the market.

In principle, the wider the bandsaw blade, the higher its beam strength and the better it can maintain straightness. Wider, however, isn't necessarily better. Almost all US woodcutting bandsaw blades over 1/2" wide are .035" thick, thicker than the Wood Slicer's total kerf width. 3/4" blades are set far more coarsely as well, so the doubled load on your saw and their rough cuts make wider blades a distinct step backward.

High Tension: No Worries

Tension may be the least important factor in successful resaw setup, but it's significant nonetheless. Adequate blade tension helps keep stock centered even if your control isn't flawless, and it reduces the bandsaw blade's tendency to flutter under thrust. It's easy to set a satisfactory amount of tension. Install the Wood Slicer on your saw, with lateral guides and thrust bearings opened up and backed off both above and below the table so they do not contact the blade. Crank on some tension, and then give the blade a sharp sideways poke about halfway between the upper and lower wheels. The blade will deflect a short distance and then seem to hit a wall; if you push a lot harder it will bend farther, but there's a fairly distinct point where it quits deflecting easily. Add tension until this sideways movement is just 1/4" to 5/16" on saws with 6" depth of cut, or about 3/8" on saws with 12" depth. By the way, don't look at the saw's built-in tension gauge until you're finished; there's no need to confuse yourself with arbitrary numbers. After you've gotten the hang of tensioning by feel, check the gauge and use its reading as a setup guide.

Once the blade is tensioned and tracked properly, there's one last bit of tuning you can do that can make a real difference in performance. Before you bring the lateral guides and thrust bearings up close to the blade, close the wheel covers and turn the saw on. If vibration blurs the blade, try increasing or decreasing the tension very slightly until the blade runs smoothly in a straight, quiet line from wheel to wheel. Cuts will be smoother when you eliminate this source of fluttering in the kerf, and the saw will run quieter and more efficiently as well.

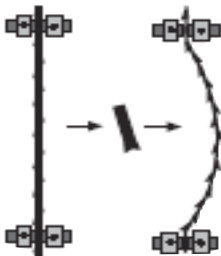
Stock Control: A Leading Question

Cutting straight lines is easy: find out how the saw wants to do it, and do it that way. That might sound facetious, but it's actually a fair description of what works. Every bandsaw blade, unless there's something seriously wrong, can cut straight lines, but each will do so in its own way; each blade has its own "lead angle". If you're resawing just one or two pieces, it will be easiest to use a point block fence, a curved fence tall enough to hold your stock upright while leaving feed direction up to you. Mark the cut line full length on the stock (leaving a generous margin for error; set the point block to your target width and freehand the cut, adjusting feed direction as you go. It's an imperfect technique; you'll waste more wood and spend more time at the thickness planer than ideal, but overall you'll get the job done quickly. When you need to resaw more than a couple of pieces, however, it will probably be more productive to set up a straight fence and make the cuts with predictable, repeatable accuracy, minimizing waste and finishing time.

Here's where most of us go wrong, so pay attention: When determining the proper feed direction for cutting straight lines with any particular blade, it's what cuts that counts, and nothing else. Your miter slot doesn't cut wood, so it doesn't help to set your rip fence parallel to it. The front edge of your table doesn't either, so don't bother reaching for your square. If your fence can't be skewed right or left at least 1/2" out of parallel to the miter slot you won't be able to use it, so make your own or get one of our Kreg bandsaw fences instead. Outfit your fence with an auxiliary face high enough to hold your resaw stock securely vertical—5" or 6" should do.

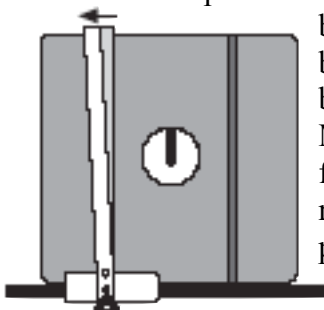
Take a piece of 8/4 scrap wood two or three feet long, joint an edge straight, and mark a line parallel to that edge. Rip freehand along the line, adjusting your feed direction until you're cutting consistently straight down the line. When you've split the line for 4 or 5 inches, stop. Hold the stock still on the table and shut off the saw. Mark a pencil line (which can be erased later) on the saw table along the straight edge of the test piece, then set your rip fence parallel to the pencil line. This is a first approximation; now you're ready for fine tuning.

Make a short resaw cut, either in the work at hand or scrap of similar hardness and roughly similar width. With the cut completed, stand a straightedge against the resawn face of the board. Unless you're just plain lucky, you'll see that the blade bowed left or right within the stock. The way the blade bowed tells you how to fine tune your fence for very precise resawing. You know that the solid body of a blade can't simply move sideways through solid wood. To create a bowed cut, the teeth must lead to one side or another within the wood (where they're free of the lateral guides' constraint), twisting the blade and making it saw its way out of vertical.



To keep the cut vertical, adjust your fence to match the way the blade twisted. If the blade bowed to the left, adjust the rear of your fence slightly to the right; if the blade bowed to the right, adjust the rear of your fence slightly to the right; if the blade bowed right, reset fence angle slightly left at the rear.

Make another test cut and check the face of the wood again. It may take three or four tests to get the fence set for flawless sawing, but once that's done you can resaw piece after identical piece, with cuts so straight that one pass through the planer is all it takes to produce clean, flat wood at your target thickness.



Slicing Wood: Just Do It

Once you've done all of the above successfully, you can't go wrong--unless you feed too fast or too slow, or let the bandsaw blade get good and dirty. Feeding too slowly will cut the wood okay, but it will wear out the blade a lot faster than need be. You're feeding too fast when the completed cut shows pronounced bands of wide diagonal tooth marks. Practice feeding at a moderate, consistent pace, just slow enough to leave a smooth surface.

Several species of timber can cause rapid buildup of debris on the blade, and any wood eventually will bake on a load of trash. Material crusted around the teeth can make it as hard for them to cut as if they were dead dull, and it can affect the blade's lead angle, too. The longer you wait to clean a bandsaw blade the harder it will be, so clean it often. If a quick scrub with a Scotch-Brite pad laced with mineral spirits doesn't do the trick, take the blade off the saw and hose it down with our Blade and Bit Cleaner wait a few minutes and then wipe clean. If you saw resinous wood regularly, Dri-Cote blade treatment will help retard accumulation of resins and junk.

There's one last detail to cover: keeping your fingers attached. The bandsaw may be the least hazardous resawing tool in the shop, but please remember that anything that turns hard wood into sawdust can do much worse to you. As you resaw, you'll often find yourself pushing the stock with one hand while holding it against the high face of your rip fence with the other. It's tempting to let your pressure hand slide along toward the neighborhood of the bandsaw blade, but that's not cool; imagine the blade bowing within the wood and unexpectedly sawing its way out through the face your hand is pressed against. It can also be tempting to push the wood right up to the last half inch and then pull it through the final bit of the cut. Once again, imagine the worst case where an unseen crack allows the last two or three inches of the plank to split apart suddenly, just as you're pushing firmly toward the bandsaw blade. Use a bit of scrap as push block instead.

There's plenty more to know about resawing, of course, but this should be enough to get you started successfully, after which doing it will teach you anything else you wish to know. So go do it!