

Leading You On: Feed Direction Is the Key to Resawing

The more skilled you become at resawing, the more you take it for granted that any stock thickness your heart desires is yours for the making. Resawing isn't difficult, but it is a skill, which has to be learned just like any other. As usual, practice is the direct route to expertise—and as usual, the better you understand the tool the more effectively practice will teach you what you need to know. Of the main factors that go into successful resawing (blade selection, tension, feed rate and accommodating lead angle), understanding the blade's lead angle is by far the most critical part of setup.

"Lead angle" describes the direction in which wood must move in order for a given bandsaw blade to cut a straight line. As fingerprints are to fingers, so lead angle is to bandsaw blades. There's so much variability in bandsaw blades, even blades made on the same machines from the same coil of band stock, that you can expect to see a perfectly good blade lead as much as 1/2" out of parallel to your saw's miter slot—and the next blade you install may lead that far out in the other direction. As long as the results are good, of course, it doesn't matter one bit whether you feed the wood northeast or northwest. Lead angles, even strange ones, cause trouble only when you attempt to enforce your own preconceptions instead.



Point Block

When you make a freehand cut along a straight line marked on your wood, you have to figure out lead angle as you go, adjusting your feed direction back and forth as the blade wanders off the line, gradually zeroing in on a direction that lets the blade follow the line consistently. That's a fair description of a common resawing stock control method, where you use what's commonly called a point block fence. The radiused point block helps you keep your stock vertical but leaves feed direction entirely up to you. It's an efficient way to resaw one or two pieces of wood: mark the line you want to cut, leaving a generous margin for error. Set the point block to the width you've marked, and then watch the cut closely, adjusting your feed direction as needed to follow the line. The technique is usually a little more wasteful of wood than ideal, but its appeal lies in minimal setup. Very experienced point block users can make consistent cuts with little waste, but for many sawyers it may be more practical to use a straight fence.

Straight and Narrow

When you have more than a few of pieces of wood to resaw, you can do the work quite accurately, repeatably and efficiently with a straight fence tuned precisely to the blade's lead angle. Begin as described above, making a freehand rip along a straight line. Once you're sawing straight down the line, stop the saw and pencil marks on your saw table along the edge of the stock. Set your fence to the marks. Now make a resaw cut, if not in the work at hand, then in a short scrap of roughly similar hardness and width. Begin the cut gently, so initial impact doesn't twist the blade and start the cut wrong. As the cut proceeds, notice if the stock wants to wander away from the rear of the fence—if so, stop and adjust the fence angle accordingly. If the wood stays tight against the fence and the saw begins to labor, stop and ease the rear of the fence away from the wood.

Take a Bow

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. 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 right or left 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 right, adjust the rear of your fence slightly to the left; if the blade bowed left, reset fence angle slightly right at the rear. Make another test cut and check the face of the wood again. It may take as many as 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.

