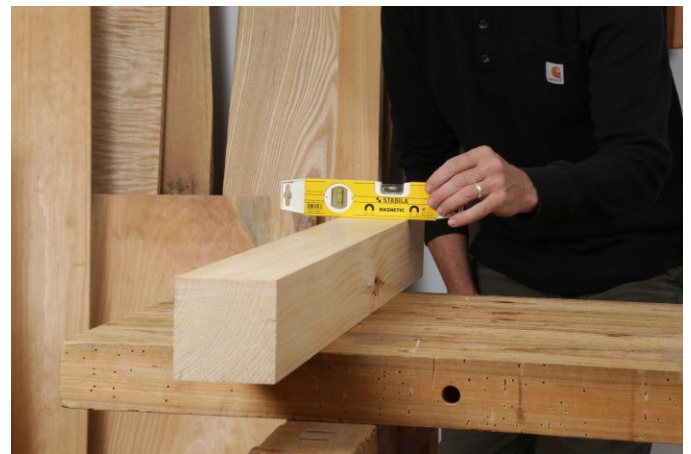
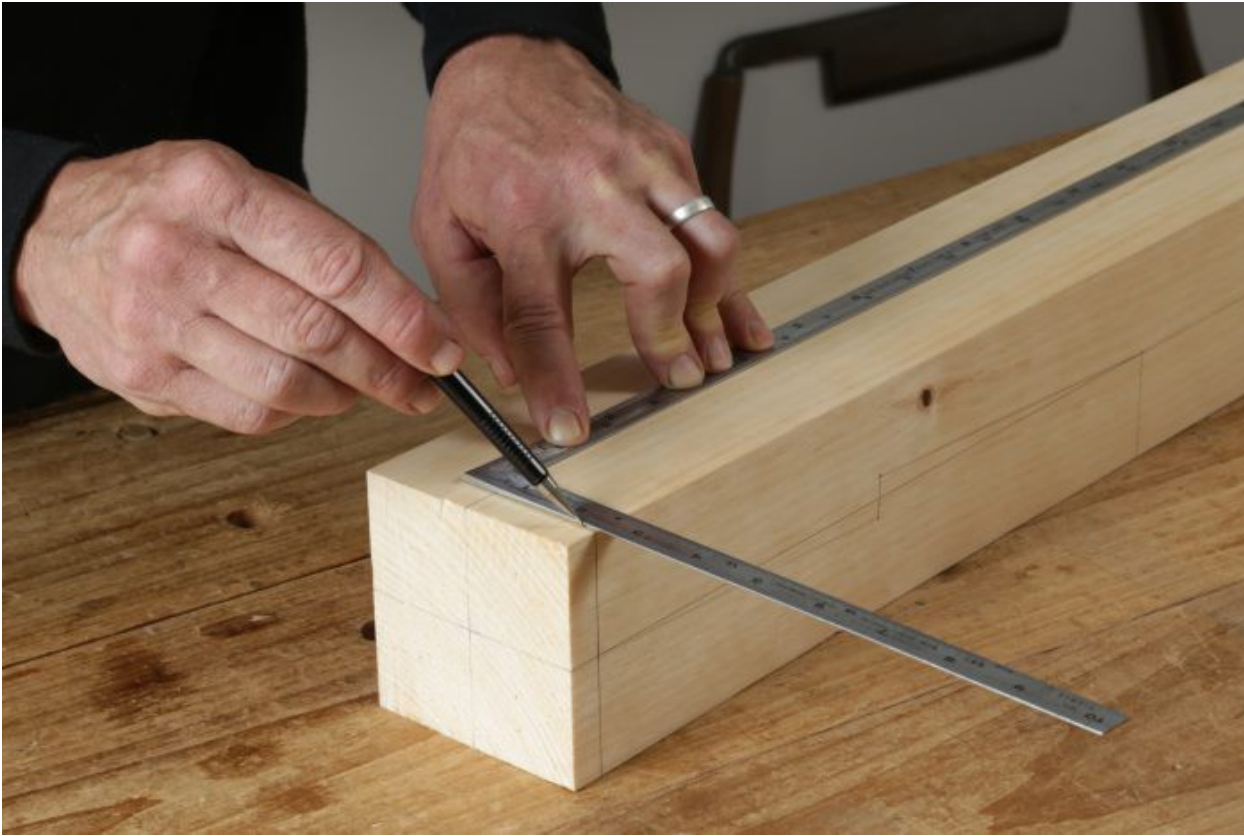


Centerline Layout For Large Stock

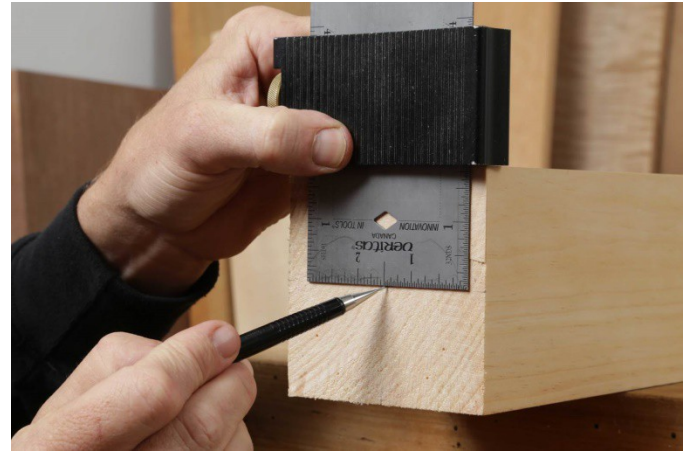
Large timbers can be cumbersome to square up for the sake of accurate joinery. When necessary, Andrew Hunter turns to an ancient layout method using centerlines.



Level the stock. Check it at the near and far ends. If there's any twist, aim for a compromise.

In furniture making, it's usually easiest to work from straight and square edges. I usually pick two faces, joint them straight and square, and reference all my layout from them. In other words, all of my joinery layout is based off of these two planes. But sometimes I like to work outside of the square box and rely on centerlines.

Centerline layout simply moves the point of the reference to the middle of the workpiece—for instance, the middle of its face—instead of a corner where a face and edge meet. For joinery, you just need a second centerline square to the first, much like X-Y axes. This is exactly what I did when laying out the [kanawa tsugi in FWW #279](#). While I did my best to make the workpieces in that article straight and square, they were rather large—3-1/2 in. square—and long, and jointing and squaring pieces that size can be a chore. The kanawa joint was traditionally used in Japanese house architecture, where the posts are bigger, about 5 in. square, and long enough to hold up buildings—so even more burdensome to mill straight and square. Centerline layout forestalls this issue.



Add shims where necessary. Hunter keeps a stack of business cards on hand for just this purpose. They're thin, letting him sneak up on level.

Find center. Don't draw a line across the end yet, though, as there's no guarantee it'll be level if your stock's irregularly shaped. Just make a short dash at the middle.

Because the joinery is laid out from lines in the middle of stock, your workpieces can be different sizes—or even warped in some way—and the joints will still fit perfectly. You just need the centerlines to be straight and true, much easier to accomplish than jointing an edge square to a face. This works just as well for milled stock as for flowing, sculptural forms. With centerlines, you can still lay out joinery and have the parts line up correctly.

Just be sure to have flat layout tools handy. While the fences on things like combo squares and try squares are great when you're layout originates from an edge, they just get in the way with centerline layout. Instead, turn to flat tools, like plastic drafting triangles or a framing square (I prefer Japanese). In a pinch, a square of MDF will do just as well.

Layout

So how do you lay out centerlines, particularly on irregular stock? One method I like relies on level and plumb lines drawn on the workpieces' ends before being connected across the faces.



Mark level and plumb across the middle of the ends. Hunter keeps a weight on his workpiece to keep it from slipping during layout.



Check your lines with winding sticks. Align two long wooden straightedges with your layout lines and tack them in place. Use them to verify your lines are coplanar.



Connect the centerlines. Set a long straightedge on the marks on both ends and trace. Do this on all four faces.

Use a flat square, like this Japanese framing square, to transfer your lines around the workpiece