

Jointing Without a Jointer

Jointing with a Router

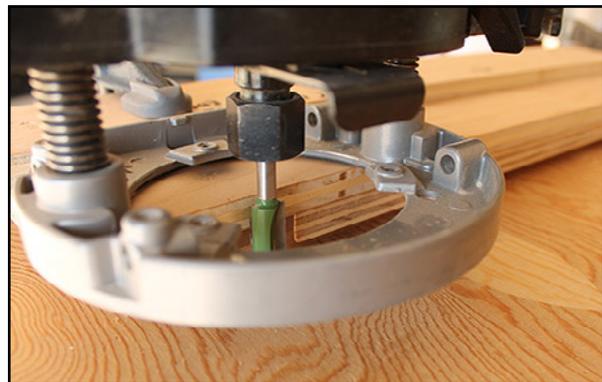
We can joint edges with a router, either handheld or on a table. The length of the cutting edge of the bit determines the thickness of the stock you can joint, usually less than 3".

i) Using a hand-held router

Very long, wide and heavy boards can be too cumbersome to move across a jointer. It is easier to joint them clamped on a workbench or sawhorses using a straightedge and a handheld router. The methods differ slightly depending on the type of bit used. For a straight router bit, build a jointing jig that is simply a base with a straight fence for the router to ride along. Clamp it on the top of the workpiece, setting the jig back on the board. Remove only 1/16" or less of stock at a time.



Make the base slightly larger and run the router against the fence to true the jig's edge.



Line up the jig and feed the router from the left to the right to true the edge.

If you use a pattern bit or a flush-trimming bit, clamp a straightedge on top of the board (or below the board for a flush-trimming bit) with the edge of the board protruding about 1/16" from the edge of the straightedge. Feed the router against the straightedge from left to right to joint the board.

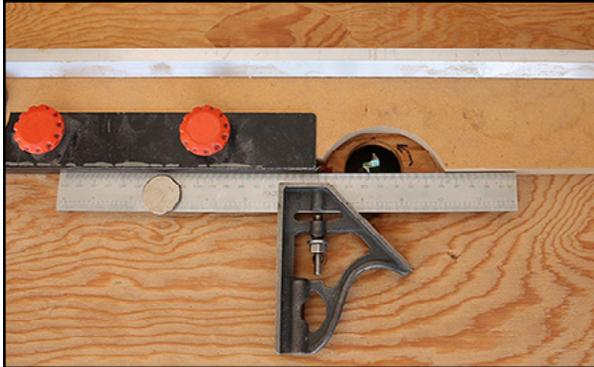


Set the pattern bit so that the bearing rides against the straightedge.

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ii) Using the router table

Jointing on a router table is like doing so on a jointer except that the stock is moved on its face side horizontally. The router table method can handle even narrow or thin stock using a split router fence design. Align the outfeed fence with the cutting edge of a straight bit in the router for an offset of about 1/16". Feed the stock against the infeed fence into the spinning bit and apply side pressure to the stock on the outfeed side as it gets closer to the end.



Align the outfeed fence with the bit and remove about 1/16" material with each pass.



Similar to working with a jointer, apply pressure on the stock on the outfeed fence.

If you have a fixed router fence, you can glue a strip of plastic laminate on the outfeed side of the fence to act as an offset. The thickness of the laminate determines how much material is removed in each pass, and the jointing steps are the same as when you use a split fence.



Using double-faced tape, secure a strip of plastic laminate to create an offset as the outfeed fence.

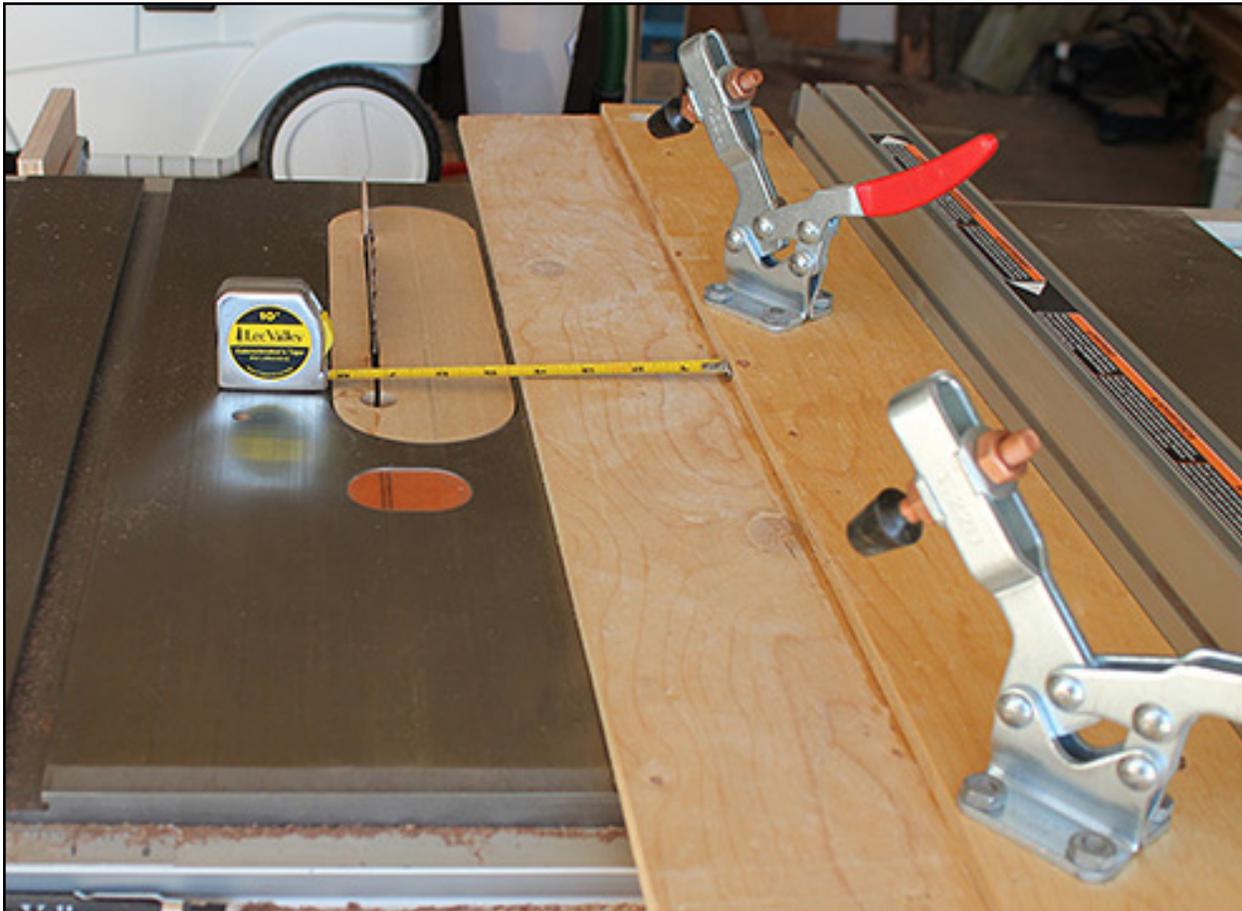
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Jointing on a Table Saw

You can mill an edge on a table saw using the saw alone or with a shop-made jig. An example is an L-shaped sacrificial fence with an infeed recess and an outfeed support.

i) Using a jig

This approach depends on the saw cutting squarely; therefore, the saw blade must be set square to the table. My edge-jointing jig is a cutting sled consisting of a plywood base with two toggle clamps to secure the rough lumber. This kind of jig can ride against the saw fence or on a long runner that fits into the mitre slot. Since my sled has a narrow base, I use it for jointing pieces that are 6" wide or less.



Make the base of your cutting sled wider if you intend to use it to joint wider boards.

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ii) Using the table saw alone

There is a simpler way of jointing on the table saw, without any jigs or square cuts. First orient and mark all the boards to be jointed. To joint the first board on a left-tilt saw, flip the board over and rip off about 1/16" of the edge. For the middle board, rip its left edge first and then flip it over to finish the second edge. Rip the left edge of the last board without flipping it. By alternating the rip cuts in this manner, the mating edges complement each other, and any bevels cancel each other out.



Orient the pieces and mark them properly.



Flip the first board to rip the right edge on a left-tilt saw.



Rip the first edge of the next board and then flip the board to joint the second edge.

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Jointing by Hand

Planing is the oldest way to true edges. The hand-tool equivalent of a power jointer is the jointer plane. For most projects, a low-angle jack plane and the like can joint edges just as well.

i) Planing one edge at a time

Note the grain direction and plane with it to avoid tear-out. After making a few passes to remove the machine marks or rough edges, ensure the board is square and mark the higher side or spots. If it is not square, do not try to tilt the plane, as it is likely to result in a second surface on the edge. Instead, place the plane on the workpiece so that the blade's edge shaves off only the high side of the board edge. After correcting the high spot, make one or two final full-width shavings to finish the jointing.

Squaring edges by hand can be a challenge to some. You will find it easier to hand joint stock using a shooting board or jointer fence. If your plane's wings are not square to the sole, use the lateral adjustment of the blade to set the cutting edge at right angles to the board or jointer fence first.



After locating and marking the high side, position the plane so the blade cuts only the high spot.



Press the fence against the workpiece as you push the plane forward.

ii) Planing two edges as a pair

Unless your boards are too thick (more than 1" each), you can joint them together as a pair. First, if possible, orient the face and edge grains of the two boards to run in the same direction. Place the two board faces together so that they are touching and, after clamping them in the vise, plane the pieces together to create two edges that are the mirror image of one another. Any error on either edge cancels the other out.

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Plane the edges as a pair and any bevel errors on either one will cancel out the other.

Knowing these jointing techniques, I choose the method that best suits the size and needs of the project at hand. And so can you.

Charles Mak

Charles Mak is a businessperson and enthusiastic hobby woodworker, teacher, writer and tipster. He works part-time at his local Lee Valley Tools store.

Further Reading

Lang, R., Huey, G., and Schwarz, C. "Three Ways to Make Edge Joints." Popular Woodworking. April 2009: 40 – 43.

Mak, Charles and Wong, Chris. "Reading the Grain." Furniture & Cabinetmaking. October 2013: 43 – 46.

Rogowski, Gary. "An Edge-Jointing Primer." Fine Woodworking. May/June 1997: 46 – 51.