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Bill Krier
Editor in Chief, WOOD magazine

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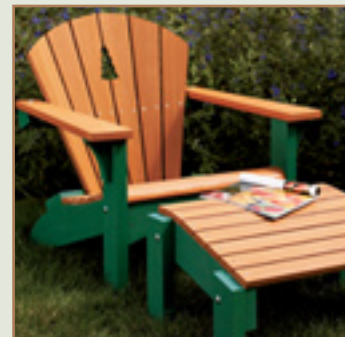
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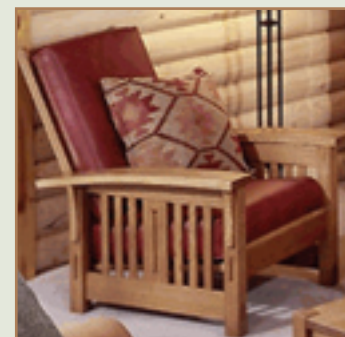
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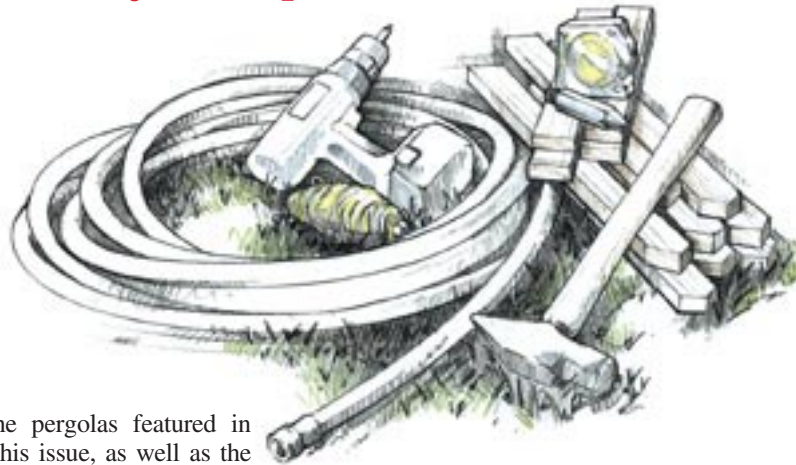
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be a post master

Well-built outdoor projects start with accurate layout of post locations.



The pergolas featured in this issue, as well as the garden gate and fence projects still to come, call for posts set in straight lines and with square corners. A few 1×2s, a length of mason's string, and simple arithmetic will get you to that goal.

The illustrations and captions on these pages show you the essential steps in locating and lining up the posts you'll need. Posts set in the ground, and anchored with concrete, are the best way to support a gate, a fence, or a pergola with an attached swing.

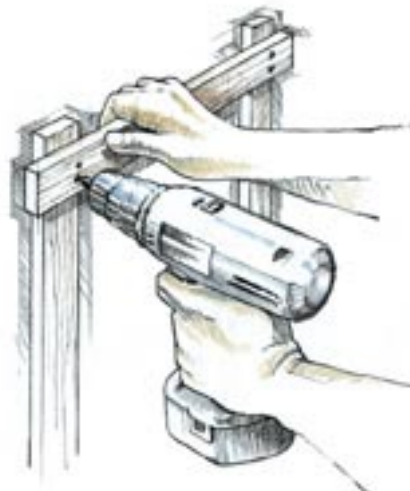
Use posts made of pressure-treated lumber or foundation-grade (heartwood) cedar. Make sure to sink them deeper than the frost line for your area, to counter the effects of frost heaving. For a neater job, and added protection against heaving, buy cardboard tubes at your home center to line the post holes before filling them with concrete.

Before you go too far, check with local or county government officials to make sure your project plans are in compliance with building codes and ordinances regarding setback from your property line. Also, call the "One Call" phone number for your state or province, and ask to have the buried pipes and wires on your property located and marked before you dig. If you can't find the number, call the North American One Call Referral System at 888/258-0808. ♣

Illustrations: Mike Mittermeier

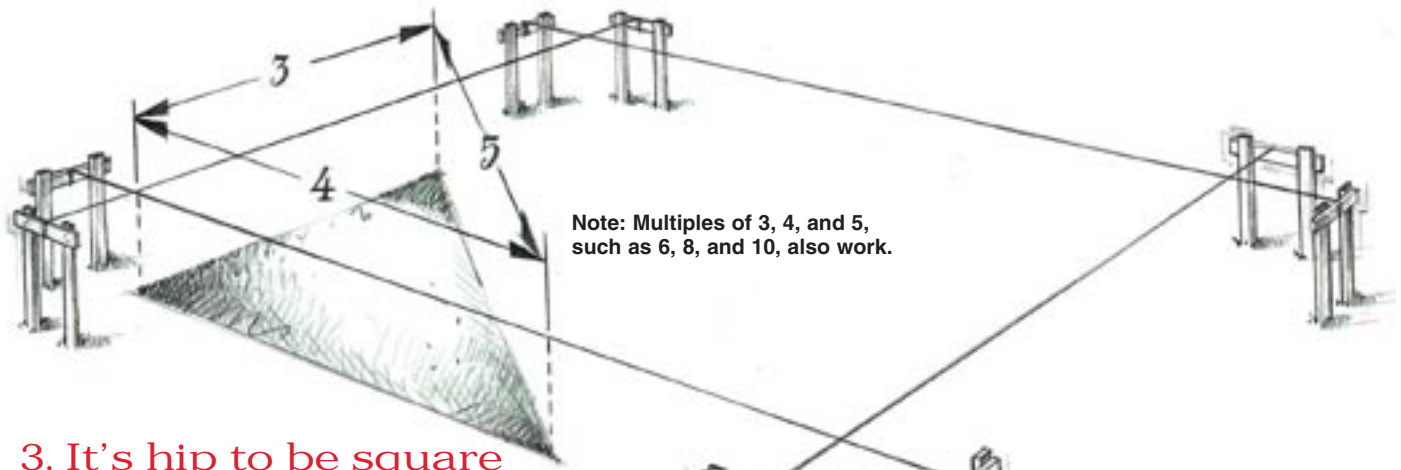
1. Get organized

You don't need much equipment to lay out posts for an outdoor structure. For an easy way to visualize its size and shape, use a tape measure and a garden hose to outline your project's dimensions on the ground. Then gather some 1×2 lumber and cut it into 3' lengths for "batterboards." You also will need a heavy hammer to drive the upright stakes into the ground, a drill and 1½" deck screws for quick assembly, a plumb bob, and a spool of mason's string.



2. Go to your corners

Define each corner with a pair of batterboards. For each batterboard, make a pair of stakes by cutting two 1×2s to a point at one end, and drive them into the ground. Set them 2' away from the planned post location, and spaced so that the post will stand about halfway between the stakes. Attach a crosspiece with screws, as shown. Use a framing square to help you set the corner's other batterboard at a right angle to the first. When you have installed all of your batterboards, wrap a length of mason's string several times around a crosspiece, pull it tight to the facing batterboard at an adjacent corner, and wrap it there, marking the side of the structure through the center of each post. Continue until you've marked all four sides, with a pair of strings intersecting at each corner.

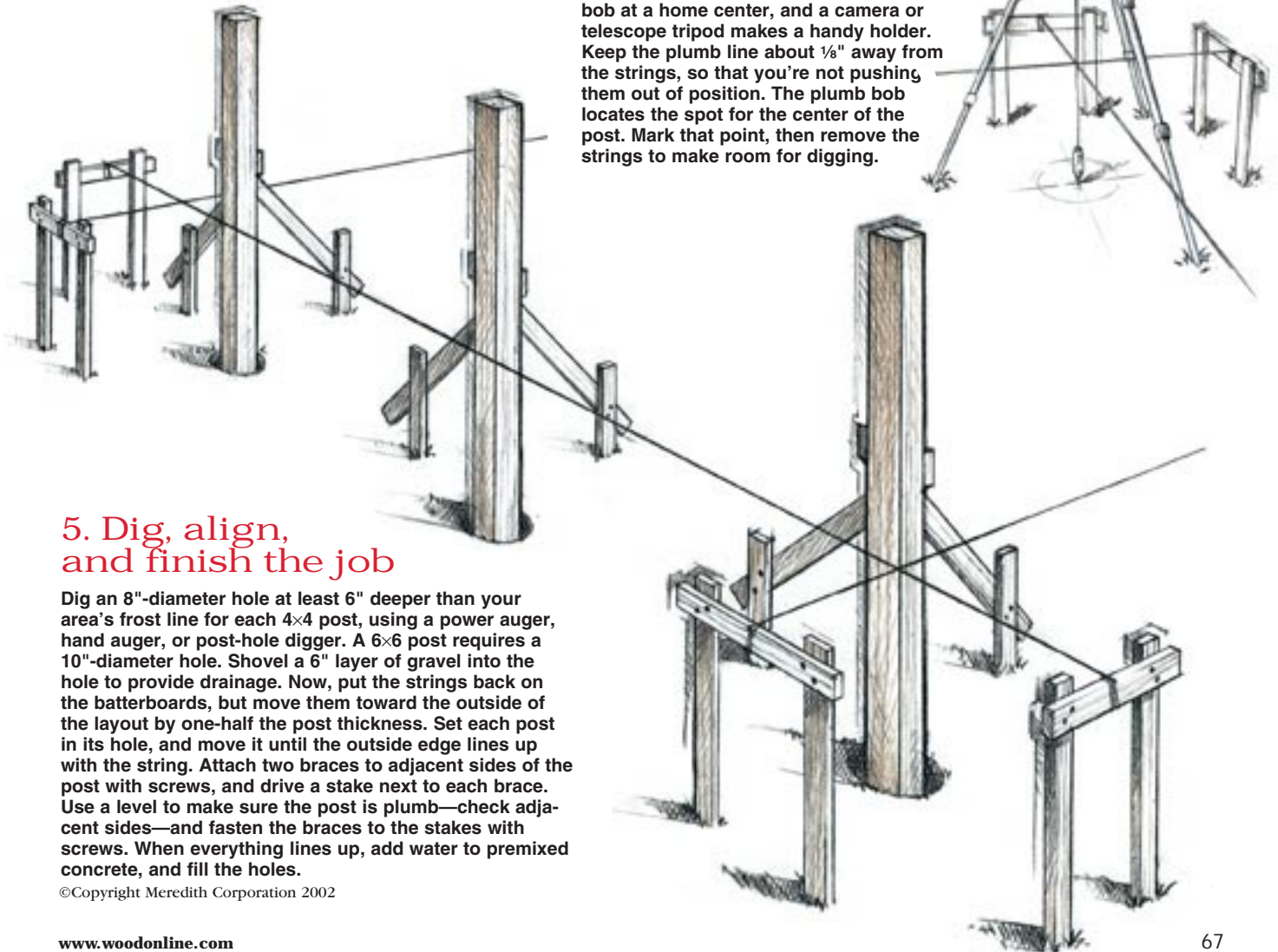


3. It's hip to be square

At one corner of your planned structure, measure from the corner to a point 3' away on one string, and mark the spot on a piece of masking tape folded over the string. Then, measure the perpendicular string 4' out from the corner, and mark that point. Now, measure between your two marks. If the distance equals 5', the strings lie at right angles to one another. If the distance is less than or greater than 5', relocate the string on your batterboard until it's right on the money. Mark the correct spot on the board with a nail, or a handsaw kerf, in case the string gets moved by accident. Check the adjacent corners for square, and finish up at the opposite corner.

4. X marks the spot

At each corner, transfer the strings' intersection down to the ground with a plumb line. You can find an inexpensive plumb bob at a home center, and a camera or telescope tripod makes a handy holder. Keep the plumb line about 1/8" away from the strings, so that you're not pushing them out of position. The plumb bob locates the spot for the center of the post. Mark that point, then remove the strings to make room for digging.



5. Dig, align, and finish the job

Dig an 8"-diameter hole at least 6" deeper than your area's frost line for each 4x4 post, using a power auger, hand auger, or post-hole digger. A 6x6 post requires a 10"-diameter hole. Shovel a 6" layer of gravel into the hole to provide drainage. Now, put the strings back on the batterboards, but move them toward the outside of the layout by one-half the post thickness. Set each post in its hole, and move it until the outside edge lines up with the string. Attach two braces to adjacent sides of the post with screws, and drive a stake next to each brace. Use a level to make sure the post is plumb—check adjacent sides—and fasten the braces to the stakes with screws. When everything lines up, add water to premixed concrete, and fill the holes.

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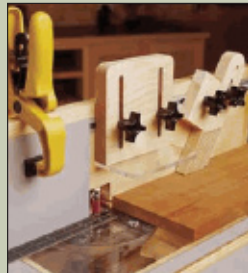
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