

# Making It as a One-Man Band

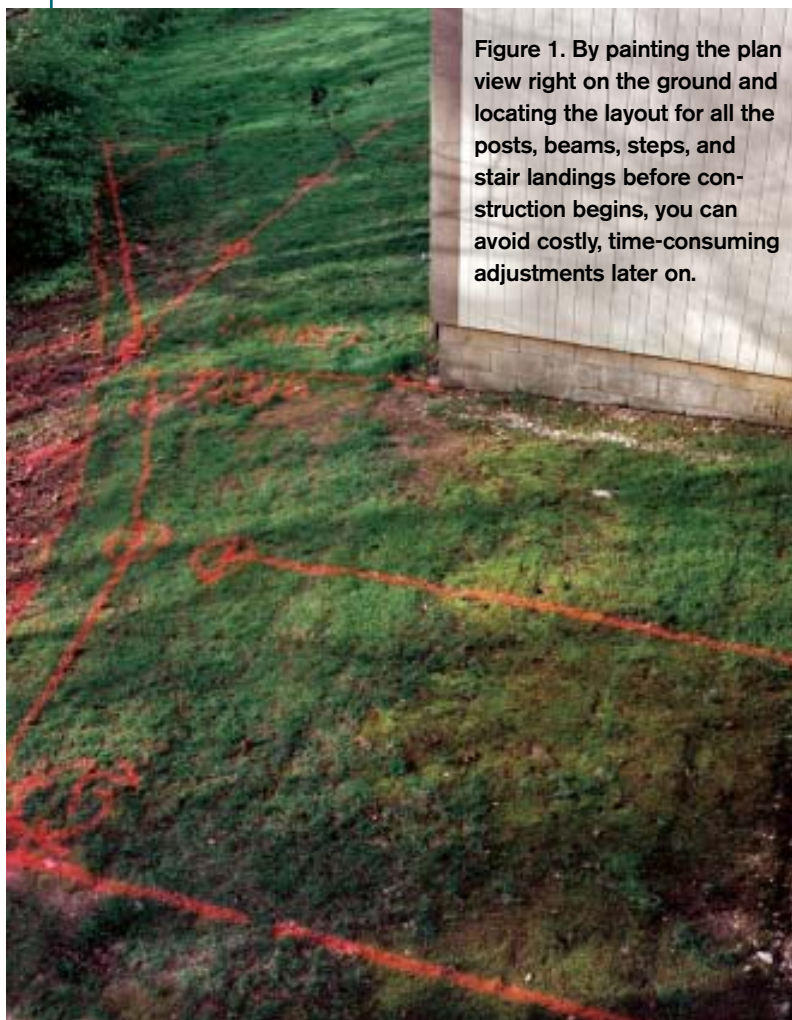
## Indispensable tools and trade tips for going it alone

by Mike Gabriel

I build decks — and I work alone, which does have its challenges. But I prefer to avoid the stress and hassles that stem from having employees — especially worrying about cash flow and struggling to maintain a high level of craftsmanship when employees don't care as much about

the quality of the finished product as I do.

Customers and peers often ask how I'm able to build decks by myself. My typical response is "one board at a time." Building decks is not that difficult, if you approach the task with some forethought. With a plan, accurate construction drawings, and the right tools — some store-bought, some handmade — the process goes more smoothly, with considerably less effort.



**Figure 1.** By painting the plan view right on the ground and locating the layout for all the posts, beams, steps, and stair landings before construction begins, you can avoid costly, time-consuming adjustments later on.

### Identify Potential Obstacles

After a customer approves a design, I plan the sequence of events for the build. I start by identifying obstacles I'll have to work around, such as irrigation lines and sprinkler heads, septic systems, phone lines, or buried cables. In Ohio, where I work, the state provides a free service (required by law) to locate underground utilities. But in some areas, this service only marks runs from the primary supply to the gas or electric meter; secondary lines from the meter to other locations around the house aren't always marked.

Also, if there are trees and shrubs near the deck perimeter, I always double-check all measurements to be sure landscaping details won't impede my progress.

I decide early on which sections of the deck to build first. The top elevation of the deck is determined by the elevation of the door leading out onto it, so I start my thinking at the top. That gives me a benchmark from which to measure grade changes and to plan stair landings.

Be sure to take your time at this point. View the project as a whole and account for every landing and post location to ensure that everything can go where it is designed to go.

On more complicated builds, I draw the top view of the deck on the ground with marking

## Making It as a One-Man Band



**Figure 2.** The electronic hand-held receiver for a laser level has an infrared sensor that locates the level line precisely, which gives the builder an accurate reading for making cutoffs after over-sized posts have been placed and plumbed into position.

paint (Figure 1, page 1), including all steps, landings, beams, and posts. This process either confirms that the design will work as drawn, or brings to light the need for slight modifications. Adjusting deck placement to have a set of steps land on existing concrete is easy before starting construction. Adjusting the same deck after building has begun can be a real headache.

### Precise Layout

I love my career as a professional deck builder, but I confess, I don't love every aspect of it. Digging holes, for instance, is absolutely no fun. So I take considerable time to determine post-hole locations to prevent the dreaded re-dig.

First, I determine the exact location of the ledger on the house, so I know where the sides of the deck will be located. Then, with a string and stakes I project the sides of the deck out square from the house. Think of creating the two axes of a graph: The house is one axis and the string — representing the projected edge — is the second axis. After that, measuring for accurate post-hole locations becomes a manageable task for a single person.

You can also place a string parallel to the house at beam locations and measure from the projected-edge string for post locations in that beam run. The time spent on this multi-step process is well worth it, because it allows you to precisely place all your post holes. And the end result for the customer is a finished product equal in quality to that of trim work.

### Essential Tools

Nothing beats having the right tool for the job at hand — and a number of them are indispensable. The first I reach for is the computer software program DeckTools ([www.decktools.com](http://www.decktools.com)).



**Figure 3.** Here the author is installing the ledger board to the house, using a centerline marked on the board and aligned to match one that's marked on the house. A power nailer leaves one hand free to support the workpiece.

## Three Tips to Keep Your Business Humming

**F**irst and foremost, BE SAFE! Most of the time, the job site is behind the house, out of sight of passersby. If you fall and get injured, you could be there for hours before someone comes to your aid. If you're faced with a project where you aren't comfortable working alone, then don't hesitate to hire some help for a couple of days.

Efficiency is a key component of building decks profitably, and is especially important when you work alone. Analyze every construction step you take, and minimize wasted time and material. Here are two good examples: Place the ladder where you can install several joist hangers at a time, and never walk around the job site empty-handed. Although these may sound simple, you can save large blocks of time over the course of a single job by implementing them.

Last, remember that happy customers mean future referrals — that is, more paying work for you. When you strive to keep the customer happy, you guarantee a steady stream of jobs to keep your business flourishing.

## Making It as a One-Man Band



**Figure 4. Posts taller than approximately 6 feet are braced with at least two 2x4s that are screwed or nailed to the posts on one end and tied to steel stakes driven into the ground on the other end.**



**Figure 5. For 6x6 or 8x8 posts or for large beams, this chain-saw attachment for a circular saw will do the job faster and cleaner than a reciprocating saw can. Without the attachment, cutting through thick material would take several passes with a circular saw.**

With it, I don't need to tediously create drawings by hand, and I can print out an accurate bill of materials and obtain accurate support-post locations and framing dimensions. This software also gives me quoting flexibility, figuring prices by the square foot or by overall costs, by whatever margins I choose.

**Laser level.** A laser level is worth its weight in gold. My RoboToolz level ([www.robotoolz.com](http://www.robotoolz.com)) has an accuracy of  $\pm 1/8$  inch in a 100-foot span. That's more than close enough for deck work, given the varying widths found in dimensions of pressure-treated materials. If you plan to purchase a laser level, buy one with a hand-held receiver; that way, you don't need to worry about seeing the projected line in bright conditions, because the infrared sensor does all the "seeing" for you. (Figure 2, page 2).

I rough cut and set all support posts, and with the laser level I establish a level plane on them and the house. Don't worry about trying to place the level at the perfect height — all that is required is a pencil mark on each post at a level plane that can be measured from. Then you will be able to determine where all the different levels of the deck are located relative to the level plane, resulting in a level and accurate top-of-deck location.

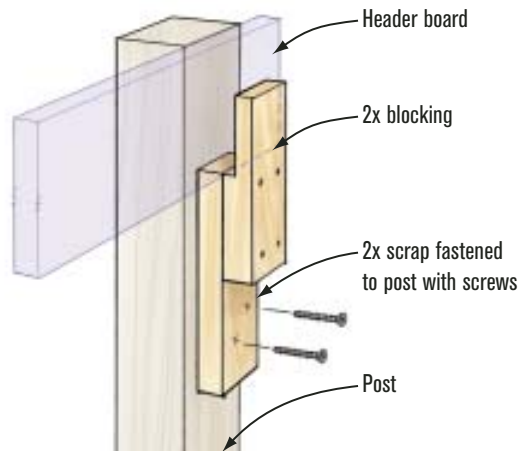
This method works extremely well when building decks with multiple levels and landings. The accuracy of deck placement also helps you to maintain consistent riser heights on multiple sets of stairs.

**Power nailer.** Use a power nailer, pneumatic or cartridge-driven, whenever you can, but especially to get your project started. These tools allow you to fasten boards using one hand — without having to be a contortionist.

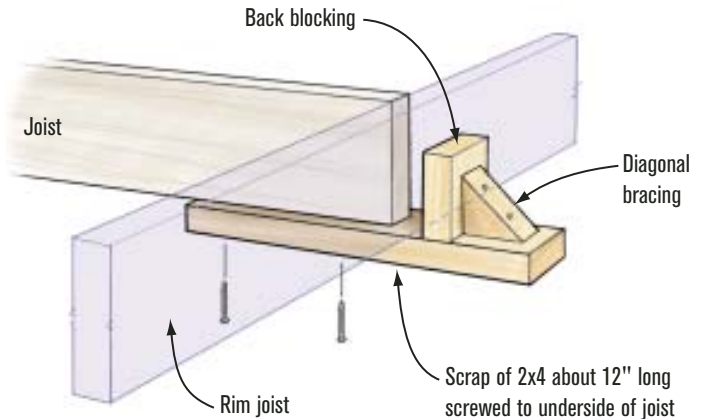
Let's take securing the ledger board as an example: Mark a centerline on the ledger board and on the corresponding location on the house (Figure 3, page 2). Hold the ledger board at or near the center of the board so you can balance the board with one hand. Align the center mark on the board with the center location on the house and hold the power nailer in your other hand to fasten the ledger board to the house. After that, it's much easier to fasten the two ends and install the structural fasteners, such as galvanized lag bolts, to permanently secure the ledger board to the house.

## Making It as a One-Man Band

### Header-Board Holder



### Rim-Joist Holder



**Figure 6.** The author uses scrap to build header-board and rim-joist holders to support unwieldy stock during deck assembly. On both of these site-built tools, he sizes the blocking to overlap half the width of the stock plus about an inch, to hold the stock firmly in place. He also allows an extra 1/4 inch where the stock fits, to accommodate the variable thickness of PT lumber and to make it easier to position before fastening.

**Chain-saw attachment.** I always install all the support posts over-sized and then cut them to size. If a post is 6 feet tall or less, the backfill will support it sufficiently. For taller posts, I fasten two opposing 2x4 braces to the sides of the posts and tie the braces to steel stakes driven in the ground (Figure 4, page 3). Then I can cut the posts to length with a circular saw, handsaw, or reciprocating saw without worrying that the post will come loose and fall over.

When I use larger posts, such as 6x6s and

8x8s, I use a Prazi chain-saw attachment (Model PR-2000, [www.praziusa.com](http://www.praziusa.com)) on my circular saw (Figure 5, page 3). One downside to this tool is that it has no blade guards, so extreme caution is warranted. But the great advantage of this tool is that you can cut up to 12 inches of material thickness with one cut. This alleviates the multiple and sometimes less-accurate cuts you get using a standard circular saw.

After cutting all the posts to length, it's time to mount the beams on the posts. Triple-beams on notched posts allow more load to be transferred directly to the footings without relying on bolts to transfer the load. Also, notched posts simplify the process of setting the beams into place.

**Site-built tools.** Even though notched posts make it easier to set beams and headers into place, nothing will keep them from rolling off the notch and tumbling to the ground (along with the builder, ladder, and assorted tools) in one sad and dangerous avalanche. To address that problem, I arrived at a solution that takes only a few minutes and some scrap 2x4s to make. I call it my "header-board holder," and it's one of the hand-made tools that make my building life easier and safer (Figure 6).



**Figure 7.** The simplest tool is also one of the best. A small wedge cut from scrap can very accurately raise or lower a heavy work-piece into place. Here a wedge is used along with the author's header-board holder to bring the header flush to the leveled top of a post.

## Making It as a One-Man Band



**Figure 8. Crooked decking is made straight with one hand doing the pulling and the wedge-action of the BoWrench tool exerting an incredibly strong force.**



**Figure 9. Time spent can also be time saved. The improved accuracy and the quality of the cut afforded by using a miter-saw instead of a circular saw can outweigh the additional time it takes to bring the workpiece to the tool.**

Along the same lines, I use another site-built tool to install rim joists, which can be heavy and unwieldy beasts. Normally, I use two of my “rim-joist holders,” one at either end of the span, and fasten them to the bottom of each end joist with a minimum of two screws. They stay put until the rim joist is secured, and they’re easy to remove when I’m done.

Last but not least, another useful item to have in your tool belt is a simple, small wedge (Figure 7, page 4) made from scrap 2-by materials. It’s not surprising that the inclined plane, which was first put to use centuries ago, still has its place and purpose today. This small scrap of wood will lift incredibly heavy boards in precise, controlled increments. I often use my wedge in conjunction with the header-board holder to get the header board exactly where it belongs. You can also use the wedge to raise or lower rail sections during installation.

**Deck-board straightener.** Once all the framing is done and it’s time to install the decking, one vital tool to have on hand is a deck-board straightener. For me, Cepco Tool’s BoWrench ([www.cepcotool.com](http://www.cepcotool.com)) fits the bill nicely. This simple device allows me to straighten even the most crooked board, quickly and with surprisingly little effort (Figure 8). Without one, you can nail a 2-by to the side of a joist to act as a fulcrum for straightening deck boards, but that takes time, and you still have one hand occupied while trying to fasten the deck board with the other. A board-straightener allows you to have both hands free once you’ve pulled the board into position — so you can operate drills for piloting or driving screws to fasten the deck boards to the joists.

**Miter saw.** When deck boards are laid diagonally and not perpendicular to the joists, the cross-grain cuts vary in length for each board — making it extremely difficult to get a long, straight cut with a circular saw. From experience, I’ve found that a miter-saw is ultimately much more efficient (Figure 9). The time it takes to place the board in the saw is more than made up by the accuracy you get with a very repeatable smooth-and-square cut, because you need to make far fewer recuts. ❖

*Michael Gabriel builds decks in Dayton, Ohio.*