

Eliminate Mistakes with Control Lines

Add Control Lines to your Manual of Practice and improve productivity, profit, and carpentry pleasure.

In a tightening market, protecting profits on the jobs we have is critical, so too is honing our bids to a competitive edge. With shorter margins, our bids must be precise. That means it's more important than ever to train your installed sales crew using a production-based systems approach to every chore. If everyone on your crew is using the same system, mistakes, re-work, and call-backs are reduced exponentially. When carpenters make fewer mistakes, they enjoy their job more and they work faster. Yes, making sure your carpenters enjoy their job is good business.

A Manual of Practice

The foundation for any productive system is a Manual of Practice: a spiral or three-ring binder (or a digital online version) that establishes company-wide procedures, from soup to nuts: what tools your employees should own and what tools you provide; the hours your crews work, paid holidays, and overtime rates; and most importantly, installation instructions for everything from windows and doors to locks and towel bars.

In my last article, *Installing Trouble-free Doors*, I reviewed the fundamental steps our crew depends on for installing a single door. In this article, I'll cover control lines and how we depend on them to get all our doors and windows installed at the right elevation the first time, so that casing and other trim follows a straight horizontal line, so that all lock rails and muntin bars are level and straight, especially across walls with multiple windows or French doors. (Fig. 1). Help your carpenters prevent mistakes and rework, make

sure your finish crew doesn't have to pull out a reciprocating saw when they're setting jambs or windows, and you'll have a happier crew and more profitable jobs.

Shoot a single level line (i.e., the Control Line)

Set up a line laser on ladder or stand—it doesn't matter what height you pick. Cast the line as far through the home as possible and mark the side of every door and

window opening. If you're shooting control lines through the entire home, for wainscoting, cabinets, electrical layout, etc., then mark all the corners and ends of every wall, too. Move the laser to the next room and adjust the height so that you continue the same level line throughout the entire job.

I know some contractors who snap lines from mark to mark, so that all the trades know the exactly location of the

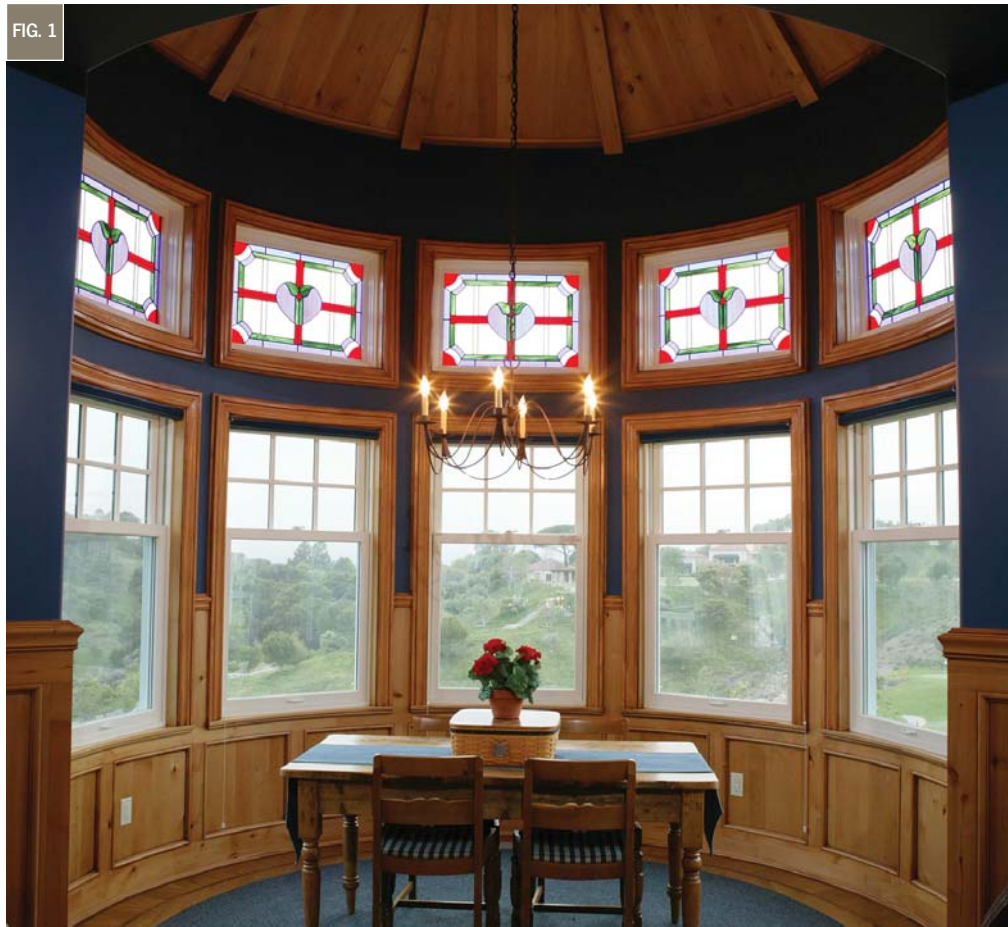




FIG. 2



FIG. 3

control line. On some custom homes, the GC labels the job-plans with the proper layout dimensions all calculated off the control lines. I've even seen contractors spray over the lines with shellac, so they won't be lost, and then transfer the lines to the drywall before any finishes are installed. But for installing windows and doors, marks on each side of every jamb are sufficient.

Find the high point of the floor

The next step is finding the high point of the floor. That's the easy part. Put the laser away and measure up from the floor to the control line, at every window and door in the house. The shortest measurement is the highest point of the floor. That's the opening where all calculations should be measured.

Measure the Pre-fit Exterior Doors

(Fig. 2) If the doors aren't on the job, then you'll have to contact the manufacturer to learn one vital piece of information: What's the measurement from the outside dimension of the threshold (the O.D. or very bottom of the threshold) to the inside dimension (the I.D. of face) of the head jamb. Because window and door jambs are constructed differently, and it's

this measurement that determines the height of the casing, don't start work on a job without this dimension. Take a piece of hard-learned advice from someone who has already made this mistake: if the finish floors are higher than the door thresholds, you'd better know that, too! For jobs with stone or terra cotta tile floors, the pre-fit sills often need to be elevated, otherwise swing-in doors might not clear the finished floor! Don't wait until the floors are installed to discover this potential nightmare.

Calculate the Magic Number

Working at the high point of the floor, measure up and mark the rough framing at the I.D. of the head jamb. Next, measure from the control line to the head-jamb mark. That measurement—and it could be a strange number like $33\frac{1}{6}$ —is the Magic Number for that job—all the windows and doors must be installed exactly that distance above the control line. To make the task fast and easy, cut a gauge block that dimension then go through the whole house, holding the gauge block on the control line and scribing a mark across the top of the block. After that, with marks on both sides of every opening, your crew won't need to hold a level over their heads to set jambs. **(Fig. 3)**

Using control lines is one of those techniques that can't be beat, it saves time and increases productivity, always, even on simple jobs. I use control lines for wainscoting, floor-to-ceiling paneling, kitchen cabinets, and columns with baseboard, dado, chair rail, astragal, and cornice details. Tile installers rely on control lines for spot-on counter tops and floor layouts; electrical contractors on high-end jobs set their switches and outlets off them; there isn't a trade that doesn't profit from the half-hour or so that it takes to set control lines, which is reason enough why control lines should be a first-base thirty-minute sacrifice on every job. ■



GARY KATZ, with nearly 40 years experience in the industry, is a contributing editor to *Fine Homebuilding* magazine, a frequent contributor to the *Journal of Light Construction*, and produces the *Katz Roadshow—Carpentry Clinics* at lumberyards all over America. To learn more, visit his web site: www.GaryMKatz.com.