

Installing Semicustom Cabinets

How to level, scribe, and fasten cabinets without marring the perfect factory finish



Master Carpenter

BY ISAAK MESTER

On the face of it, installing semicustom kitchen cabinets is pretty straightforward: Attach a run of boxes to the wall, make sure all the doors and drawers work, and don't scratch the paint. Unless kitchens are a regular part of your work week, however, you'll find that the installation can go sideways in a hurry if you don't pay attention to some key aspects of the job. In demonstrating the installation of this fairly typical kitchen, I illustrate the most important tricks of the trade that help to make this a professional-looking job.

First, unpack carefully

The designer and the client picked semicustom cabinets from Kraft-Maid for the kitchen. In price and quality, they usually represent a comfortable midpoint between small-shop custom cabinets and big-box-store economy cabinets. The carcasses are made of plywood, and the face frames, doors, and drawers are hardwood. The quality of the finishes is excellent. The cabinets were configured with a mix of drawer and door bases, two lazy-susan corners, and some glass-door uppers. Cabinets like these are usually shipped to the job



THE CRAFTSMAN

Isaak Mester has been in the construction business for 28 years. His family emigrated from the Ukraine, stopped in Israel, and settled in New Jersey. His father was a tool-and-die maker who did small renovation jobs on the weekends, and Isaak began helping out when he was 11. Even though wood can't be held to the same tolerances as metal, they always tried to get it close. Isaak went to college for computer science, but

three months from graduation, he left school and started working full-time with his father. He says, "I couldn't see myself sitting behind a desk all day." Although he has tackled all phases of residential construction, he has concentrated on kitchens and baths during the last 10 years. In an acknowledgment of his sore shoulders and knees, Isaak has become a licensed building, electrical, and plumbing inspector.

TRICK OF THE TRADE

Painter's tape on one edge of a level protects the cabinet finish. When the tape gets dirty, though, it's not helping any longer. Change it often.



START OFF ORGANIZED

The best way to start an installation is to make sure that the space is clean and that your tools and materials are right where you need them. After unpacking the first run of cabinets, place them in the general vicinity of their future locations, leaving yourself enough space to work comfortably.

TRICK OF THE TRADE

Before installing a cabinet, remove its drawers and doors, set them aside, and replace them when the cabinet is set.

TRICK OF THE TRADE

You'll need more shims than you think. An empty bucket keeps them handy and portable.



TRICK OF THE TRADE



When opening the cabinet boxes with a knife, steer clear of the face of the cabinet. Don't get excited and learn this simple tip the hard way.

site. The first thing I do is check the shipping manifest against the items shipped, and note any damaged or missing boxes. The faster you start the return process, the faster you'll be able to finish the job.

When taking cabinets out of the boxes, use a knife only when necessary, and don't cut the box along the cabinet's face or you may scratch the finish. Inspect each cabinet to make sure there are no dings, and arrange the return of any damaged units.

Factory cabinets are manufactured in part with hot-melt glue, which tends to dry in heavy drips that can get in the way of an installation. Before installing a cabinet, scrape off any of these drips.

Measure and mark for level

A level run of cabinets starts from a reference point taken off the high spot on the floor or, when there are soffits, the low spot on the ceiling. It's especially important for the base cabinets to be level and flat so that they can adequately support long runs of countertop.

On this job, the kitchen's cathedral ceiling meant that there were no constraints to the upper cabinets, so we based our measurements on the floor. Using a 6-ft. level, I checked the floor along the base of the wall and found a high spot in the corner. Carried out on a level line, this would translate to a gap of more than an inch at the end of the cabinet run—too high to hide with a kick plate or shoe molding.

To avoid this gap, I moved my reference point to the end of the corner cabinet, where my original level line cleared the floor by about 1/2 in. I then marked a new reference point 1/4 in. below the original line. From this new point, I measured up 34 1/2 in. to establish the height of the base cabinets and drew a level line there. I then made another mark 19 1/2 in. above that line to mark the bottom of the upper cabinets, drawing that line out level as well (photo right). When installing the cabinets, I scribed and cut the bases where the floor was higher than my reference mark, and shimmed the bases where the floor was lower.

Compensating for corners

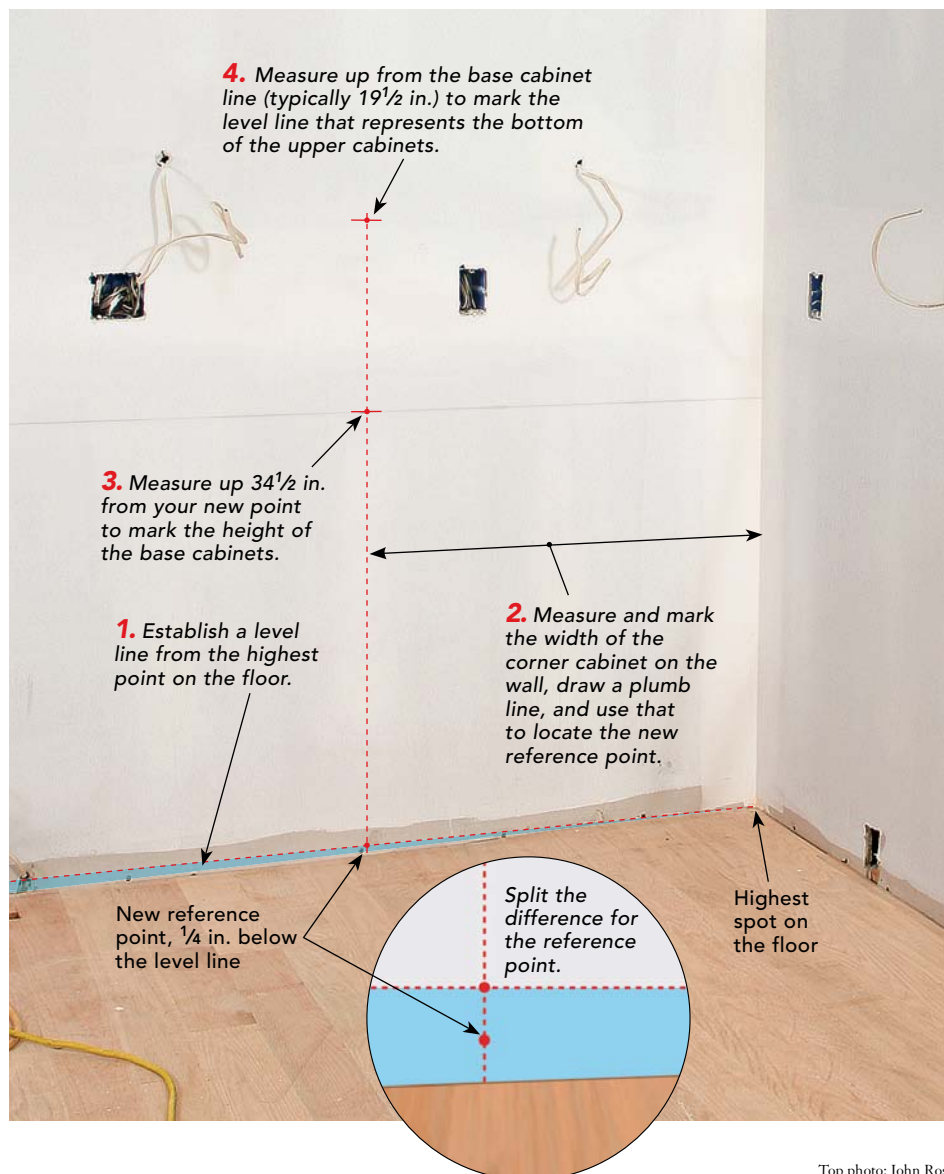
Once you've understood the state of the floor, you have to scope out the walls. It's a rare event when a kitchen's walls are plumb and square. I checked to see that the corner itself was relatively square so that the end cabinet on either side wouldn't flare out

ESTABLISH A REFERENCE LINE

Start a cabinet installation by finding the floor's high spot from which to create a level reference line on the wall to represent the cabinet tops.



If the high spot is too high, split the difference. Mark a new reference point below the first line. Measure up 34 1/2 in. to mark the top of the base cabinets.



START IN THE CORNER

TRICK OF THE TRADE

Spend the time to get the first cabinet perfect, and it'll be much easier to install the rest.

TRICK OF THE TRADE

Align shims with the wall framing so that the mounting screws lock the shims into place.



Many installations start in the corner, so that cabinet must be plumb, level, and square. Here, I had to cut down the corner cabinet to compensate for a high spot in the kitchen's inside corner. To make an accurate cut, I scribed the side panels (1), cut them down with a jigsaw (2), and transferred those cuts to the interior base supports (3). A couple of strategically placed shims brought the cabinet into level compliance.

SET CABINETS CAREFULLY

As you work outward from the first cabinet, it's important to keep the successive cabinets level and in line with the walls.

TRICK OF THE TRADE

When shimming the front of a cabinet, keep one finger on top of the face frame of the adjoining cabinet to avoid having to look to see when the two cabinets are even.

TRICK OF THE TRADE

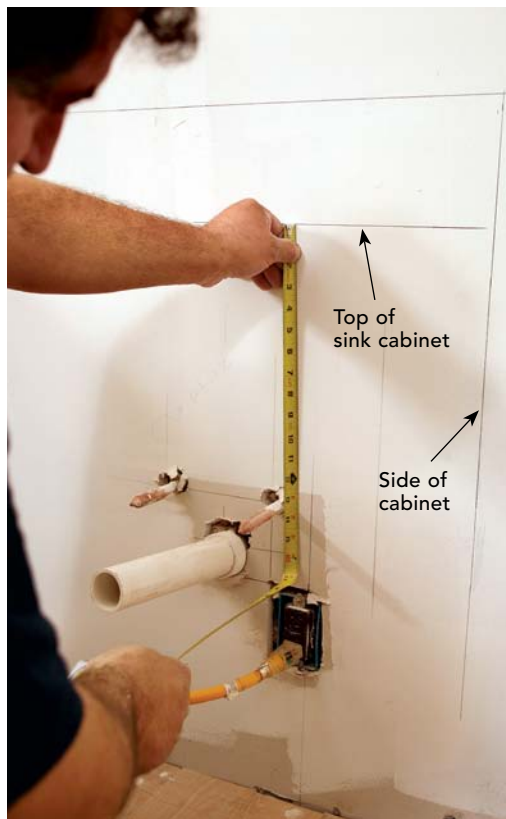
Dedicated drill-drivers—one for drilling pilot holes and one for driving screws—save time.

TRICK OF THE TRADE

Use a small flat bar as a lever to gain more adjustment control when shimming a cabinet. A multitool does a clean and fast job of trimming shims without disturbing or splitting them.



ACCURATE HOLES IN THE SINK BASE ARE IMPORTANT



Establish the reference. Find the centerline of the cabinet on the wall, then measure and mark the locations of the cabinet's side and top. Use only these two points to measure the plumbing and electrical locations.



Transfer to the cabinet. From the same two points, measure and mark the centers of the plumbing stubs and the outlet.



Drilling for appearances. Drill 1/4-in. pilot holes on the center marks from the cabinet back, then drill from the cabinet interior with a sharp hole saw, using its pilot bit as a guide, to minimize visible tearout.

from the wall. Corners are often less than square because of the buildup of tape and compound. Sometimes the best solution is to cut or scrape out the compound behind the cabinet to square up the corner.

I like to join the corner cabinet to the adjoining cabinets before attaching them to the wall so that I can carry the corner outward in two directions. If the corner isn't square, I can adjust the cabinet's angles so that there's an equal gap behind the end cabinets, which I usually conceal with a finished end panel. Here, because the line of cabinets was interrupted by appliances, I had the option of adjusting the position of the cabinets independently, but I always try to keep the counter overhang as consistent as possible.

There are times when joining your upper cabinets together on the ground will make the installation much easier and straighter. This is especially true with frameless cabinets, as there is absolutely no play in the installation. Some installers like to hang the

upper cabinets first because they don't have to reach up and over the base cabinets. Many kitchen designs (like this one) are driven by appliance locations, though, so it's important to establish the base location first.

When it came to installing the upper cabinets, the first thing I did was to screw a length of scrap brick molding to the wall studs along the upper level line. This serves two purposes: First, it's a third hand to support the cabinets as they're installed; second, it makes a handy reference when locating screws inside the cabinet. If the area between the bases and the uppers isn't meant to be covered by a backsplash, it's easy enough to patch the screw holes in the walls.

Keep plumbing and electrical neat

One of the details that adds to a good installation is careful integration of cable and pipes in the cabinets. I have encountered too many kitchens where the installers simply hacked out a square in the cabinet back for the water

and waste lines, which is visible whenever the cabinet is open.

The first step I take to ensure this integration is to insist that the plumber leave everything stubbed out and capped. It makes it easier to do a careful layout, which in turn makes a neater installation.

Second, I find out what kind of undercabinet lighting is going to be installed later so that I can drill the holes in the proper locations of the cabinet. There's nothing worse than seeing the lights installed with 2 ft. of exposed wire running across the bottom of the cabinet to the hole that I drilled.

Scribing shouldn't be difficult

Once the cabinets are in, the next step is to scribe and attach the finished end panels. Base moldings, often part of the trim package in semicustom cabinets, cover any gaps between the panels and the floor, so the wall is the critical area to be scribed. After measuring the space, and determining the correct

SET UPPER CABINETS WITH A LEDGER

As with the lower cabinets, the upper-cabinet installation begins in the corner and works outward. Secondary support, such as a ledger or cabinet jack, helps to stabilize a cabinet's position while stud and wiring locations are marked and pilot holes drilled.

TRICK OF THE TRADE



Screw a temporary ledger such as a scrap piece of brick molding to studs in the wall to help support the upper cabinets. When screwing a cabinet to the wall, transfer the locations of the ledger screws to the inside of the cabinet.



TRICK OF THE TRADE

Use padded bar clamps to attach the next cabinet in line with the first, making sure to align the face frames. Always countersink a pilot hole for screws, and use decking or similar heavy-duty screws to attach cabinets to each other and washer-head screws to attach cabinets to the wall. Drywall screws are too brittle and shouldn't be used.



TRICK OF THE TRADE



Move the wires to where they belong. Here, the undercabinet feeds should be above the cabinet bottom. On this job, a full backsplash will conceal the drywall repair.

BE PRECISE WITH CROWN AND END PANELS

The easiest crown job. Because of the cathedral ceiling in this kitchen, the cabinet crown could be cut simply by registering its spring angles onto the miter saw's table and fence.



Work carefully with prefinished stock. To reduce visible nail holes, it's a good idea to use the smallest nail or brad possible when attaching crown or other exposed trim.

Backing not included. Finished trim panels on the back of peninsulas often require extra nailing support. Layout lines on the walls help to locate blocking in the right places.



Keep fasteners concealed. Meant to be covered by corner trim or base, the perimeters are good spots to attach the panels and still keep the appearance clean.

width or length of the panel, I shim or clamp the panel's tops equal to the top of the cabinet. Setting a compass to the distance of the largest portion of the gap between the wall and the panel, I scribe the wall's line onto the panel, check the measurement to make sure it's right, and cut away the waste. Full-length panels should be shimmed plumb before they're scribed.

Tips for installing trim

The trim for semicustom cabinets is usually made from prefinished hardwood, and it's relatively expensive and difficult to replace once you've started. Make sure you have enough before you sign off on the delivery, although distributors often can send missing pieces within a few days. Because it's prefinished, the trim must be cut carefully to avoid

tearout. Keep nail holes small so they can be concealed with a color-matched filler, and glue joints for extra holding power. When working with dark-stained crown, apply stain on the inside edges of miters so that any gaps won't show as prominently. □

Photos by Charles Bickford, except where noted.



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