



CROWN MOLDING

Courtesy of **How-To**

Installing Crown Molding with Coped Corners

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Crown molding can add greatly to a room's overall décor, especially when it's installed correctly. But a molding installation with spreading corner joints only adds as much style as a ragged fedora. Although precision cutting and gluing the inside miters can help the joint stick, the expansion and contraction of the molding material is a powerful force. Nine times out of ten, miter joints will open. To prevent this, many carpenters bypass cutting miters on inside corners in favor of coped joints. A coped piece of molding has the end "carved" in the shape of the molding profile so it fits over the intersecting strip of molding like a puzzle piece. Coping the joints hides the problem of inside corners that tend to spread open.



First step is to use a stud finder to mark the framing locations on the wall and ceiling.



Temporary molding hangers can make installation easier.



Planning the Layout

Fortunately, with ceiling trim there are generally no doors or other room openings with which to contend. This simplifies the layout somewhat, but you should plan the layout according to the locations of the coped joints.

In a basic square-room installation, the first piece of crown should be installed on the wall opposite the door with two square-cut ends butted tightly to the adjacent wall surfaces. Then install the adjacent pieces of molding, each having one coped end that nests against the square-cut first piece, while the other end is cut square to butt against the opposite wall. This means that as someone walks into the room, they are presented with the best face of the crown joints on the opposite side of the room. The final run of molding will have two coped ends, but these are at the least noticeable locations in the room.

Before installing the first piece, use a stud finder and pencil to mark the wall studs and ceiling joists around the perimeter of the room. Mark just outside the molding location so you'll know where to drive the nails

First Run

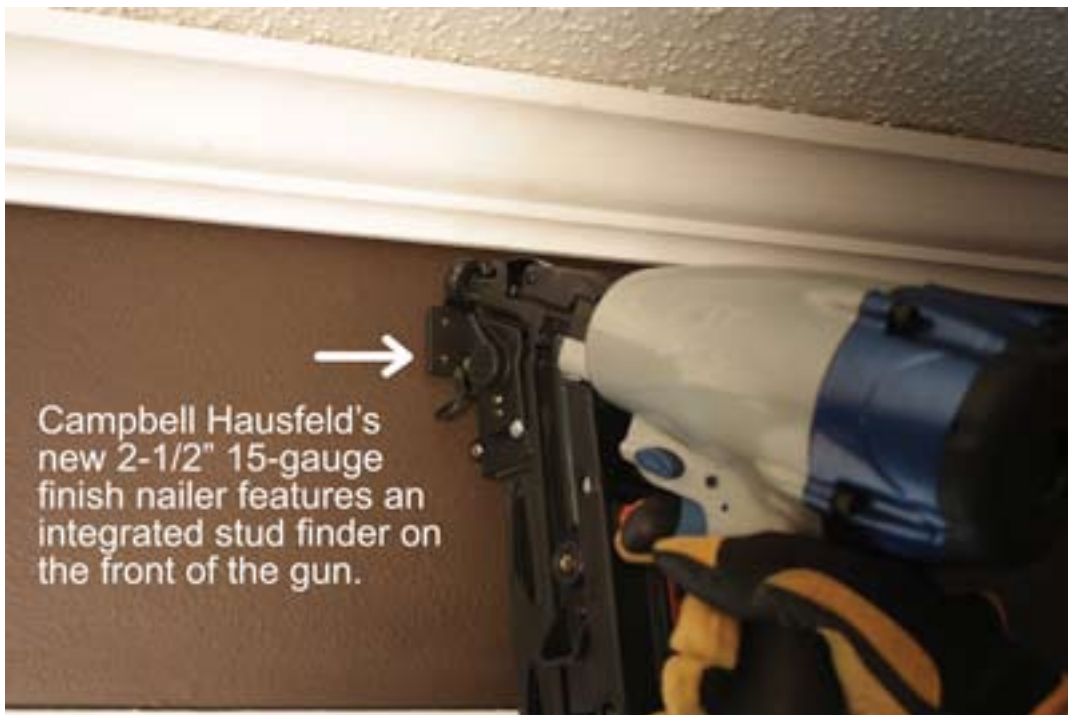
Requiring no angled cuts, the first piece of molding is the easiest to install. Simply make a 90-degree cut to trim the molding to length, using a powered miter saw or handsaw and miter box. Use finish nails to fasten through the molding and into the wall and ceiling framing. A hammer and nail set will suffice, but be careful not to bang up the molding profile. A better tool for the job is a pneumatic nail gun, which frees up one of your hands, affords greater nailing precision and really picks up the pace of the installation.



A pneumatic nailer can greatly speed up the fastening process.



Campbell Hausfeld's new 15-gauge finish nailer features a laser marker to indicate exactly where the nail will be driven, as well as an integrated stud finder at the tip of the gun.



Campbell Hausfeld's new 2-1/2" 15-gauge finish nailer features an integrated stud finder on the front of the gun.



Learning to Cope

The next two adjacent pieces of molding will intersect the first piece using a cope joint. When making a cope joint, begin by tracing the molding profile with a pencil for better visibility. The idea is for the intersecting cuts to duplicate the molding profile, or shape, so it nests tightly against the face of the adjoining molding for a nearly perfect fit.

First, measure the wall and mark your measurement onto the intersecting end of the second piece of molding. Cut a 45-degree inside miter at the mark. Remember, when cutting crown molding on a miter saw, you typically have to cut it upside-down and backwards, so the saw's base represents the ceiling and the saw's fence represents the house wall. With 45-degree inside corners, the cut should be made so the lower, longer point of the molding (when positioned on the wall) meets the mark you made for the molding strip's overall length.



Cut strips of molding “upside down and backwards,” so the saw’s base represents the ceiling and the saw’s fence represents the house wall.

Next, run a pencil along the mitered edge, marking the edges and curves of the profile for better visibility. Clamp the molding securely and use a coping saw to back-cut along the pencil line, following the contours of the profile. Keep the blade 1/16 inch to the waste side of the cutline. Then use a file to clean up the profile, revealing a shaped edge that will be the only point of contact between the intersecting molding pieces. This should create a socket that fits snugly over the face of the first piece. After checking for fit on the wall, cut the uncoped end square and butt it against the far corner to meet another coped piece on the third wall. Repeat this process for the molding strip that intersects the first piece on the opposite wall.



Use a pencil to darken the edge of the profile for better visibility.





Back-cut the mitered piece with a coping saw, staying 1/16" from the profile edge.



Use a variety of files to create a shaped edge that will be the only point of contact with the intersecting piece.



The coped piece of molding should nest perfectly against the square-cut first piece.



Scarfig

The final molding strip on the fourth wall, above the door, is coped at both ends. Admittedly, it is difficult to successfully fit a piece of molding that is coped at both ends—even for a pro. To make this easier, you can fit each coped corner on a separate piece of molding and cut a scarf joint to join the two pieces in a continuous run. In fact, use a scarf joint anytime you need to join two pieces of molding along a straight run of the wall. To make a scarf joint, cut opposite miters on the two molding pieces and nail the joint securely over a wall stud. After fastening the first half of the run over the stud, cope the corner end of the second half and then cut a supplementary miter, making the strip just a little too long. Test-fit this last piece and then cut away the excess on the miter until it fits snugly into the scarf joint with no visible gap.



Nail the molding securely near the joint and into the stud framing.

Finishing

With the molding solidly fastened in place, fill the nail holes and seal seams with a high-quality caulk or wood filler. The molding used in this material was pre-primed pine. If you're painting the molding, it improves paint adhesion to sand the caulk after it dries and to “spot” prime the seams and nail patches. Once the primer dries, simply mask off the molding and finish up with a couple of coats of your favorite interior paint—we recommend using the high-gloss variety.



Cut scarf joints to join straight pieces of molding in a continuous run.



Set all nail holes below the surface of the molding and fill with caulk or wood putty.



Mask off the molding with a quality painter's tape.



Finally, apply caulk and paint for a finished look.

SIDE NOTE

Installing Outside Crown Corners

In many cases, you'll be faced with installing the trim on outside corners as well as inside corners. Outside corners are cut at a miter angle and nailed together to complete the corner.

To install molding at an outside corner, first cope the end of the molding opposite the outside corner. Hold that strip along the wall, nesting the cope against the preceding piece, letting the other end run long over the outside corner. Mark the cutline where the molding overhangs the corner. Do the same for the adjoining piece. Then make a miter cuts at the corresponding marks. For typical 90-degree corners, the joint should consist of two complementary 45-degree cuts. However, it's always a good idea to double-check the corner with an angle finder in case the wall is out of square.

Install the pieces by applying a bead of carpenter's glue to the joint and securing with finish nails. You can then smooth the joint by running the rounded edge of a nail set over it to press the fibers closed. For thick, heavy moldings or problem gaps, drill pilot holes at the top and bottom of the joint, and drive 4d finish nails perpendicular through one molding into the end of the other



For outside corners, first mark the cut with the molding in place on the wall.





Cut the two complementary miters to make up the angle. For example, two 45-degree cuts should join tightly over a typical 90-degree corner. Glue and nail the corner joint.



Finish by closing the end grain with a nail set, filling the seams and nail holes with caulk, and painting to match the interior décor.