Installing Window and Door Mouldings

About Window and Door Mouldings

The trim around windows and doors greatly influences the look and style of your interior. They also bridge the gaps and cover spaces between the door or window jambs, and the rough framing and wall surfaces.

Door and window casings are usually installed with a “reveal” between the edge of the jamb and the casing – Typically 1/8”. This allows you to adjust the casing if the jamb is not perfectly straight.

Window and Door Moulding Designs

Casings are the most commonly used mouldings for windows and doors, and are usually distinguished from base mouldings by it’s rounded outer edge. Windows sometimes have a Stool and Apron trim pieces, or they may be trimmed out in a simple picture frame style. Some door openings use Plinth and corner blocks along with casings to create distinctive architectural effects. Samples of these styles are shown below.

Casing can be relatively plain, such as the popular clamshell design or square-edge design (called S4S), or detailed, such as colonial-style molding. By far the most popular casing joint design (and the one described in this column) is the mitered picture-frame casing.

Popular head casing treatments for windows and doors
**Preparing to Install Mouldings**

**Tools & Equipment Required:**
- Finish hammer
- Hand plane: for trimming jamb extensions
- Measuring tape
- Carpenter's glue
- Sanding Block and 120-grit sandpaper
- Jigsaw: for notching stool and profiling apron.
- Combination Square: for marking casing, stool, and apron
- Compass: for transferring marks and reveal lines
- Pencil
- Utility knife, and Chisel: for trimming drywall, adjusting fit of trim
- Putty Knife
- Nail set: to recess heads of hand-driven nails
- Miter saw equipped with Cross-cut or combination blade: for cutting trim pieces to length
- Drill with 1/16-inch-diameter bit: for making pilot holes
Optional:
- **Pneumatic nailer**: for attaching casing
- **Random-orbit sander**
- **Router**: for making stool profile (if making your own)
- **Table saw**: for cutting rabbet in bottom of stool (if making your own)

**Tip:** A power miter saw or chop saw fitted with a crosscut blade will provide far better results than a miter box and saw. A power saw allows you to make fine adjustment and tapered cuts that are often necessary for perfect miter joints. It is also possible rent power miter saws by the day.

If you are not experienced using a particular power tool, obtain and read the tool’s operator manual (often available from the manufacturers website) or consult a book on using such tools. If renting a tool, ask the dealer to explain safe operating procedures.

**Safety:** Always wear eye protection when using hand or power tools, especially while cutting, nailing, chiseling or demolition. Keep your work area safe at all times. To prevent injury, bend over or pull nails from any moulding that has been removed.

**Removing Existing Moulding**
Existing casings will often have built-up paint or caulking where the casing meets the wall surface, and where the casing meets the door jamb or other trim pieces. If so, use a utility knife to score these seems.

Use a pry bar or sturdy putty knife to separate the casing from the wall material. Then use a pry bar and a hammer to carefully separate the casing from the wall surface (place a piece of scrap wood or similar material on the wall material to avoid damage from your tools).

On doors and windows with stools, aprons, blocks or other trim, remove casings first, then aprons, then stools or other trim pieces.

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**Basic Window Casing Installation**
(with stool and mitered top corners)

**Overview**
After preparing the window opening, install the stool and apron, then install the head casing, then the side casings. The order is shown at right.
Preparation
Make sure that the jamb is flush with the wall surface using a straight edge or carpenter square. If the jamb is not flush with the wall surface, plane it flush using a surface plane.

If the jamb falls short of the wall, glue and nail thin strips of material of moulding strips over the jamb to make it flush with the wall surface. Plane any excess from the newly applied material.

Note: Some manufacturers of new window units provide adjustable jamb extensions to bring the jambs flush with the wall surface.

Mark the reveal lines
The reveal is the amount of space the casing is set back from the jamb, typically 1/8”. If you are replacing your existing casing, you may wish to follow the lines left by the removed casings. Otherwise, set the straight edge of combination square to 1/8” and draw reveal lines on the surface of the jambs.

Preparing the Stool:

Cut the Stool to the overall length.
Determine the overall length of the stool by measuring the distance between the jambs, adding 1/4” for both of the reveals, then adding the width of the two casings, plus the desired length (times 2) you would like the stool to extend beyond the casing. (Note: This length beyond the casing may be influences by your design. Allow extra length if you are planning to round the edges or cut them at an angle) Alternatively, you can determine the length by holding the stool against the window sill, then placing smaller pieces of casing in place vertically to obtain the desired length.
Measure and cut horns on the stool
The stool will need to be notched at each end to allow it to rest against the window sill.

1) Center the stool on the wall where it will be installed. Make a continuous mark across the sill trim and the stool for future reference. You may want to position a test piece of casing to evaluate the look and make a precise measurement.

2) Mark the inside edges of the window jamb on the stool.

3) Measure the depth the stool must recess into the window and mark that depth on the stool using a combination square. Another method is to scribe the area to be cut using a compass and pencil. Adjust the compass to the distance from the back edge of the stool to the sill trim. Hold the compass point against the wall and scribe lines from each end of the stool to the jamb line.

4) Cut out the notch from each end of the stool using a jigsaw. If the design calls for the stool to rest at an angle, match the desired angle while cutting.

Test fit the stool by holding it in place, and making sure it fits tightly against the wall surface, the inside of the jamb, and the sill trim. Make adjustments to the fit of the stool as needed using a chisel or making additional cuts.

Cut and install the apron
There are several molding styles that will make an attractive apron, and there are a few classic styles such as Kelleher moulding part number P-361PR. The width of an apron is typically shorter than the width of the stool, but equal to or greater than the width of the outside edges of the casing.
There are several ways to finish the ends of an apron. One way is to first cut the ends of the apron square. Then use a scrap piece of the apron to trace the profile as shown in the diagram below. Cut out the shape using a coping saw, then sand and smooth as needed.

A straight cut edge with a slight mitre of 15 to 30 degrees also makes an attractive edge.

**To Install the Apron.**

**Apply glue along the top edge of the apron.**
Align its ends with the outside edges of the side casing, and press the top edge against the bottom of the stool.

**Nailing Specs:** Nail the apron at both ends and every 16 inches along its bottom edge with 18-gauge nails (or 8d finish nails in pilot holes). Then drive 4d finish nails (in pilot holes) through the top of the stool and into the top edge of the apron every 8 to 10 inches.

**Painting and Staining.**
You may wish to paint or stain your mouldings after cutting and fitting, but prior to installation. If you plan to stain, complete your finishing process through the first topcoat. If you plan to paint, apply a primer and possibly one coat. This is especially helpful if you do not plan to paint the walls afterwards. Cover all parts of the moulding to seal the wood and minimize warping.

**Installing Side and Head Casings (Mitered Top Corners, Stool at Bottom)**

1) **Cut Head Casing**
Measure the distance between the reveal lines on the left and right jambs, at the upper most corner on the head jamb. Cut a piece of casing for your head with opposing 45 degree miter cuts on each end. The shorter side of the head casing should equal your measurement. (Note: You may wish to cut your head casing a hair wider, then later trim as needed to ensure a tight fit.)
2) Temporarily Nail Head Casing in Place
Position the head casing so it just covers the reveal line on the top jamb. Nail the casing in to the jamb partially using several 4d finishing nails.

3) Rough Cut Side Casings
Cut a length of casing for each side that will extend beyond the head casing at the top and the stool at the bottom. Miter cut the top and remember that one will be left-handed and one right handed.

Tip: Look ahead for problems. Using a carpenter’s square with 2 foot legs, check the intersecting reveal lines for squareness. Alternatively, you cut an extra piece of casing (that you’ll be able to use later as a head casing), and test fit the miter joint. These steps may indicate that the jambs are out of plumb, and that miter cuts slightly smaller or larger than 45 degrees are necessary.

4) Test Fit and Cut Side Casings
Place the left casing upside down against the wall, resting the mitered point on the stool, and the square cut end against the upper left corner of the head casing. Mark this point and cut. Alternatively, measure the distance from the top of the stool to the top left hand corner of the head casing. Cut the left side casing to that length and test fit. Repeat this procedure on the right side casing. Test fit and re-cut if necessary.

(Note: If your design calls for the stool to be set at a slight angle, cut the side casings slightly longer and bevel the cut for a snug fit.)

5) Check and Adjust the miters
Hold the casings in place, and apply some pressure so you can see how it will fit when secured with nails.
If there are openings in the miters, determine if they can fixed by making slight tapered cuts in the head or side miters – changing the angle from say 45 degrees to 46 degrees. Pay attention to how these changes will affect the casings position relative to the reveal lines.
If the casings and are not flush at the miters, possibly due to variances in the plane of the wall, try removing some material from the back edge of the casing ends. Do this by using course sandpaper or a rasp.

6) Attach the Casings
If the miters appear to be tight, apply some wood glue to the surfaces of the mitered ends, and nail the casings to the jambs using 4D nails at least 1 inch back from the miter. You may want to drill pilot holes for the nails before nailing to avoid splitting the wood.
1) Hammer 4d nails through the casing into the jamb along the inner edge of the casing. Stay back as far as possible from the edge to avoid splitting, but be sure you are nailing solidly into the jamb.
2) Depending on the size of the casing, hammer 6d or larger nails through the outer edges of the casings securing it to the stud.
Tip: Nail the ends of the casings nearest the miters first (but stay at least an inch or so back to avoid splitting). Final nailing may actually affect the tightness of your miter, and you may need to remove the casing and make additional adjustments.

Wipe up any glue that emerges with a damp cloth.

7) Cross-nail Mitered joints:
Hammer 4d finishing nail as shown through the edge of the head and side casing about 3/4 inch from the outside corner. This will prevent them from opening in the future.

8) Finishing Steps
Use a nail set and hammer to set the nails slightly below the finished surface. If you are painting, use a filling compound such as Spackle to fill the nail hole. If you are staining, use a wood filler appropriate to your finishing technique. Apply, touch-up, and smooth the finish according to the product manufacturer’s instructions.

Finishing Tip: If you are painting your casing, you may want to apply a very thin, fine bead of paintable caulk to the joint where the casing meets the wall surface. Then, using your finger and wearing a latex glove, smooth out the caulk so it feathers out on to the wall and the casing. This will give your installation a professional look and a slightly aged appearance.

Installing a Window with Mitered Top and bottom Corners
(Picture Frame Style)

Refer to the detailed instructions above for “Basic Window Casing Installation” and do the following.

1) Cut the side casings with miters at both ends so that they just cover the reveal lines on the window jambs. Temporarily nail them in place as you did with the head casing
2) Measure, cut and fit a lower casing for the bottom of the window.
3) Measure, cut and fit left and right side casings.
4) Check and adjust the miters and attach the casing as described above.

The order of installation is shown at right:
Installing a Window with Corner Blocks and Stool
(Victorian Style Casing)

Refer to the detailed instructions above for “Basic Window Casing Installation” and do the following.

1) Your may need to adjust your design to have a slightly larger reveal. This will allow your corner block to protrude on either side of the casing.
2) Be sure to select corner blocks that are slightly wider and slightly thicker than your casing. This will allow your corner blocks to protrude on either side of the casing. Experiment with different styles at your supplier to find a combination with good proportions.
3) Install the window stool.
4) Measure the distance on along the left jamb from the top of the stool to the point where the reveal lines meet on the top jamb.
5) Square cut the left casing to these dimensions and test fit.
6) Repeat the same procedure with the right casing.
7) Install the left and right top corner blocks.
8) Measure the distance between the left and right corner blocks.
9) Square cut and fit a head casing between these blocks.
10) Check and adjust the joints and attach the casings as described above.

The order of installation is shown at right:

(continues)
Installing a Craftsman Style Window with Craftsman Style Header (or Butt Joint)

Refer to the detailed instructions above for “Basic Window Casing Installation” and do the following.

**Choice of Materials:**
Be sure that your style of casing is suitable to this installation.

A butt joint requires a flat casing such as 1x or 1/2x stock with square edges (round edges will interfere with a smooth joint). Edges can be eased after installation.

A square, round edged, or any symmetrical casing such as a beaded casing may be used with a craftsman style header. The header itself is often plain wood and it’s thickness should be greater than the side casing by at least 1/8”.

1) Install the window stool
2) Measure the distance on along the left jamb from the top of the stool to the point where the reveal lines meet on the top jamb.
3) Square cut the left casing to these dimensions and test fit.
4) Repeat the same procedure with the right casing
5) Measure the distance between the outer edges of the left and right casings. In the case of a craftsman style header, add the desired amount you would like the head casing to extend beyond this distance
6) Square cut the head casing to this distance and test fit.
7) Check and adjust the joints and attach the casings as described above.

The order of installation is shown below:

(Continues)
Installing Door Casings

The installation of door casings is similar to window installations except there is no stool or casing at the bottom of the opening.

There are several ways to trim the bottom of the door.
1) Have the side casings extend all the way to the flooring, leaving a small amount of room for expansion.
2) Have the casing run into the plinth or corner block at the base

The top of the door may be trimmed like windows with a craftsman style head, corner blocks, or standard picture frame joints.

Installing Door Casings with Plinth Blocks

The installation of door casings is similar to window installations above.
To summarize:
1) Make sure the door or window jamb is flush with the wall surface, and adjust as necessary.
2) Mark your reveals on the jambs.

Note: You may want to leave a slightly larger reveal so that your blocks can protrude past the casing

(Continues)
3) Install the plinth blocks at the base of the door jamb. Allow room for the flooring materials.
4) Be sure that the corners are square and the jambs are plumb. Place a square across the top of the side casing to be sure the head casing will be level.
5) If you are doing simple mitered corners at the top (picture frame style), measure and cut head casings and temporarily nail into place. Then measure and cut side casings.

If you are doing corner blocks, butt ends, or craftsman style headers at the top, measure and cut side casings first and temporarily nail into place, then cut and measure head pieces.

The order of installation is shown at right:

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**Installing Door with Full Length Casings**

The installation of door casings is similar to window installations above.
To summarize:
1) Make sure the door or window jamb is flush with the wall surface, and adjust as necessary.
2) Mark your reveals on the jambs.
3) Be sure that the corners are square and the jambs are plumb. Place a square across the top of the side casing to be sure the head casing will be level.
4) If you are doing simple mitered corners at the top (picture frame style), measure and cut head casings and temporarily nail into place. Then measure and cut side casings. Allow room at the base of the door casing for any planned flooring materials.

The order of installation is shown at right:

If you are doing corner blocks, butt ends, or craftsman style headers at the top, measure and cut side casings first and temporarily nail into place. Then cut and measure head pieces. Allow room at the base of the door casing for any planned flooring materials.
Installing Casings with Newer Style Window Units

Newer style window units with wooden frames, often have jamb extensions that bridge the gap between the window unit and the wall surface. They are either included with the kit or available as an option depending on your wall thickness. Jamb extensions can often be adjusted to bring them flush with the wall surface. Once installed, Jamb extensions can be treated like traditional window jambs.

If your window units are made of PVC, Fiberglass or Aluminum, refer to the manufacturers instructions for window trim.

Additonal Installation Tips

**Tip:** Planning your cuts. Make a list of all the head and side lengths (plus10%) that you will need to complete your project. Plan your cuts to maximize the best use of 8’, 10’ or 12’ foot lengths that you are likely to buy.

**Tip:** To prevent splitting in this usually thin edge of the casing keep your nails back at least one inch from the ends of the molding.

**Tip:** If the casing is being installed on the exterior you must use weather-resistant fasteners, such as hot-dipped galvanized nails.