HOW TO INSTALL ELITE PANELED WAINSCOTING
Using X-Rails with Either Raised, Flat or Beaded Panels

Although wainscoting is an old world wall treatment, it still holds up today with its timeless beauty. It will fit into just about any situation, from classic to modern decorative styles. The Elite Raised Panel Wainscot system and the Elite Cottage Style Wainscot system were created for the do-it-yourselfer; they are systems that are easy to install and finish. These instructions will explain how to install both of these systems. The only difference between the two is in the edges of the panels. One is routered with a ½" inch total thickness and the other is flat with a total thickness of ¼" inch. Please disregard any of the routering instructions when installing the cottage style wainscot. Please read all the instructions before installing.

1. First, remove the cover plates from all electrical outlets. All baseboards should also be removed; the wainscot kit comes with its own baseboards. Be careful and try not to damage the wall board, you want as much support in behind the panels as you can get.

2. Measure from the floor-up the height for the wainscoting and make pencil marks. Use a long level to mark the height line around the entire room. With a stud finder and mark the location of the studs. Draw a vertical line along the center of each stud to just above the height line to mark for the starting point for installing the baseboards and rails. Although nailing into studs is important, if you nail in an "X" pattern you create a fastener in the wall board. This will allow you to not be limited by the dimensions of the studs and the spacing between them.

3. Lay the room out and try to use as many whole panels as possible. Try to lay it our so that electrical plugs and central vacuum outlets land in the middle of the panel or the middle of a stile.

4. You are now ready to install the lower rail. Find the most level part of the room and start there so that you allow some room to work with in case the room slopes at one end. Using a pneumatic nail gun, place your nails into the studs to attach the rail. You can hammer finishing nails through the studs if you don't have a nail gun.. Remember to set the pressure of the compressor so that the nail head gets counter sunk in the wood approximately 1/16th of an inch. This will make finishing easier later on in the installation.

5. Begin by installing the center stile with adhesive. Continue down the wall line, installing a stile, then a panel and repeating this process. Constantly check level and plumb to make sure the pieces fit together properly. Remember that when you hit a corner you may have to rip down a stile in order for it to fit and to maintain symmetry. In the case of a 90 degree corner, the corners can be butt jointed. If there is a bigger or smaller angle on the corner, you...
must use a table saw to rip the appropriate angle in order to create the corner.

6. Eventually you will run into a corner. The raised panel you will use should be cut down using a table saw on one side. After cutting it down to the appropriate size, it must be routed and shaped using the #519 Freud Router Bit which will give you the shape of the rest of the panel and allow the cut side to fit in to the grooves provided. We chose the Freud bit because of its availability. This bit will match the curvature of the profile on the panels.

7. For electrical outlets, be sure that an outlet falls in the middle of a panel or stile, not around a groove. Place a panel under the outlet and mark the width. Extend the lines on the panel with a straight edge, and then place the panel beside the outlet to mark the height. After drilling pilot holes at each corner of the panel outlet marks, use a coping saw to make the cutout. Then attach the panel to the wall, matching up the outlet with the outlet hole.

8. The wainscoting may alter the wall outlet so that an extender is necessary to keep the outlet flush with the new wainscoting. Simply turn off the power, attach an extender to the panel and re-mount the outlet with extended screws. Check with your local electrical codes to see if this solution will meet code.

9. Once all wainscoting panels and styles are in place, it's time to finish the top. You will need a miter saw to cut and miter the top rail pieces for installation. Slide the top rail over the rabbit cuts and secure the rail with a pneumatic nail gun. When you get a corner the top rails cannot be butt jointed due to their design, so they must be mitered to allow the stiles and panels to fit in behind.

10. Next, place the Cap Rail over the top rail and secure with finishing nails and adhesive. Lay Shoe Molding along the bottom of the wainscoting and secure it with a pneumatic nail gun, as well.

11. Use the Spackling Compound (plaster mix) to fill in any nail heads and seams. A paintable latex caulking should be used to fill in all other seams (between shoe mould and Base board). Allow the spackling compound to dry before sanding it down smooth. In order to get a clean line of caulking you can use a wet finger or rag and run it along the bead of caulking you just laid down.

12. You are now ready to prime and paint. Keep in mind that the edges of the panels may require sanding to reduce the raised grain of the MDF. We recommend semi-gloss paint so that any stains can easily be cleaned off.

**General Installation Tips**

When installing on a wall longer than the available length, you should cut the ends of the rails and the baseboard on a 30 degree angle. You will then cut the opposite angle on the corresponding end of material; this will make for an invisible seam.

When you get to a low window, you can either run the top rails right into the window casing and cut the panel to suit. Or cut the top rails so that they surround the window casing and cut the panel to suit. Either way is acceptable, with the first method being easier to do.

If you are considering painting the house, install the wainscoting first. You will get a better finish when this is installed first, and you won’t worry too much about getting the walls dirty.

The Elite raised panel wainscot system comes pre-primed. Save yourself some time and paint it only after you have completed the installation and have finished the sanding and caulking.

If you are getting hardwood or any other type of floor treatment, get that done first before you install the wainscoting. This way you can determine where to start the wainscoting rather than doing it and trying to fill the gap later on.

The shoe moulding is not necessary if you have carpeting. It is a decorative item which is used to add more heft to the bottom of the base board. Its practical application is to cover gaps left by flooring installers for expansion of the floor.

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Getting that professionally finished look is made easier when you follow these tips.
1) All the Elite Pre-cut panels (a) going up a set of stairs should be similar in size; this gives your installation symmetry. The width of the panels comes down to personal choice in regards to appearance. Each kit includes 4 panels that measure 44” h x 20” w. Use an angle finder (shown above right) to measure the angle of the stairs. To do this, place one arm of the angle finder against the vertical rise of the stinger (c) and the other arm onto the diagonal side (the side going up) of the stringer. Use this angle to cut the tops and bottoms of your stiles (d) and the tops and bottoms of your panels (a). If you have a Raised Panel Kit, you will have to shape the panels after cutting to size; using the (99-519) Freud Router Bit.

**Note:** In the case of Wall Panel Wainscoting, panels are not necessary; your existing wall will be used as a panel. Only the ends of the stiles will have to be cut and reshaped using the Freud 99-470 Router Bit.

![Angle Finder](image1)

2) The Lower Rail is 8” high however you should not install a full height Lower Rail diagonally up the stairs. The reason for this is that it would be too big and it will protrude into the panel too much making the panels on the stairs look too small. The Lower Rail needs to be cut down; in this example (f) it is cut to 4” in height (the height is really up to you, 5” works as well). The Lower Rail should butt up flush with the vertical face of the Stringer. Measure back 4” horizontally from the stringer on the Lower Rail and make a 45° cut. The cut will end approximately half way down on the Lower Rail. The “Variable Angle” will all depend on the angle of your stairs (all stairs are different). In this example our Variable Angle was 120° because the diagonal angle of the stair is 120°.

![Cut 4\\(^{\circ}\) Lower Rail](image2)
3) Note the position of the Transition Stile (e) and both the top and bottom transitions in the different pictures included in this instructional. The Bottom Transition is placed next to the stile (e) whereas the Top Transition is placed above the stile (e). This is done in order to accommodate the stringer without interfering with; or protruding into the panel. Using this technique also prevents odd “L” shaped panels which are difficult to cut and especially difficult to shape using a router.

4) The next part to consider is the small transition (b) on the Top Rail between the horizontal installation and the diagonal stair installation. Follow the same guidelines set for the Lower Transition described in Step 2. The difference here is that the Top Rail is installed at full height and should not be cut down in height. Remember, that the variable angle will remain the same for both the top and the bottom of the installation.

5) Use Spackling (plaster compound) on any seams, corners and nail head holes you may have on the wainscoting itself. Allow the spackling to dry out completely, and then sand it down using fine grit sandpaper. Dap (paint-able latex caulking) should be used anywhere that the back of the wainscoting touches the wall. The Dap will fill the seams between the wainscoting and the wall. It will allow the wainscoting to move as the wall and the home expands and contracts, depending on weather and the time of year.

6) After sanding and caulking, it’s time to apply a finish coat of paint. Any type of paint can be used, however we recommend using Semi Gloss. Wainscoting is applied to the bottom of the wall and tends to get scuffed and dirtier than the rest of the wall; therefore you need a paint that is easy to clean.
**Tips on Cutting Panels**

Before starting the installation of your new Raised Panel Wainscot system, you should remove all electrical and central vac outlet covers. Turn off the power to the plug before you begin. When laying the room out, make sure the outlets either land inside the panel avoiding the routered edge, or inside the 4" stile.

Take the panel and hold it above the plug. Using the plug as a guide take your pencil and mark the width of the jack on the panel.
Next you should hold the panel next to the plug and mark the height of the plug.

Using a square, extend the lines on the back of the panel to get the outline of the plug hole that you will cut out.
Drill a hole big enough to fit a saw blade or a Jig Saw blade into in order to cut out the hole.

This is the result on both sides front and back.
You now insert the panel just as you did with the other normal panels and pull the wires through.
Install an extender to the existing electrical box in order that the wires do not touch the wood. Check your local electrical code book for rules in your area. Attach the cover back to the plug and your all done.
Raised Panel Shaping Tips

Normally when installing raised panel wainscotting, you would need to shape all four sides of your panels. What makes our **Elite Raised Panel Wainscot Kits** so revolutionary is the fact that most of the time you only have to cut and reshape one side of the panel. All the panels are shipped a standard size and only one side has to be cut and re-shaped. Review the how to tips that come packed with the rails or our web site videos for tips on panel spacing. These easy to follow tips and pictures should help make your project go smoother. Please use all safety precautions as outlined by the tool manufacturers.

**Step 1** In order to get the desired effect, only one side of the panel should ever be cut. First you should measure the width of the finished panel. Rip the one side down to the desired width. The height will always remain the same at 24”.

**Step 2** :: Next you will use your router or router table to shape the cut edge of the panel. A router table is preferred because of the diameter of the router bit required to give the panel the proper shape. The router bit used is a Freud 2 + 2 Router Bit (SKU: 99-519)

**Step 3** :: You will now sand the newly cut radius using a fine grit sand paper. This will remove the rough edges left by the router and will give you a finished surface for painting

**Step 4** :: Tip- The MDF panels come unprimed, before installing panels on to the rails, prime edges first. For better results, you may want to prime and sand the edges twice. The face of the panel only requires one coat of primer.

**Step 5** :: Fit the panels into the slots of the rails.