

**Tools and Items Needed**

- Drill/power screwdriver
- Miter or circular saw with carbide tip blade
- Marked speed square
- Carpenter's level
- Carpenter's pencil
- Adjustable wrench or socket wrench for bolts, etc.
- Safety glasses/goggles
- Rubber mallet
- Tape measure

**Contents**

- 2 - 6' or 8' aluminum rails with baluster connectors installed (Connectors not included in a la carte kits)
- 1 - level or stair bracket kit
- 16 - #8 x 3/4" screws (8 - #8x3/4" and 8 - #8x1-3/4" screws for stair kits)
- 15 balusters (12 for stair kits, 20 for 8ft line kits), (balusters not included in a la carte kits)
- 30 - 1" metal sheet screws (40 for 8ft rail) in à la carte kits only

**In-Line Railing Installation Instructions**

**Prior to construction, check with your local regulatory agency for special code requirements in your area.** Common railing height is 36".

Read instructions completely to get an understanding of how the product goes together and how each piece affects the other.

**Step 1** Determine the number of railing posts needed for your deck. Post spacing is 6' or 8' on-center. Example: A 12x16 deck attached to a building with a 4' access opening on one side will require a total of eight posts.

**Step 2 Installing posts:** Install posts by attaching the aluminum base to the surface of the deck. Position the post so the fastener will go into the floor joist, and make sure the decking is firmly attached to the joist at the location of the posts. Proper structural blocking/framing under the decking material is required when attaching the post to a wood frame deck because decking alone is not approved as structural framing.

**Step 3** Position the post assembly onto the location where it will attach to the deck. Four 3/8" diameter mounting holes are provided on the base. When the final position is determined, mark the base hole locations. Remove the post assembly and drill 15/64" holes in the marked locations into the deck and reinforcement.

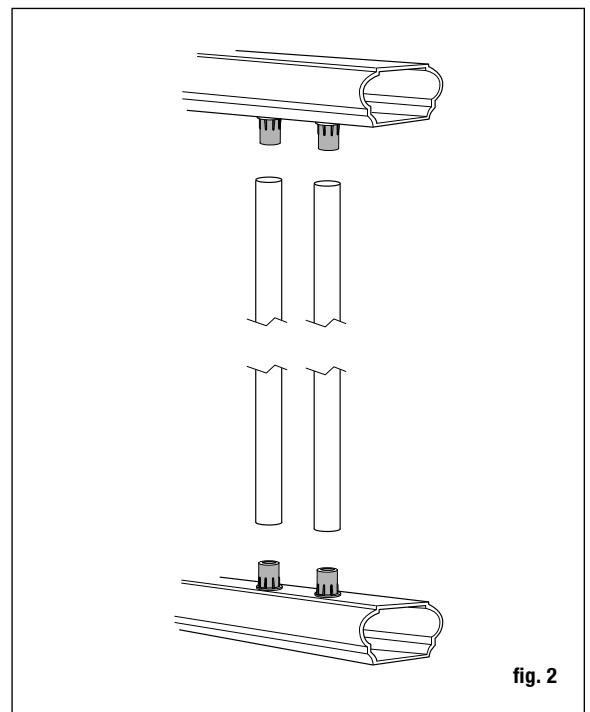
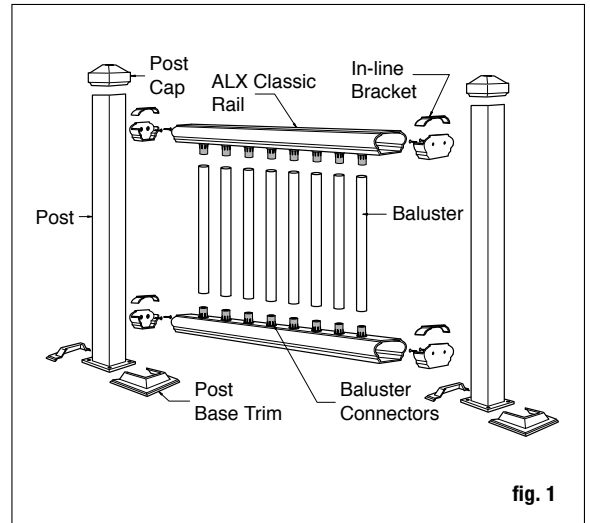
**Step 4** Reposition the post assembly over the predrilled holes and insert the fasteners (not included). Secure the base to the deck structure. Make certain the posts are plumb. If the post requires adjustment, add stainless steel washers under the base plate.

**Step 5** Finish by sliding a post base trim (optional) over each post for a finished look. *Note: Installing the post base trim prior to installing the bottom rail is recommended. However, the two-piece design does allow the installer to add the post base trim after the rail has been installed.*

**Step 6** For a la carte rails: Install baluster connectors using sheet metal screws included in the a la carte kits. Install using pre-drilled holes. Do not over tighten.

**For rail kits: Baluster connectors are attached to bottom and top rail, but should be fully tightened by hand to railing before being installed. Do not over tighten.**

**Step 7** Measure the distance between installed posts to determine the length of the top and bottom rails (fig. 1). Lay bottom rail on deck. The distance between the post and the first baluster should be less than 4" and equal on both



ends. Mark the angle and length. Repeat with the top rail. Remove an additional 13/64" on both ends (13/32" overall) for the bracket to fit between the rail and post. Trim the top and bottom rails to length.

**Step 8** Temporarily place the brackets on either end of the bottom rail. Position the bottom rail between posts and center. Check building code requirements for maximum spacing between deck surface and bottom of rail (sweep). Spacing of 3" is recommended for 36" or 42" finished rail height. Mark the location of the bracket on both posts. Remove rail and brackets. Mark the screw locations and predrill through the posts only, using a 1/8" drill bit.

**Step 9** Attach each bracket to the posts with three 3/4" screws.

**Step 10** A support block is needed every 2 feet (2 are included in the 6ft kit, 3 in the 8ft kit). Attach support block connectors to the bottom of the lower rail at 2 foot intervals. Predrill using a 1/8" drill bit. Attach the support blocks to the support block connectors. Mark the location of the support block on the deck surface and attach the other support block connector to the deck using the included screw.

**Step 11** Install the bottom rail between the posts by setting it in the brackets. Snap top trim piece to the rail bracket.

**Step 12** Attach baluster to the lower rail by sliding onto connection (fig. 2).

**Step 13** Position the top rail between the posts. Check for level end-to-end and vertically. Mark the bracket location on post and remove rail. Mark the screw locations using the bracket as a guide, and predrill using a 1/8" drill bit. Attach bracket to the post with three 3/4" screws at one end. Repeat for the other end.

**Step 14** Lower the top rail into position, placing the balusters onto the connectors while working from one end of the railing to the other. Tap with a rubber mallet if needed to eliminate any gaps. Attach the rail to each bracket by predrilling with a 1/8" drill bit and using two 3/4" screws. *Tip: Use a driver extension bit to avoid marring the rail with the drill chuck.*

## Stair Railing Installation Instructions

**Step 1** Begin by determining where the top and bottom post will be located. Mark the desired location of the post. *Note: To ensure post location is compatible with railing, prior to securing to the deck, place both posts in position, and lay the bottom rail along the stair nosing from top to bottom adjacent to both posts. On the rail side of the post, measure up from the top of the rail and ensure there is a minimum of 34" to the top of the post. Post location may need to be adjusted to ensure minimum is obtained. Repeat this step for the bottom post.* For a wood deck, position the post so the fasteners will go into the floor joists, and make sure the decking is firmly attached to the joists at the location of the posts. Proper structural blocking/framing under the decking material is required when attaching the post to a wood frame deck because decking alone is not approved as structural framing.

**Step 2** Four 3/8" diameter mounting holes are provided on the base. When final position is determined, mark hole locations and remove the post assembly. Drill the marked locations into decking and reinforcement braces.

**Step 3** Reposition the post assembly over predrilled holes. Insert fasteners (not provided), then secure the base to the deck structure. Make certain the posts are plumb. If the post requires adjustment, add stainless steel washers under the base plate.

**Step 4** Finish by sliding a post base trim (optional) over each post sleeve for a finished look. *Note: Installing the post base trim prior to installing the bottom rail is recommended. However, the two-piece design does allow the installer to add the post base trim after the rail has been installed.*

**Step 5** Measure the distance between installed posts to determine the length of the top and bottom rails. Lay bottom rail on stairs with the predrilled holes facing up. The distance between the post and the first baluster should be less than 4" and equal on both ends. Mark the length on top face at both ends of rail using a square or straight edge where it meets the posts. Remove an additional 1.25" at the uphill end of rail, and 1/8" at downhill end of rail, to allow for the stair connectors. Cut bottom rail to length. *Note: The distance from the end of the top rail to the first stair baluster will be 1-1/16" longer than the bottom rail to ensure the balusters are plumb.*

On the cut bottom rail, measure to the underside of the top rail. Add 1-1/16" to this measurement and cut the uphill end of top rail. Measuring from the cut end, mark and cut the other end of top rail to match overall length of bottom rail (fig. 3).

**Step 6** Mark location of the bracket screw holes on bottom rails. Remove bracket. Predrill through the rail only, using a 1/8" drill bit.

**Step 7** Attach each bracket to the post with two 1-3/4" screws

**Step 8** For a la carte rails: Install baluster connectors using sheet metal screws included in the a la carte kits. The rails are predrilled with the proper spacing. The top and bottom connectors will be facing opposite directions. Attach baluster connectors to rails. Do not over tighten.

**For rail kits: Baluster connectors are attached to bottom and top rail, but should be fully tightened by hand to railing before being installed. Do not over tighten.**

**Step 9** Lay bottom rail on stairs against the posts with the predrilled holes facing up. The distance between the post and the first baluster should be less than 4" and equal on both ends. Mark the rail where it meets the inside of the installed brackets. Do the same with the top rail, but with the predrilled holes facing down. Trim the top and bottom rails to length with a 90 degree cut.

**Step 10** A support block is needed every 2 feet (2 are included in the 6ft kit, 3 in the 8ft kit). Attach support block connectors to the bottom of the lower rail at 2 foot intervals using included screws. Predrill using a 1/8" drill bit. Mark the location of the support block on the step tread and attach the other support block connectors to the step tread.

**Step 11** Install the bottom rail between the posts by setting rail in brackets. Snap top trim piece to the rail bracket. Secure bottom rail to brackets using two 3/4" screws. Tip: Use a driver extension bit to avoid marring the rail or post with the drill chuck.

**Step 12** Attach balusters to the lower rail by sliding onto the connectors.

**Step 13** Position the top rail between the posts. Check for plumb end-to-end and vertically. Mark the bracket location on post and remove rail. Mark the screw locations using the bracket as a guide, and predrill using a number 2 drill bit. Attach a bracket to the post with two 1-3/4" screws at one end. Repeat for the other end. Lower the top rail into position, placing the balusters onto the stair connectors while working from one end of the railing to the other. Tap with a rubber mallet if needed to eliminate any gaps. Attach the rail to each bracket by predrilling with a 1/8" drill bit and using two 3/4" screws. *Tip: Use a driver extension bit to avoid marring the rail or post with the drill chuck.*

**Step 14** Set post caps on each post. Gently tap with rubber mallet to secure.

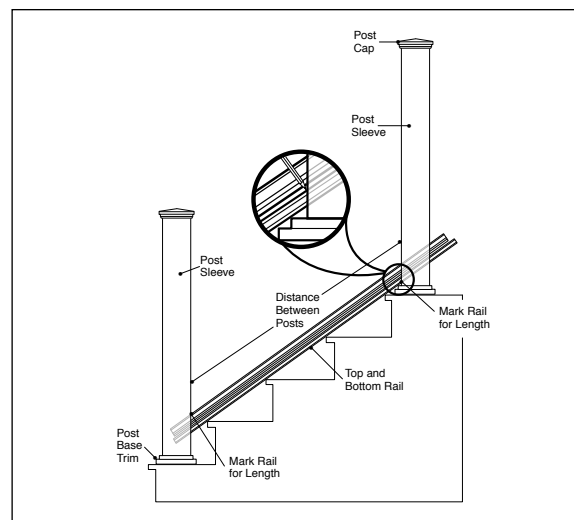


fig. 3

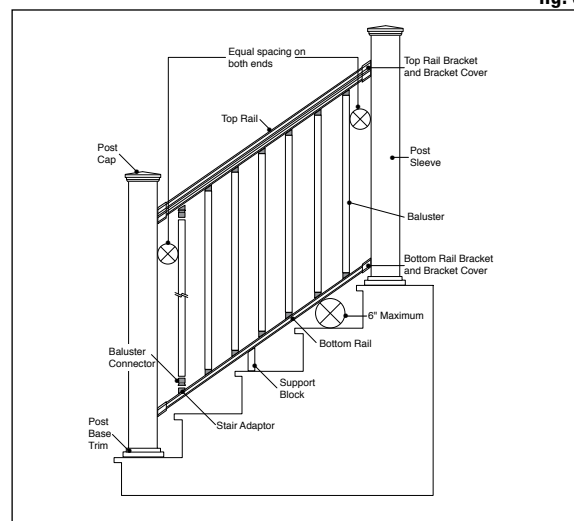


fig. 4

THE DIAGRAMS AND INSTRUCTIONS IN THIS BROCHURE ARE FOR ILLUSTRATION PURPOSES ONLY AND ARE NOT MEANT TO REPLACE A LICENSED PROFESSIONAL. ANY CONSTRUCTION OR USE OF THE PRODUCT MUST BE IN ACCORDANCE WITH ALL LOCAL ZONING AND/OR BUILDING CODES. THE CONSUMER ASSUMES ALL RISKS AND LIABILITY ASSOCIATED WITH THE CONSTRUCTION OR USE OF THIS PRODUCT. THE CONSUMER OR CONTRACTOR SHOULD TAKE ALL NECESSARY STEPS TO ENSURE THE SAFETY OF EVERYONE INVOLVED IN THE PROJECT, INCLUDING, BUT NOT LIMITED TO, WEARING THE APPROPRIATE SAFETY EQUIPMENT. EXCEPT AS CONTAINED IN THE WRITTEN LIMITED WARRANTY, THE WARRANTOR DOES NOT PROVIDE ANY OTHER WARRANTY, EITHER EXPRESS OR IMPLIED, AND SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING CONSEQUENTIAL DAMAGES.