

## STAIR INSTALLATION INSTRUCTIONS

For the most recent installation instructions, please visit our website at [www.harmonyrailing.com](http://www.harmonyrailing.com).

Prior to construction, check with your local regulatory agency for special code requirements in your area. Common residential stair railing height is 36". ADA secondary grab rail may be necessary to meet local code compliance. Stair post spans should never exceed 6' on center. For all other applications, consult a design professional or a Harmony Railing representative for more information. Read installation instructions thoroughly before proceeding with assembly.

### STEP 1 – FITTING STAIR RAILING PANEL

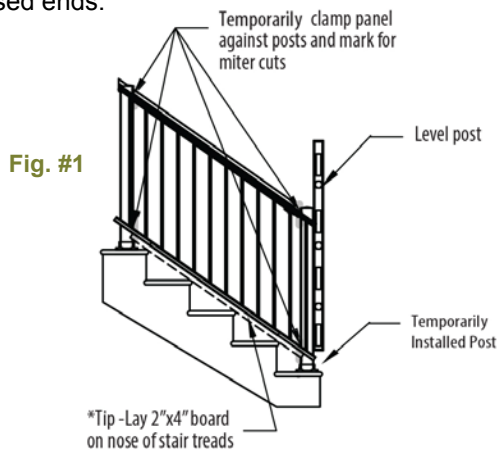
Position stair railing panel alongside 3" top stair post and temporarily installed 3" bottom post (Fig. 1).

Position stair panel approximately 1 1/2" above stair nosing. \*Tip - lay a 2"x4" board flat on nose of stair treads. This will allow enough room for installation of bottom snap. Clamp stair panel against top and bottom 3" posts. Using a sharp #2 pencil, mark the stair channels at four (4) locations.

If using a continuous top rail, after panel has been clamped to post, mark cut lines on the H-channel and the 2 inch post using the bottom of the H-channel to find your angle for post cut. (Fig. 1B)

Remove clamps and cut stair panel at all four (4) locations. (Fig. 2) Take care to cut stair channels at appropriate stair angle. Use of Miter saw with a sharp non-ferrous blade is recommended.

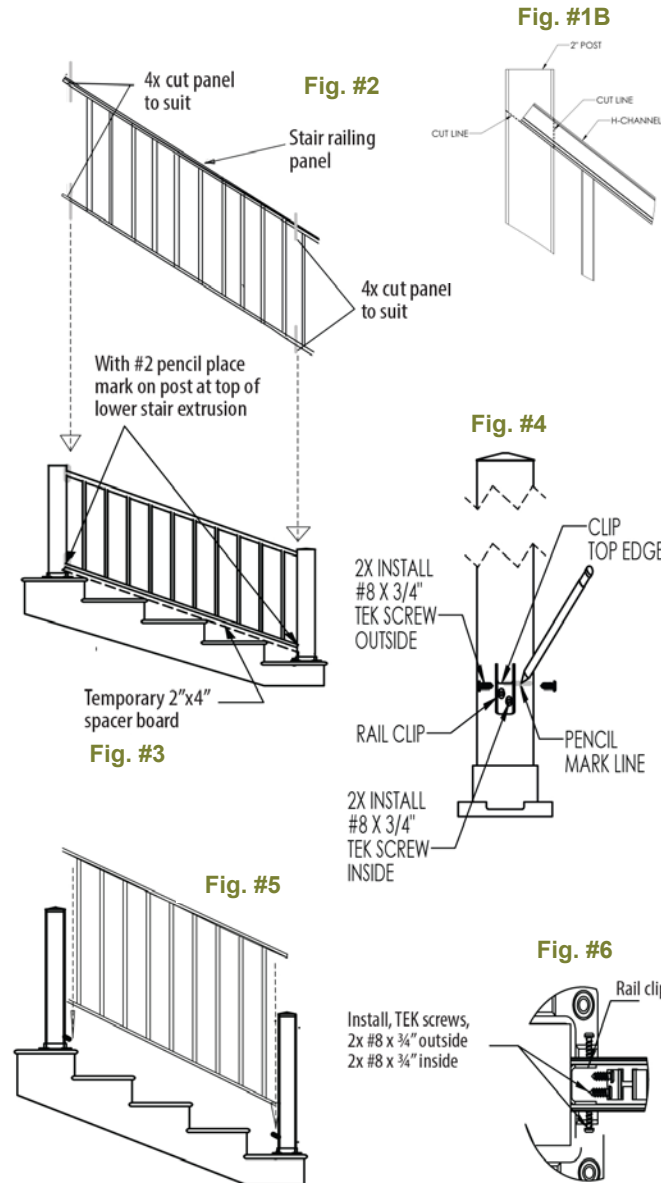
Clean cut areas and apply touch-up paint on all exposed ends.



### STEP 2 – INSTALLING STAIR CLIPS ON POSTS

After stair panel has been cut to proper size and angle, place the panel on the 2"x4" (or hold 1 1/2" above stair nosing) board, between the 3" posts. Use a #2 sharp pencil, draw a line across the top of the lower picket channel, 2 places (Fig. 3).

Remove panel and bottom post. Attach stair panel attach clips at marked location as per (Fig. 4) and fasten with #8x3/4" Tek Screws.



### STEP 3 – SECURING STAIR PANEL TO 3" POSTS

Once the stair panel attach clips have been installed, re-attach the lower 3" post to the bottom step or landing. Place the stair panel onto the lower stair panel attach clips (Fig. 5).

When lower extrusion is fully seated on lower clips, insert stair panel attach clips into upper extrusion. Secure attach clips to post with 2-#8x3/4" Tek screws, then secure upper extrusion to stair panel attach clip with 2-#8x3/4" Tek screws. Repeat this same procedure for bottom post, upper extrusion (Fig. 6).

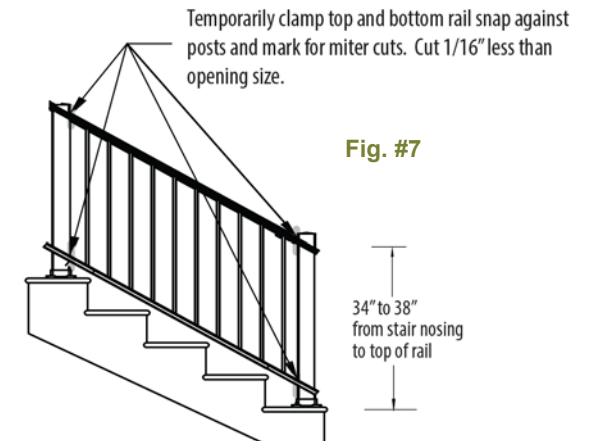
When upper extrusion is secured to attach clips, return to lower extrusion and secure lower extrusion to lower stair clips with 2-#8x3/4" Tek Screws at upper post and 2-#8x3/4" Tek Screws at lower post.

### STEP 4 – INSTALL TOP AND BOTTOM SNAP COVERS

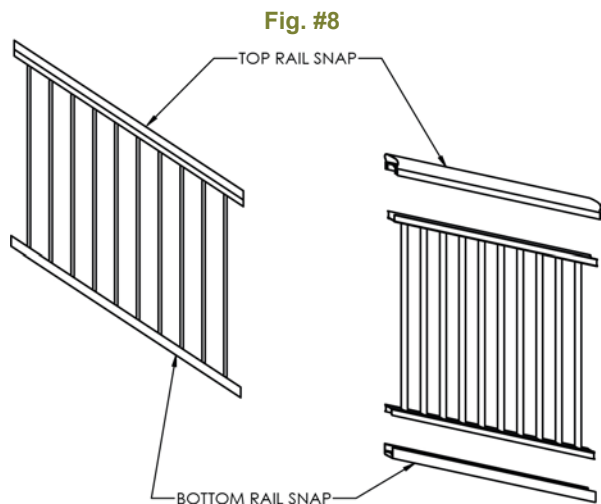
Following the same angle as the secured stair panel, clamp or hold top/bottom rail snaps against 3" posts (Fig. 7). Using a sharp #2 pencil, mark the top/bottom rail snaps at all four (4) locations.

Remove clamps and cut top/bottom rail snaps at all four (4) locations. Take care to cut snaps at appropriate stair angle. Use of Miter saw with a sharp non-ferrous blade is recommended. Cut 1/16" less than opening size.

Clean cut areas and apply touch-up paint on exposed ends.

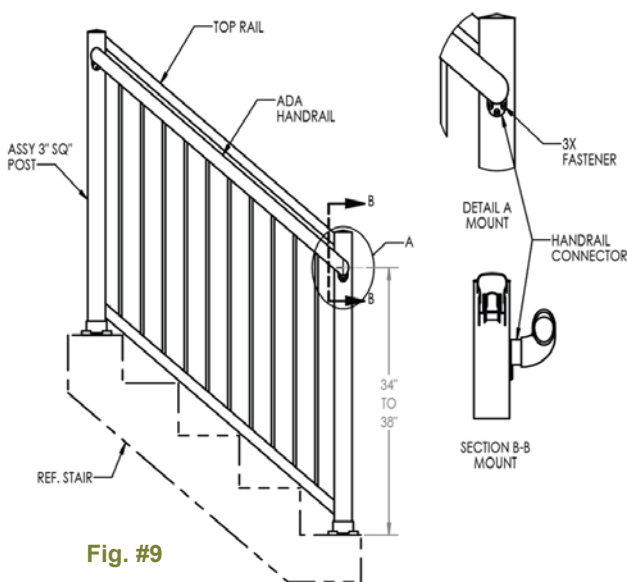


Snap each rail snap over the corresponding rail channel until properly seated (Fig. 8).



## STEP 5 – INSTALLATION OF ADA COMPLIANT HAND RAIL

ADA handrail may be required (Fig. 9) for residential deck installations (check with local building code official). Maximum recommended span between posts is 6' on center. See Harmony Railing's ADA Railing Installation Instructions for all installation configurations.



## SYSTEM EVALUATION:

1. Harmony Railing™ (Harmony) railing products have been evaluated for structural integrity by an independent laboratory as per ICC-ES AC273 Acceptance criteria for handrails and guards approved February 2008 and effective March 1, 2008 (editorially revised January 2012). Harmony's 42" aluminum railings were evaluated with a total railing span of 96" with a Harmony 3" post attached at each end and secured to a structural wood frame with four GRK RSS 5/16"x6" deck structural screws per post. The Harmony aluminum railing systems have been evaluated with 1/2"x3/4" aluminum balusters (6063-T5) assembled using the patented UltraLox Interlocking assembly process by which guardrail infill components are press locked together. Harmony's 1/4" tempered glass panel system (ANSI Z97.1 tempered glass) has been evaluated with a total railing span of 72" with a Harmony 3"x3" post attached at each end and secured to a concrete substrate with 4-ITW Redhead anchors LDT 3824 3/8"x2 1/2". When the guardrail is installed in configuration other than described in the installation instructions, the installation configuration and fastening detail must be specified by a licensed engineer.
2. When Harmony aluminum railing systems are assembled under the conditions described above, the railing meets the guardrail requirements of 1607.7.1.1 of the 2012 International Building Code (IBC).
3. When Harmony guardrail is installed in configuration other than described above, each installation shall be designed using numerical methods by a registered professional engineer licensed in the state in which the project is constructed. Sealed shop drawings shall be made available to interested parties to demonstrate compliance with applicable in which the project is constructed.
4. If Harmony aluminum railings are installed contrary to the specific assembly described above and sealed engineering drawings are not available, then the railing is intended for decorative purposes only and cannot be used in applications where a structural railing system is required by building code.

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, Harmony does not provide any other warranty, either express or implied, and shall not be liable for any damages, including consequential damages.



# HARMONY RAILING™

## INSTALLATION INSTRUCTIONS

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[WWW.HARMONYRAILING.COM](http://WWW.HARMONYRAILING.COM).

## STAIR RAILING INSTALLATION

### ITEMS REQUIRED FOR INSTALLATION:

- Appropriate fasteners for mounting posts to deck surface
- Cordless Drill
- Pencil
- Safety Glasses
- Miter Saw W/Non-Ferrous Blade
- Level
- Tape Measure
- 6" #2 Sq. Drive Bit
- 3/16" Drill Bit

### IMPORTANT NOTES:

- Actual picket panel sizes: 6' Panels = 69.43"; 8' Panels = 91.31".
- 3" posts are required to reach 6' & 8' lengths.
- MAXIMUM POST SPANS ON STAIR RAILING APPLICATIONS IS 70" ON CENTER.
- Stair railing panels are shipped at a 37° angle. Panels are adjustable and will accommodate 30-40° stair angles. **CAUTION:** Over adjusting stair panels will cause loose and rattling pickets.
- 45° deck angles require 22.5° clips applied to each side of the post. The 22.5° clip kit is sold **SEPARATELY**.
- Using 2 Posts at top of stairs is recommended if compound angle cut is required.

