

## CONTINUOUS RAILING INSTALLATION INSTRUCTIONS (NON-FLAT TRACK 270)

(Franklin Shown, Madison Similar)

### INSTRUCTIONS

- Please read all instruction completely before starting any installation of our pro railing systems.
- Railing Panels come assembled with Top/Bottom Rails and balusters. Top Cap and hardware sold separately.
- Rail Sections come in 4ft, 5ft and 6ft sections.
- Posts sizes are 2"x2" square crossover style available with or without 1/2" thick flange plate with cover.
- Signature railings should be installed using accepted building principles in accordance with local building codes and the installation guidelines.
- Signature railings have been tested by ATI and meets the current testing standards for IRC and IBC construction codes.
- If you have any questions, please call YOUR distributor or check their website for more install details.
- **SAFETY:** Always be safe and follow all instructions when using power tools and always wear safety goggles!
- Any questions? Call 800-656-4420 and ask for your railing specialist.
- Visit our website for videos and other information: [www.ultrarailing.com](http://www.ultrarailing.com)



**IMPORTANT:** Consult your local building code official and check all Code Requirements  
**IMPORTANT:** If installing post lighting, wiring must be installed prior to securing posts.



### RECOMMENDED TOOLS

- Tape Measure
- Level
- Rubberized Non-Marking Mallet
- Hacksaw, Portable Ban Saw or Miter Saw with Aluminum Cutting Blade
- Cordless Drill, Battery & Charger
- Cordless Impact Driver, Battery & Charger
- Safety glasses, gloves and ear protection
- T-30 Driver, #3 Phillips Driver
- 13/64" Metal Appropriate Drill Bit
- Quick Clamp Grips



*These recommended tools are required. Your project may contain special considerations for accessibility or additional tools.*

### HARDWARE AND PROFILES

#### Signature Continuous Pre-Assembled Railing Kits include:

- Top Universal Glass/Baluster Track
- Bottom 2-Piece Rail
- 3/4" Square Balusters



#### Purchased individually: (You need the minimum following components to complete your Signature Continuous system)

- Bottom rails and mid rails (if applicable) require (1) 2-pc bottom universal bracket with screws per rail end. Horizontally adjustable brackets are also available for changes in layout. Same bracket is used for column or wall connections.
- **All panels require selection of either the Madison or Franklin Top Cap (12'-4" or 24'-8" lengths)**
- All mid (line) crossover posts require (1) straight line connector plate with screws and clamp
- All crossover posts used at ends require (1) end connector plate with screws and clamp
- All crossover posts used at corners require (1) corner connector plate with screws and clamp
- All top cap rails ending into existing buildings or columns requires (1) rail end w/ tab and clamp. Horizontally adjustable brackets are also available for changes in layout.

# POST PLACEMENT AND INSTALLATION

**NOTE:** The following installation guide covers the basics of installation for the Ultra Signature Continuous Railing system with ideal and simplistic layout. **Professional installation is recommended.** Your project and site conditions will vary and require logical and qualified adjustments to suit.

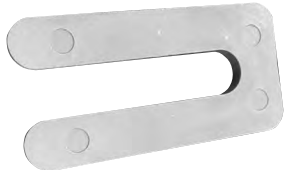
**STEP 1** To minimize cutting and maximize materials, it is important to layout post locations in a fashion that maximizes panel sizes. Panels lengths vary based on the product you purchased. Always measure your panels rail length to ensure the correct size and deductions are being used for proper posting. Your ornamental panel rail length should be as followed:

ORDERED PANEL SIZE	TOP RAIL LENGTH	BOTTOM RAIL LENGTH	BOT. BRACKET CLEARANCE PER SIDE	INSIDE POST TO POST DIM.	CENTER TO CENTER OF FLANGE PLATE
4'	50-3/16"	47-11/16"	1/4"	48-3/16" 5	0-3/16"
5'	63-9/16"	61-1/16"	1/4"	61-9/16"	63-9/16"
6'	72-1/2"	70"	1/4"	70-1/2"	72-1/2"

**STEP 2** Layout post centers based on the above chart for max panel sizes, any reduction in layout spacings will need to be figured as required.

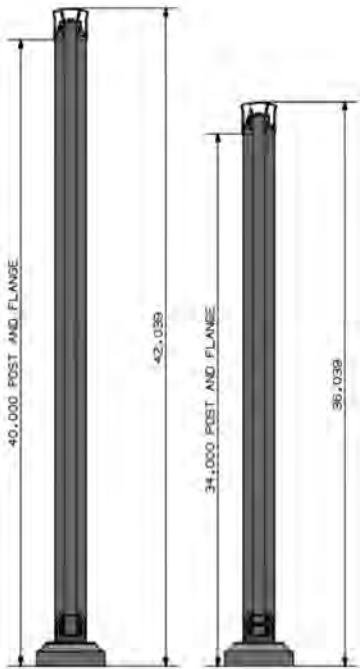
**STEP 3** Flange mounted posts must be installed on secure and stable substrates, such as concrete or secured decking substrate. NEVER install posts on unsecured block retaining walls, limestone caps or unsure substrates. **Failure to ensure the substrate is capable of exceeding the guardrail load requirements will result in injury or death.**

**STEP 4** Anchor posts using appropriate 3/8" diameter or 10mm anchors or bolts. Shim under plates as needed using the provided wedge shims (shown to the right) to ensure posts are plumb and level. Inside to inside dimensions must be identical at top and bottom.



**STEP 5** Top of concrete to top of 2" square crossover post must be 34.0" for 36" high and 40.0" for 42" high (See FIGURE 1). Continue installation of all posts, checking plumb, level, in line and inside dimensions as you go. Use of a string line for face of posts or ground markings for edge of plate is highly recommended.

**STEP 6** When using end posts with a welded crossover end cap, install the end post first, the gap between the face of the post and adjacent structure should never exceed 3-7/8" to not allow a 4" sphere to pass. Ultra recommends, conservatively, using 3-1/2" as your gap distance.



**FIGURE 1**

## TOP PLATES, UNIVERSAL TRACK AND TOP CAP INSTALLATION

### STEP 7

Install the top end plate (UARC-KL-WECE-U-9387-XX) or corner plate (UARC-KL-WCCF-U-93897-XX) with provided thread cutting screws into the (4) boss channels on the inside of the post (FIGURE 2). Ensure all (4) screws are snug.



FIGURE 2

### STEP 8

Place the included clamp onto the plate, aligning the extended edge against the top plate and install the (2) provided color matched self-drilling screws upward. Ensure the screws are snug (FIGURE 3).

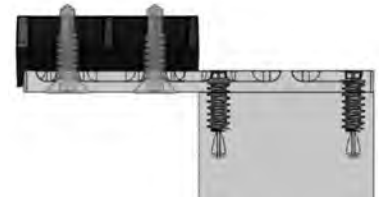


FIGURE 3

### STEP 9

Snap the included universal top track with welded top cap over the previously installed clamp (FIGURE 4). As shown, this is the welded end cap connection piece which is a predefined standard length of top cap and universal top rail.

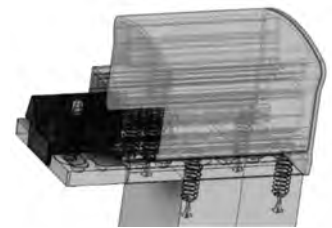


FIGURE 4

### STEP 10

Next, install the top straight-line connector plate (UARC-LP-U-XX) with provided (4) thread cutting screws into the (4) boss channels on the inside of the post. Ensure all (4) Screws are snug. (Similar to FIGURE 2)

### STEP 11

Place the included clamp on both sides of the straight-line connector plate and secure them with the (2) self-drilling color matched screws for each side, ensuring the extended edges of the clamp are lined up and centered on the plate. (Similar to FIGURE 3)

### STEP 12

Position the bottom universal 2-piece brackets (UMX-BL-2P10801-XX) centered and against the post, measuring from top of the base plate to the bottom of the bracket 1-1/2" (2" from grade to bottom of bracket if no flange plate is used) and secure the bracket to the post with the (2) provided color matching self-drilling screws. Repeat this step for the adjacent posts' bracket (See FIGURE 5).

### STEP 13

Slide the factory assembled railing panel so the bottom rail slides into the previously installed brackets as well as the underside of the top universal channel snaps into the previously installed clamps. Bottom or top rails may require trimming depending on your layout, and if so, should be done equally on both sides to allow the same picket gap on both ends. If your cap and panel are connecting to an existing column, **see step 14 prior to installing panel and cap.**

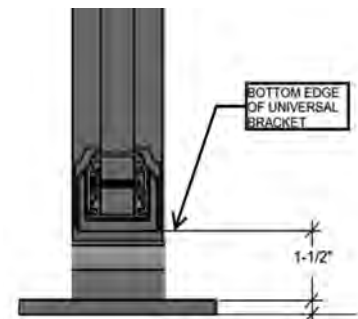


FIGURE 5

### STEP 14

If the top universal track, cap and bottom rail are connecting at an existing columns or wall instead of a post, ensure the rails are cut back 1/4" from the mounting surface and the top rail end brackets are slid onto the rails prior to securing the panel down and onto the clamps. Bottom 2-piece brackets are mounted using the same procedure from step 12.

### STEP 15

Should your Ultra Signature railing have a mid-rail, place these brackets at the mid rails location and secure the bracket and top piece of the 2-piece bracket as previously done for the bottom bracket.

## STEP 16

The *Franklin* top cap should be installed utilizing the longest lengths possible to minimize joint lines, caps are available as 12'-4" (RA-9387-IN148-XX) and 24'-8" (RA-9387-IN297-XX) lengths. Should the length of top cap be less than factory length, measure between the end of the fixed end or corner caps and cut the length of the rail to the exact dimension. Should the length of top cap be longer than factory length, install top caps in longest lengths possible placing the joint lines centered over posts.

## STEP 17

Install the Franklin top cap rail over the universal top rail applying downward pressure to secure the cap (FIGURE 6). The cap is fully installed once turned in ridges of the top cap snap into the recessed ridge of the top rail. Use of a small mallet with protective non-marring material may be used.

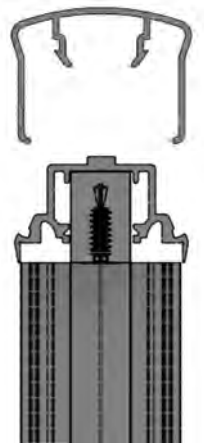


FIGURE 6

## STEP 18

Snap the top half of the 2-piece bracket over the bottom rails and secure them with a light tap from a mallet. Ensure this component is flush against the post and going straight down.

## STEP 19

Install the (2) piece flange covers (if applicable) around the 2" post shown in FIGURE 7 via pressing the friction fit pieces together.

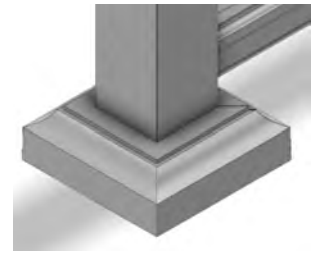


FIGURE 7

## STEP 20

Perform any touch up that may be required using Ultra Aluminum's touch up paint and discard all packaging materials.

## STAIR LAYOUT AND POST INSTALLATION

### NOTE:

The following installation guide covers the basics of installation for the Ultra Signature Continuous Railing system with ideal and simplistic layout. **Professional installation is recommended.** Your project and site conditions **will vary** and require logical and qualified adjustments to suit.

Many of the steps for successful installation of the Ultra Signature Continuous stair railings will be similar to those of the level system. These instructions assume you have successfully completed the steps required to install the level system and will apply assembly techniques in the same manor.

Post placement for utilizing the pre-manufactured stair panels require critical planning and placement to insure panel brackets and rake work with your conditions.

## STEP 1

Locate the top of stair post so that the face of the post closest to the top riser is no more than 3" away from the top riser. Properly shim the post to ensure it is plumb. Post must be in line with adjacent level panel posts. Secure the post to the substrate using 3/8" or 10mm hardware. Post height should match the height of your level panels (34" or 40" from top of concrete to top of post).

## STEP 2

Locate the bottom of stair post so that the face of the post closest to the bottom riser in no more than 3" away from the bottom riser. Properly shim the post to ensure it is plumb and in line with the adjacent posts. Secure the post to the substrate using 3/8" or 10mm hardware. Post height will be taller and require cutting the height down (54" post height).

### STEP 3

Should the stair run be longer than the maximum length of a stair panel (72"), a mid-post is required to split the panels equally. This post should be centered on top of the middle tread of your stair. This post will also be taller (54") in order to accommodate the height of the riser and will require field cutting. Do not cut the height of this post until the top of the panel height is verified.

### STEP 4

Building Code mandates dimensions for a stair railing must meet the following criteria, however, your governing bodies may differ, consult your local building department.

- a. Height of the panel when measured upward from the nose of any tread must be 36" minimum for residential single-family homes or 42" minimum for any multi-family or commercial applications (see FIGURE S1). Ultra Signature Continuous is designed to be set at 37" and 43" to the top of the top rail, respectively.
- b. The triangle formed between the sloping bottom rail, riser and tread must not allow a 6" sphere to pass through.

### STEP 5

The Ultra Signature Continuous stair panels are designed to rake up to 36 degrees simply by placing the panel on a solid surface and using a push down and over direction to rake the panel to the skew needed, up to 36 degrees. Once raked, place the panel sitting on the noses of the stair and ensure the pickets are plumb to match the posts. Adjust the rake further if needed or pull back to lessen the rake. Assuming the panel is longer than required, the same amount of top rail and bottom rail should be passed the posts. Center the panel amongst the posts and with a pencil, mark the post edge on to the rail at the top and bottom of the panel. Using a speed square on the lower side, mark a 90 degree line from the long side of the marked angle line, then mark a second line offset to inward toward the panel center 1". This is to account for the bracket clearance of the vertical adjusting brackets (UAR-BV-108S01-XX). Repeat this step for the top bracket, offsetting the squared off line 1" inward toward the panel center on the rail.

### STEP 6

Install the panel brackets, drop the panel in place onto the crossover cap swivel plate and into the bottom brackets. Install the self drilling countersunk color matched screws through the hole in the bracket into the railing as well as through the swivel plate into the crossover cap.

### STEP 7

In the longest lengths possible, install the top rail franklin cap in between the installed end caps and snap in place.



Ultra Aluminum Manufacturing, Inc.  
2124 Grand Commerce Drive • Howell, MI 48855  
Phone: 517-548-6755 • Fax: 517-548-6756  
800-656-4420 | [UltraRailing.com](http://UltraRailing.com)



Intertek  
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