



# PHOENIX FENCE VINYL PRODUCTS

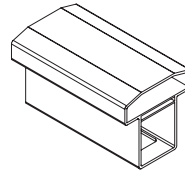
## Reliant & Sentinel Deck Stair Rail Installation Instructions

**TOOLS REQUIRED:** Tape Measure - Screw Gun  
Screw/Drill Bit - Chop Saw/Hack Saw - Square - Level

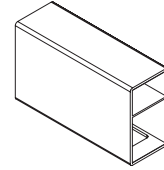
### DECK STAIR RAIL KIT CONTENTS

Components	6' Kit	8' Kit
<b>Top Rail</b> Reliant: 2" x 3-1/2" Webbed Reinforced Sentinel: 2" x 3-1/2" T-Rail Reinforced	(1)	(1)
<b>Bottom Rail</b> - 2" x 3-1/2" Webbed with pre-routed holes	(1)	(1)
<b>Reinforcing Insert</b> - for Top Rail	(1)	(1)
<b>2" x 3-1/2" Top &amp; Bottom Rail Brackets</b> - with nylon post brackets, covers and fasteners	(4)	(4)
<b>Balusters</b> - 1-1/2" Square x 36"	(15)	(21)

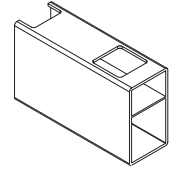
Sentinel  
2" x 3-1/2" T-Rail  
Top Rail



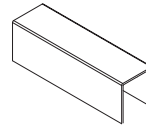
Reliant  
2" x 3-1/2"  
Top Rail



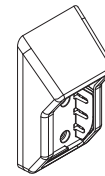
Reliant & Sentinel  
2" x 3-1/2"  
Bottom Rail



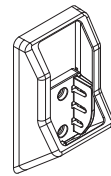
Top Rail  
Reinforcing Insert



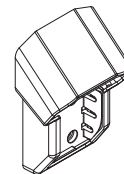
2" x 3-1/2"  
Upper Stair Bracket  
(A)



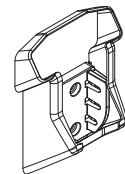
2" x 3-1/2"  
Lower Stair Bracket  
(B)



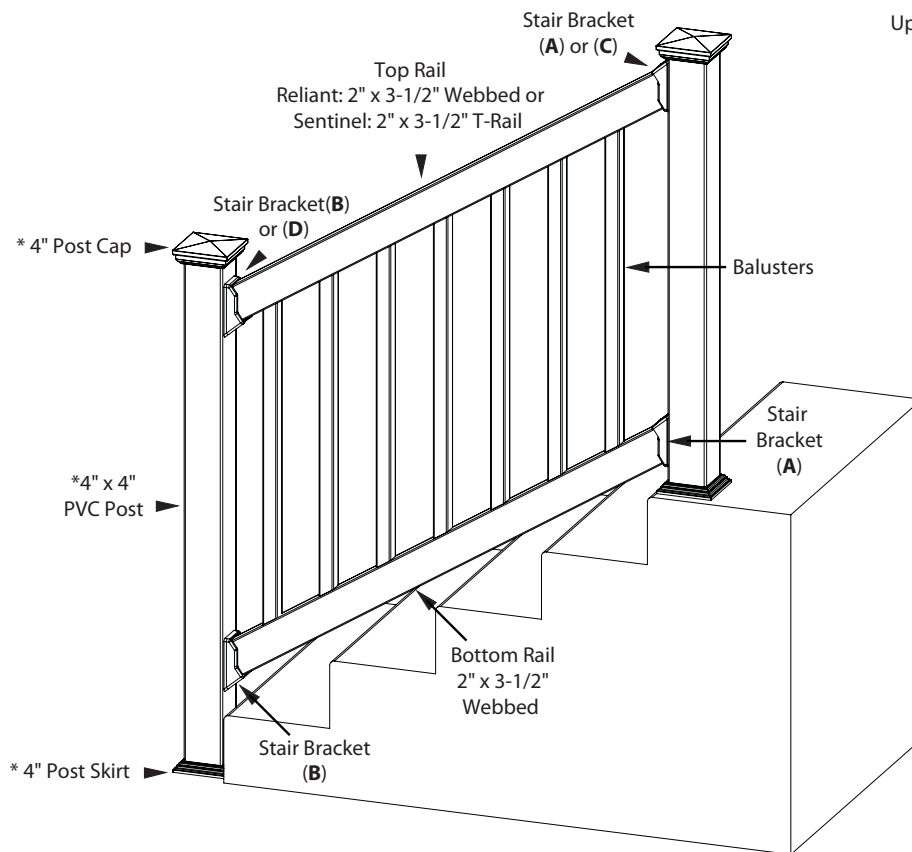
Sentinel T-Rail  
Upper Stair Bracket  
(C)



Sentinel T-Rail  
Lower Stair Bracket  
(D)



1-1/2" Square  
Baluster

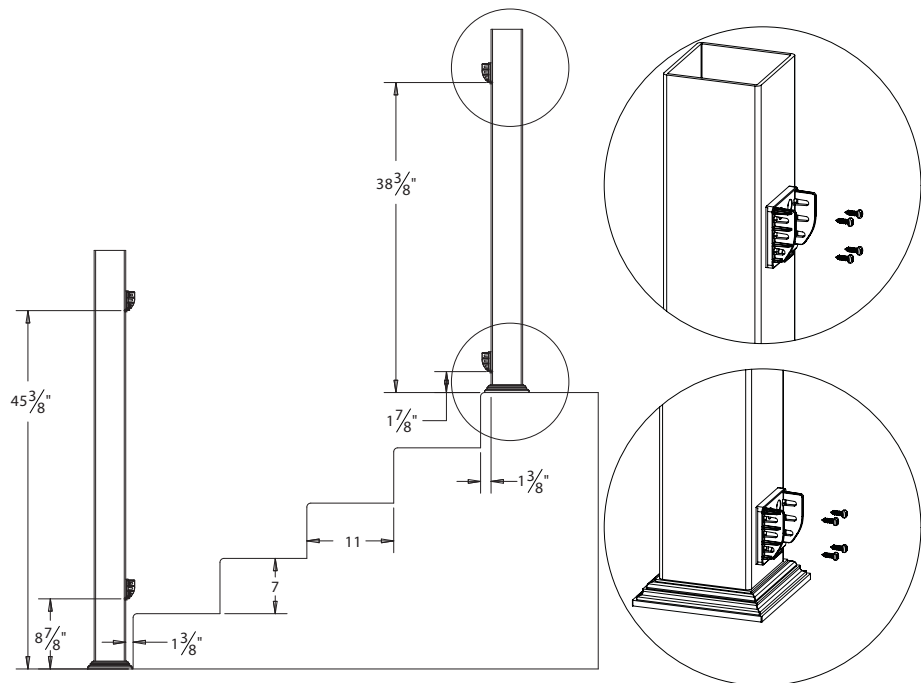


Reliant & Sentinel Deck Stair Rail Kits are designed for a standard 7/11 rise/run or a 32-1/2° angle. The following instructions and illustrations are designed with the upper post support fastened 1-3/8" from the edge of the porch or deck surface and the lower post support fastened 1-3/8" from the foot of the steps. (See illustration in Step 1)

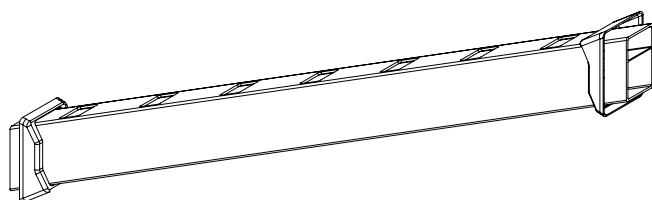
**Step 1 - Prepare and install posts and decking.** Prepare the posts and mounting surfaces to which the rail section will be attached. A "TRADITIONAL" installation uses a 4" x 4" vinyl post sleeved over a 4" x 4" treated wood post which is fastened to the deck sub-structure. The upper most 4" x 4" post (installed at the deck or landing surface) should extend 42" above the wood joist framed structure. The remaining 4" x 4" staircase posts should be cut 7" longer to accommodate the 7" stair riser (See illustrations below). Alternately, a "POST MOUNT" installation uses a 4" x 4" vinyl post sleeved over two 1-7/8" x 4" Post Sockets fastened to a 1-7/8" OD x 36" Galvanized pipe post with a 3-1/2" x 3-1/2" base plate for mounting directly on the wood, vinyl or concrete deck surface. Install decking boards around post supports. Refer to the decking installation instruction manual for the correct installation procedures of the deck boards. If vinyl post skirts are being used at the base of the posts, slide the post skirts into position so that they come to rest around the base of the 4" x 4" sleeved post.

**Step 2 - Secure post mounting brackets.**

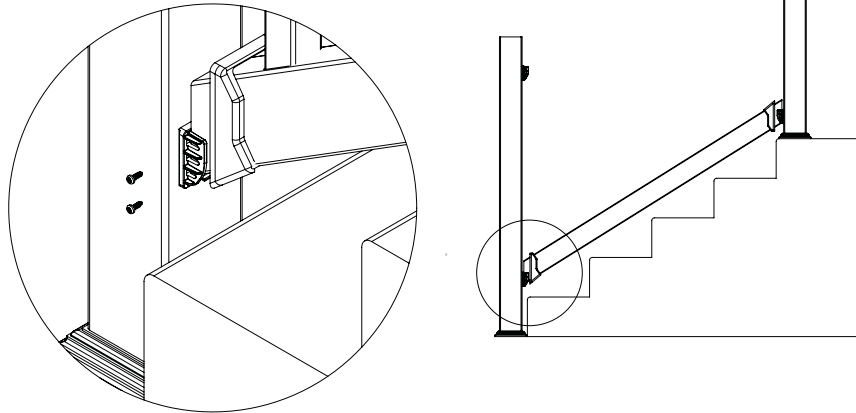
Attach the nylon post brackets to the sleeved vinyl posts by using the (4) #10 x 2" deck screws for the Traditional installation and the (4) #10 x 1" pan-head screws for the Post Mount installation. Measure and secure the bottom nylon post bracket 1-7/8" from the installed deck surface or top of step surface. Similarly secure the top nylon post brackets to the installed posts 38-3/8" from the deck or top of step surface.



**Step 3 - Measure and cut the bottom rail.** The 2" x 3-1/2" bottom rail has a series of routed holes on the top side. Measure the distance between the base plates of opposing nylon post brackets keeping the tape measure 1" above the end of the step treads while maintaining a 32-1/2° angle. If cutting of the bottom rail is necessary, cut an equal amount off both ends of the rail so to maintain uniform baluster spacing between the posts. Loosely position the 2" x 3-1/2" bracket covers on opposing ends of the bottom rail.



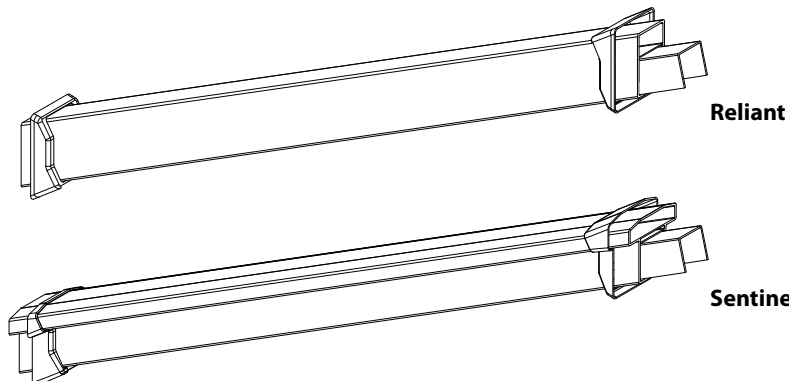
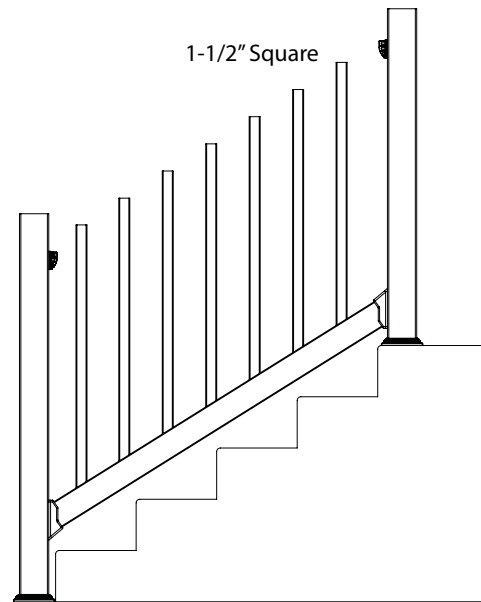
**Step 4 - Secure the bottom rail.** Attach the bottom rail to the nylon post brackets by using the (4) #10 x 1" pan-head screws. The bottom rail will be 1" off the step tread nosing with the rail inserted correctly into the nylon post brackets. Fasten two screws into each side of the nylon post bracket using the top and bottom slots of the nylon post brackets. Once secured, snap the 2" x 3-1/2" step bracket covers positioned in Step 3 onto the nylon post brackets.



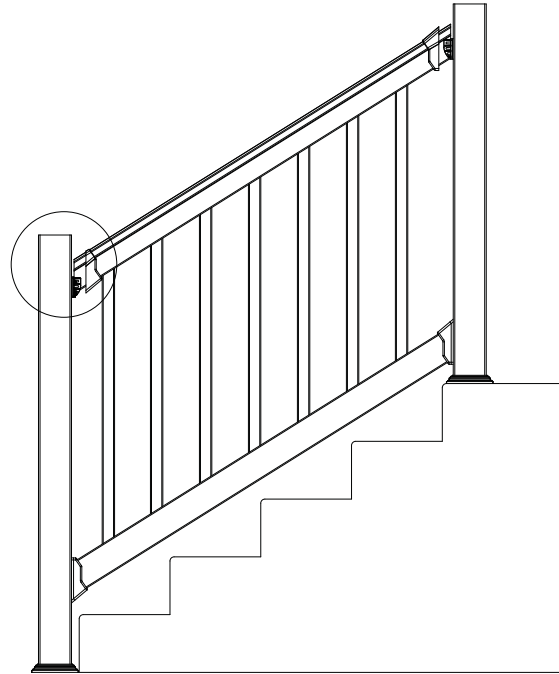
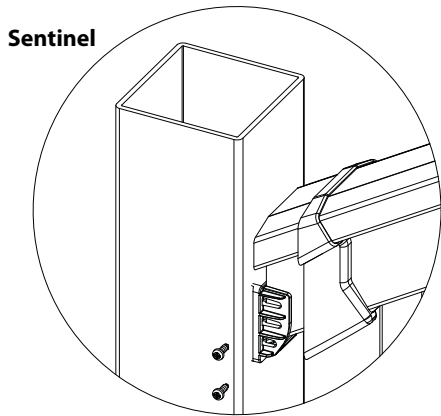
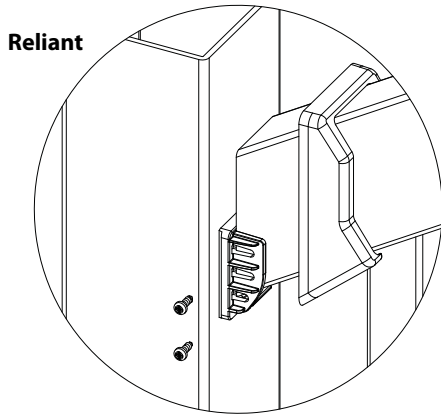
**Step 5 - Insert the balusters.**

Having secured the bottom rail into place, insert the balusters into the bottom rail.

**Step 6 - Measure and cut the top rail.** Both the Reliant and Sentinel top rail have a series of prerouted holes on the bottom side and an internal reinforcing insert. If cutting of the top rail is necessary cut an equal amount off both ends of the rail to maintain a uniform baluster spacing between the posts. The rail kits are provided with a reinforced insert that must be used. Cut the insert to the appropriate length of the measured top rail. Slide the insert into the top rail and loosely position the 2" x 3-1/2" bracket covers on opposing ends of the top rail.



**Step 7 - Secure the top rail.** Position the top rail over the exposed ends of the balusters so that it is positioned on the resting flange of the installed nylon post brackets. Attach the top rail to the nylon post brackets by using the (4) #10 x 1" pan-head screws. Fasten two screws into each side of the nylon post bracket using the top and bottom slots of the nylon post brackets. Snap the 2" x 3-1/2" bracket covers positioned in Step 6 onto the nylon post brackets.



**Step 8 - Finish the section.** Secure the 4" x 4" post caps onto the post tops by applying PVC adhesive to the internal surfaces of the post caps. Set the caps onto the post tops. Wipe off any excess adhesive.

