

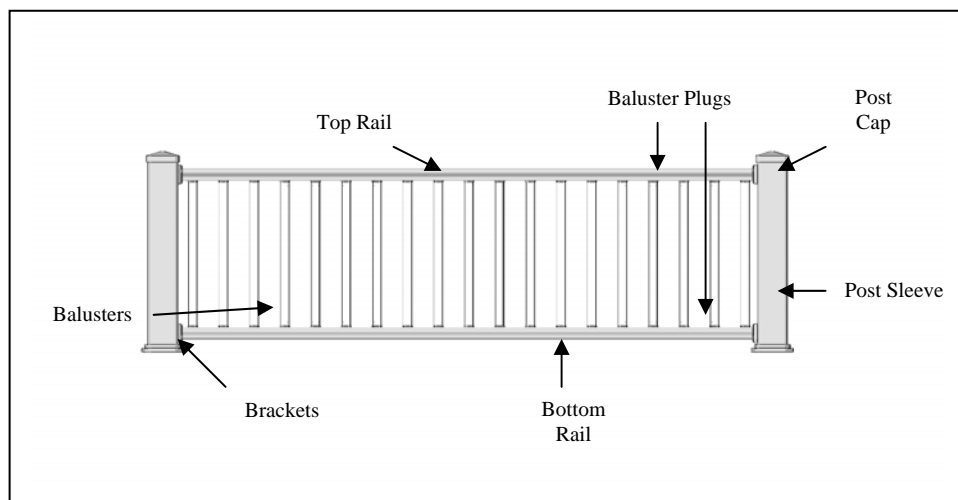
Charleston™ Railing System Installation Instruction

Before You Begin:

In order to achieve a trouble-free installation of Charleston, please read the following to insure proper installation.

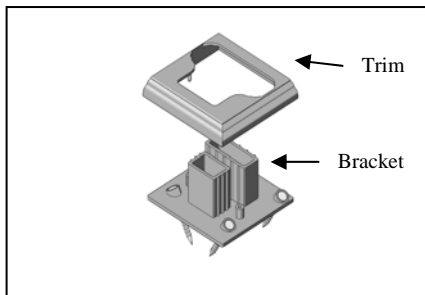
- Consult local building code for codes in your region.
- Our sections are true 6' or 8' free span sections and require a 73 1/4" or 97 1/4" opening between the wood 4x4 posts.
- Charleston post sleeves will close the 1 1/4" gap between the post and 1 1/4" section of railing to 72" or 96"
- Post skirts will not fit properly on deck if you notch the 4x4 post over the rim joist.

Charleston Railing should be disposed of with normal construction debris, Do Not Burn Charleston due to its material properties.



Hardware Mounting Kit Contains:

- Mounting Bracket (4)
- Bracket Trim (4)
- #10 x 2 1/2" S.S. (29) or (38) see below
- Flat Head Screw Square Drive (17)
- Foot Block Kit (1)

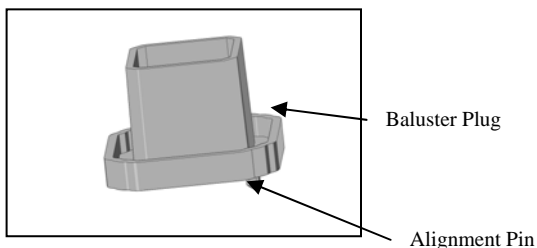


Baluster Kit – 6' Section Includes:

- Baluster Plugs (29)
- #10 x 2" S.S Pan Head Square Drive (29)

Baluster Kit – 8' Section Includes:

- Baluster Plugs (38)
- #10 x 2" S.S Pan Head Square Drive (38)



Installing Level Rails

Step 1

Install Post Cover over the 4x4 wood post per drawing

- Slide post cover and post trim over wood post
(Before installing railing section)
- Post should slide easily over post, DO NOT FORCE

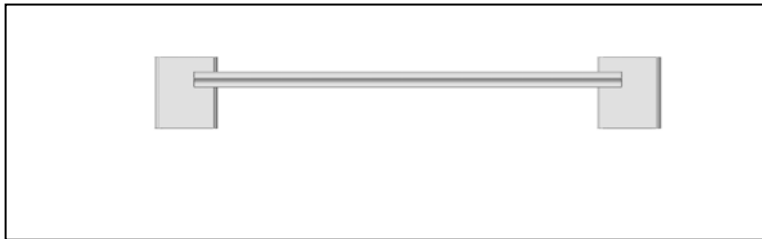
Step 2

Determining rail length

- The total rail length is measured by the distance between the post sleeves. Remember PC Ultimas free span lengths are 72" or 96"
- To achieve even baluster spacing, remove **EQUAL** distance from each end of the rail.

Helpful Tips

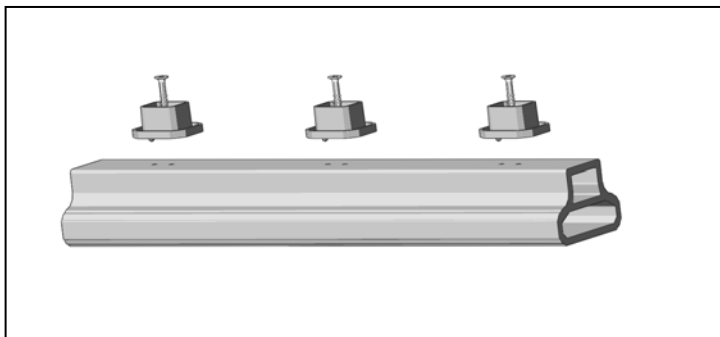
- Place the bottom rail between posts until equal spacing of baluster holes, use a scrap piece of wood to hold the bottom rail and scribe a mark.
- You will have to cut 3/16" more off on each side of your mark to allow for bracket and expansion of the rail.
- Make sure your posts are level and repeat process for the top rail.
- The spacing between the end baluster and post cannot exceed 4"



Step 3

Installing Baluster Plugs

- Install the baluster plugs to each rail top and bottom using the predrilled holes and the screws provided (#10x2" Pan Head Sq Drive S.S)
- Each baluster plug will have an alignment pin on the bottom; you need to make sure the alignment pins are installed in the same hole of every set to insure baluster plugs are lined up with each other from top and bottom rail.
- Insert Baluster Plugs for both the top and bottom rail.

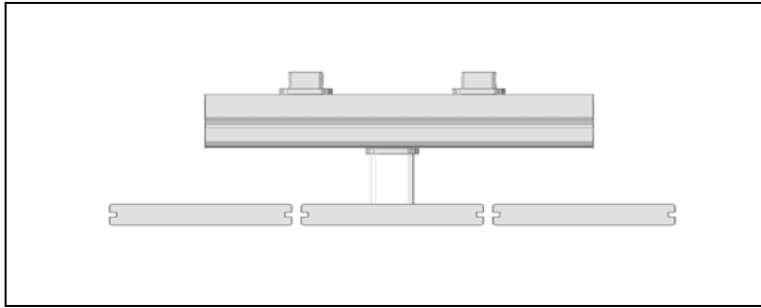


Step 4

Installing Foot Block

- Attach one baluster plug to the underside of the bottom rail using the pre-drilled holes with same screws (#10 x 2" S.S. pan head screw)

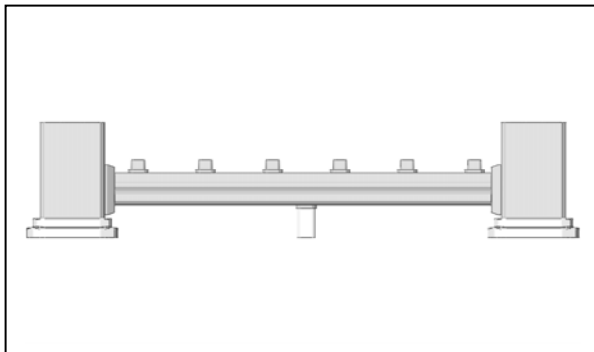
- Cut the foot block to the proper height with a miter saw depending on your local codes to mount flush between the bottom rail and deck surface.



Step 5

Installing Bottom Rail

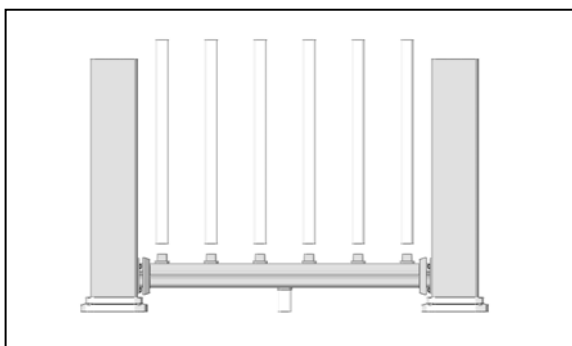
- Place trim and brackets on rail before installing the rail to post cover.
- Position Bottom Rail on blocks between the posts, this gives you the right height of rail depending on your local codes. (Most areas are 2"-2 1/2")
- Install your foot block before screwing down the bottom rail.
- Position bottom rail between posts and pre-drill 1/4" pilot holes through post cover and into post through the holes of the mounting bracket.
- Screw through rail brackets into post cover with the #10 x 2 1/2" S.S. flathead screws provided.



Step 6

Inserting Baluster

- Place balusters on the plugs installed on the bottom rail.
- Make sure bracket trim covers are between post and first baluster

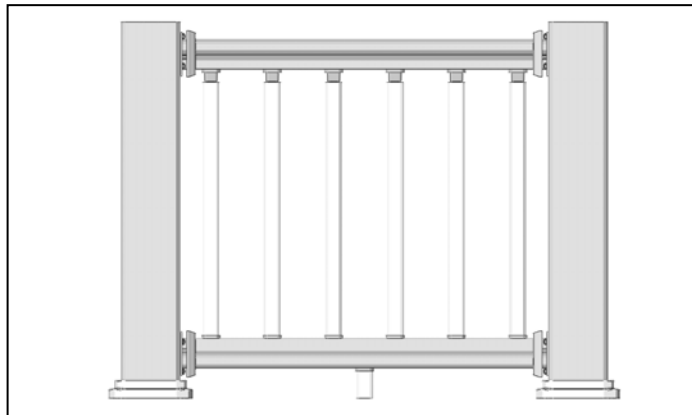


Step 7

Installing Top Rail

- Insert brackets and trim covers onto top rail before installing
- Make sure bracket trim covers are between post and first baluster
- Position top rail over installed balusters into the corresponding plugs of top rail
- After all balusters are seated in the top rail plugs, screw bracket to post with screws provided

- Position top rail between post and pre-drill 1/8" pilot holes through post cover and into post through the holes of the mounting bracket.
- Screw through rail brackets into post cover with the #10 x 2 1/2" S.S. flathead screws provided.



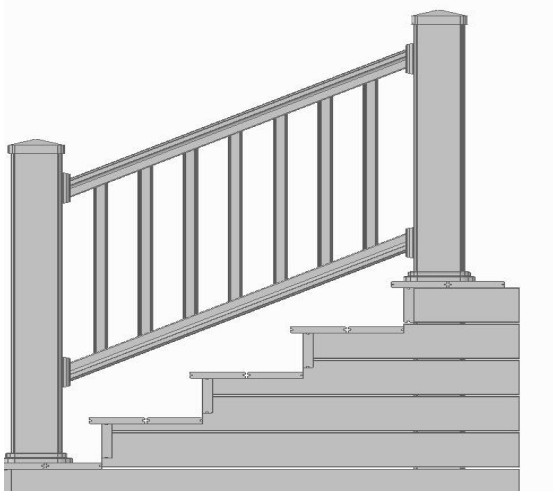
Step 8

Installing Trim Cover and Post Caps

- Apply a dab of an all purpose adhesive glue to inside mounting bracket cover where it will contact mounting bracket. This will help insure that the cover remain positioned properly over time.
- Finish off installation by positioning post cap by placing glue on inside of caps with PVC glue (not included)

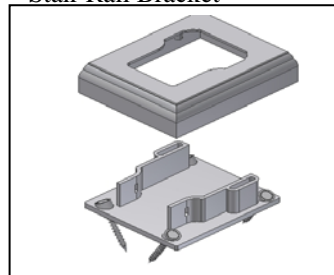
Stair Application Instructions

See "Before You Begin" (above)

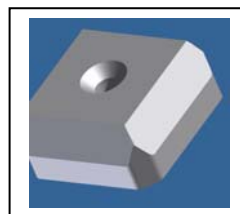


Hardware Mounting Kit:
 Mounting Bracket (4)
 Bracket Trim (4)
 #10 x 2 1/2" S.S. Pan Head
 Screw Square Drive (17)

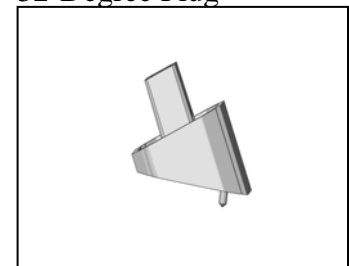
Stair Rail Bracket



Stair Plug



32-Degree Plug



Baluster Kit – 6' Section:

- Baluster Plugs (26)
- #10 x 2" S.S Pan Head Square Drive (34)

Baluster Kit – 8' Section:

- Baluster Plugs (36)
- #10 x 2" S.S Pan Head Square Drive (40)

Installing Stair Section

Step 1

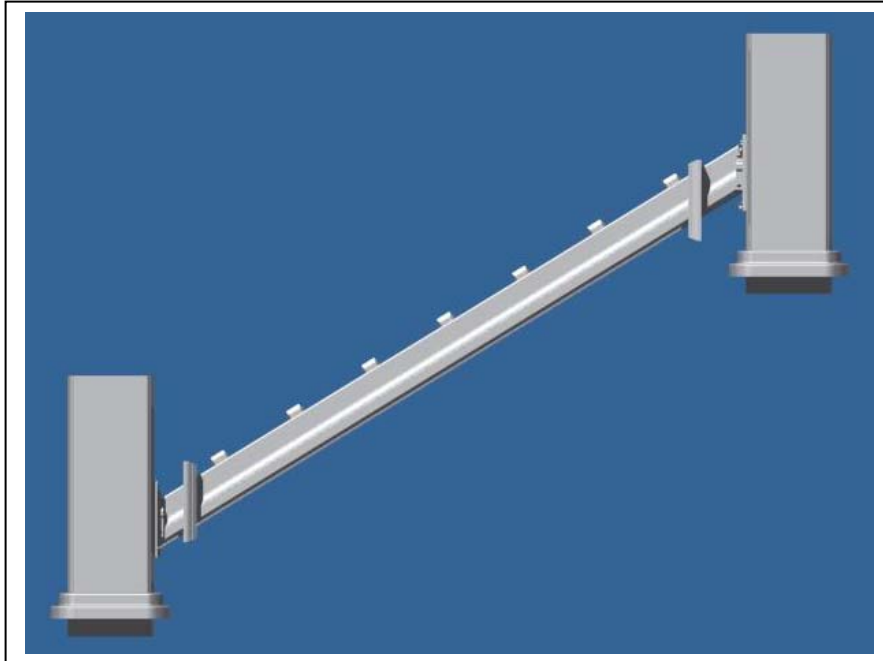
Install Post Cover over the 4x4 wood post per drawing

- Slide post cover and post trim over wood post
- (Before installing railing section)
- Post should slide easily over post, DO NOT FORCE

Step 2

Trimming Rails

- Check to ensure that posts and are plumb
- Determine measurements and angles as shown in the diagram below.
- Rail will have to be cut at the angle of your stairs and the bottom rail should rest on the top of your stair tread.

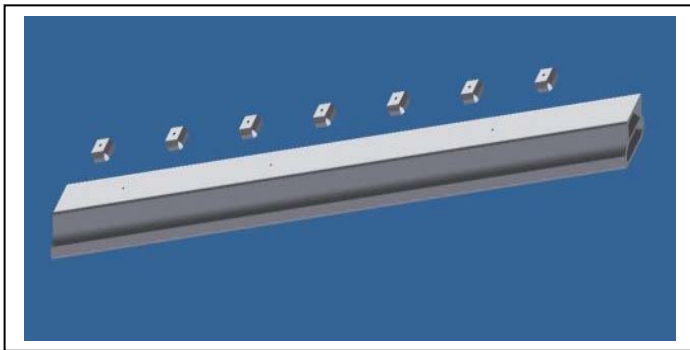


Note. You will have to cut the rail 3/16" shorter to allow for brackets

Step 3

Installing Baluster Plugs

- Installing the baluster plugs to bottom rail using the predrilled holes and screw provided (#10x2" Pan Head Sq Drive S.S)
- STOP! IMPORTANT! - If your rail is different then 32 Degrees you will need to cut baluster to stair angle and use the internal plug (see plug drawings above)

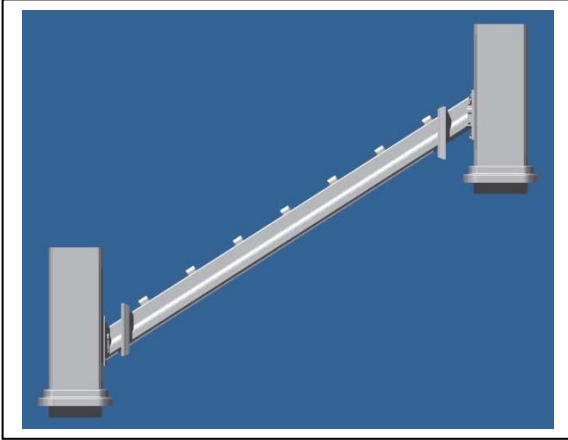


Step 4

Installing Bottom Rail

Note: make sure post trims are installed on post before installing bottom rail

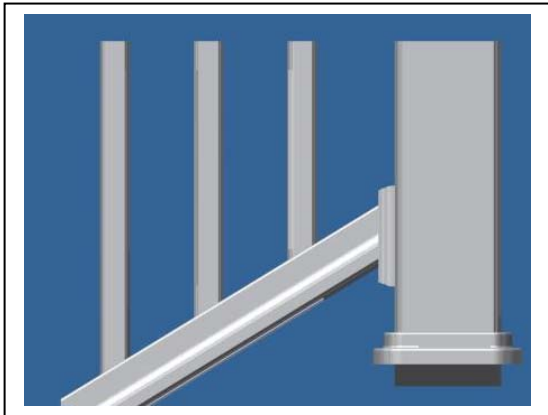
- Place trim and brackets on rail before installing the rail to post cover
(If your angle is more than 32 degrees you will have to file out the trim to the scribe marks on the inside, using a standard wood file.)
- Position the rail so the bottom is resting on your stair treads, Check with your local building codes.
- Position bottom rail between post and pre-drill 3/16" pilot holes through post cover, NOT the wood post
- Screw through rail brackets into post cover with the #10 x 2 1/2" S.S. flathead screws provided.



Step 5 – ONLY IF YOU ARE NOT USING 32-DEGREE PLUG

Cutting Baluster

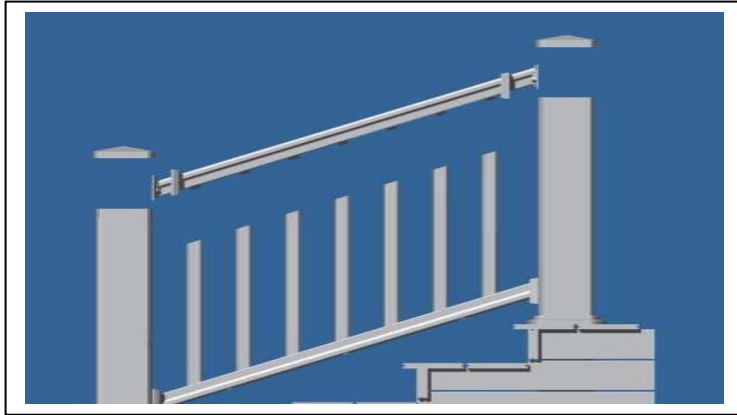
- Baluster will need to be cut to the angle of your stair rail top and bottom



Step 6

Installing Top Rail

- Cut rail following instructions from Step 2 for bottom rail.
- Install Baluster plugs.
- Place trim and brackets on rail before installing the rail to post cover
- Position Top Rail over installed baluster and plug each baluster into the corresponding plug.
- After all balusters are seated in the top rails plugs, pre drill rail bracket and screw bracket to post with screws provided (as in Step 5).



Step 7

Installing Post Caps

- Finish off installation by positioning post cap and placing glue on inside of caps with PVC glue (not included)
- Apply a dab of an all purpose adhesive glue to inside mounting bracket cover where it will contact mounting bracket. This will help insure that the cover remain positioned properly over time.

Top 10 time saving Tips from the Pro's

(These are some helpful hints, however please be sure that you have read all instructions)

Hint #1 - If installing a stair rail, you will want to align up the posts for this area first as you will need to position the post at the proper spot to yield enough clearance over the slope of the step.

Hint #2 – When installing post covers over 4x4's, its important that the 4x4's be as close to plumb as possible. Warped, bowed, or damaged 4x4's may need to be corrected or replaced with a new 4x4 or structural post mount. It is a good idea to inspect existing posts in advance of rail installation in case any adjustments need to be made.

Hint #3 – Have a helper screw baluster plugs into top and bottom rails in advance. The rail bracket cover will need to be installed on rail prior to securing the rail to the post. On the bottom rail only, leave the outer two baluster plugs off. This may give you a little additional room for screwing the rail mounting brackets. You can easily install them after the bottom rail is secured to post.

Hint #4 – To determine where to cut a level rail, you can save time by lining up the bottom rail by eye. Position the bottom rail against the outside of the two posts. Place the rail so the spacing on the baluster plugs are evenly spaced. Mark each side for cutting.

Hint #5 – Use a tape measure to determine if the top rail will be the same as the bottom rail. If so, lay both rails on the deck, align, and mark where top rail is to be cut. If the top rail spacing differs from the bottom rail, add or subtract half of the total amount from each side.

Hint #6 – The mounting bracket will need at least 1/8" spacing between the post trim and the mounting rail bracket to allow for mounting bracket cover. Check local building codes for required height of bottom rail. From a scrap piece of wood or rail, cut a piece to appropriate height to keep bottom rail positioned steady while screwing mounting bracket and rail to post. With baluster foot positioned in plug below midpoint of rail, slide this block under the appropriate side prior to screwing in rail bracket. This will help will eliminate any torquing effect that may otherwise occur.

Hint #7 – There needs to be sufficient spacing at the ends for the railing bracket cover to fit. The center of the plugs (where either the screw or the pilot holes are located needs to be at minimum 1 1/2" from the post)

Hint #8 – Make sure the balusters are recessed entirely in the baluster plugs.

Hint #9 – To install top-level rail, place the top of the baluster without securing railing brackets. Having two or more people helping position the balusters in top rail plugs will save time. Work from one direction to the other, with one person gradually positioning each baluster over each plug. Have someone else push down the top rail as each additional plug is aligned. Balusters need to be completely recessed in top and bottom baluster plugs for proper installation. It is helpful to use a rubber mallet to insure each baluster is entirely recessed in baluster plugs. Again, you should drill pilot holes through the post prior to fastening screws.

Hint #10 – Apply a dab of an all purpose adhesive glue to inside mounting bracket cover where it will contact mounting bracket. This will help insure that the cover remains positioned properly over time.