

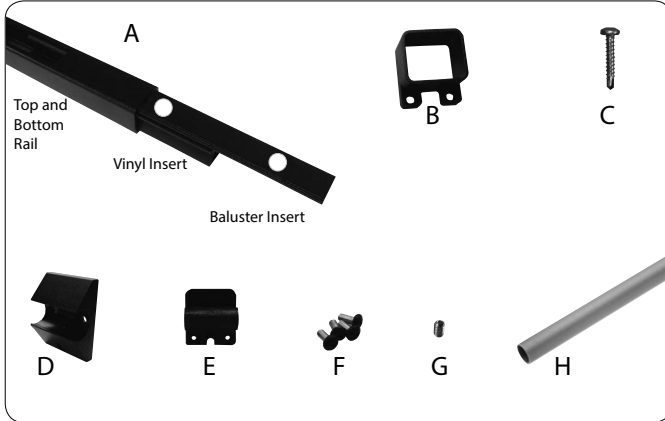
Instructions for Aspen Aluminum Adjustable Stair Rail

36" Height



COLOR GUARD
RAILING SYSTEMS

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Component List:

- A) Top & Bottom Rail Assembly with Vinyl & Baluster Insert - 2
- B) Rail Brackets - 4
- C) #10 x 1" Self-Drilling Screws - 10
- D) Adjustable Stair Bracket Base - 4
- E) Adjustable Stair Bracket - 4
- F) #10-32 x 7/16" Machine Screws - 8
- G) 1/4-20 x 1/2" Set Screws - 4
- H) Balusters - 13 - 6' section
18 - 8' section

Tools Required:

- Drill Bits: 5/32"
- #2 square drive hex bit 4" long
- Drill with Adjustable Clutch
- Miter Saw with Metal Cutting Blade
- Level
- Rubber Mallet or Wood Block
- Tape Measure
- Masking or Duct Tape
- 12" Combination Square
- 8" File
- Straight Edge
- Center Punch - optional
- Touch-up Paint - optional
- Silicone Adhesive - optional
- Shop Vac or Blower - optional
- 1/8" Hex Wrench
- Always wear safety goggles*

Installer is responsible for quality workmanship and meeting all building codes.

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ezTIPS

- Read and understand all instructions before starting your installation.
- Plan your railing project completely. A drawing or sketch is recommended.
- Check local building codes.
- Check all cartons for proper components.
- Paint all cut ends to protect from the environment.
- Use two people for best results.
- Wear personal protective equipment, such as safety glasses, gloves, etc.
- Pre-drilling of all holes is recommended.
- Do not over-tighten screws. **Set clutch on drill to lowest workable setting.**



Aluminum Post Placement & Installation

1. Secure top post to deck, level and plumb. **It is the responsibility of the installer to ensure proper installation, including adherence to all local codes.**
2. Place bottom post on lowest step or landing.
3. Place a piece of tape on baluster insert to keep from moving.
4. Place bottom rail against posts, baluster openings up.
5. Measure **horizontally** from both posts to the edge of the first baluster hole, the distance should be no less than 2 $\frac{3}{4}$ " on both ends. If you have less than 2 $\frac{3}{4}$ ", slide your rail to the left or right to remove a hole. **Move lower post as needed to achieve 2 $\frac{3}{4}$ " minimum spacing. Do not mount post until 2 $\frac{3}{4}$ " spacing is achieved.** Secure lower post, level and plumb.



Adjustable Stair Rail Installation

1. With both post collars removed, set the Bottom Rail Assembly (A) on stairs and against posts with baluster openings facing up. Place carpenter square against post and onto rail. Mark a horizontal line on both upper and lower posts, between posts.
Install collars.
2. **For 36" high stair rails:**
 - a. Upper post, measure up 31½" from horizontal line (step 1) and make a 2nd horizontal line.
 - b. Lower post, measure up 32¼" from horizontal line (step 1) and make a 2nd horizontal line. Then measure down 31½" from the 2nd line (step 2b) and make a 3rd horizontal line. Erase the original line from step 1.
 - c. You should now have 2 horizontal lines on each post, 31½" apart.
3. **For 2"x2" posts**
 - 3a. Place a vertical mark 7/16" in from the outer edge of each post that intersects with the 4 horizontal lines from step 2. Pre-drill a 5/32" hole on each mark, 4 holes total.**For 3"x3" posts**
 - 3b. Place a vertical mark 7/8" in from the outer edge of each post that intersects with the 4 horizontal lines from step 2. Pre-drill a 5/32" hole on each mark, 4 holes total.
4. Install set screw (G) into each base (D). Use screw (C) to attach base (D) onto the posts, 2 on upper post and 2 on lower post, using the pre-drilled holes in step 3. Using a carpenter square to keep base level, pre-drill 5/32" hole through post and install screw (C). Two bases should now be attached to each upper and lower post.
5. Install (2) Adjustable Stair Brackets (E) with the screw holes facing down to each base closest to the stair. Rotate bracket (E) until the face is perpendicular to the stair angle. Tighten each set screw.
6. Place a 2x4 flat onto the stairs against the posts. Set the Bottom Rail Assembly (A) onto the 2x4 with the baluster openings facing up. Slide the Bottom Rail Assembly (A) on the 2x4 until the baluster openings are centered between the posts. Check that there is at least 1-1/4" from the face of the Adjustable Stair Brackets (E) to the first baluster opening. This will ensure the Rail Bracket (B) has proper clearance. Place a clamp onto the Bottom Rail Assembly (A) and either post to keep it from moving. Mark the bottom rail at the intersection of the face of the Adjustable Stair Brackets (E) and the Bottom Rail Assembly (A) for each post. Mark the rail "T" near the upper post. Be sure the "T" is at the upper post during assembly. Remove the Bottom Rail Assembly (A) and cut on each mark. Check that the rail fits between the brackets. Trim rail if needed.
7. Slide (2) Rail Bracket (B) onto Bottom Rail Assembly (A), with baluster openings facing up, and the tabs on each bracket facing down and out. Set Bottom Rail Assembly (A) between posts and attach to Adjustable Stair Brackets (E) using (4) #10-32x7/16" (F) screws, 2 into each bracket. Check that each set screw (G) in the bottom bases are tight.
8. Install (2) remaining Adjustable Stair Brackets (E) into the 2 remaining bases, 1 on each post. Rotate bracket (E) until the face is perpendicular to the stair angle. Tighten each set screw (G).
9. Install (1) baluster (H) into the highest and (1) baluster (H) into the lowest baluster opening in the Bottom Rail Assembly (A). Set the Top Rail Assembly (A) onto the 2 balusters. Check that the remaining baluster openings on the top and bottom rails are equal. Push Top Rail Assembly (A) against posts. Move Top Rail Assembly (A) until balusters are plumb and equal to posts. Mark the top rail at the intersection of the face of the Top Adjustable Stair Brackets (E) and the Top Rail Assembly (A) for each post. Mark the rail "T" near the upper post. Be sure the "T" is at the upper post during assembly. Remove the top rail and cut on the marks. Check that the top rail fits between the brackets.
10. Slide the Brackets (B) onto the top rail, with the mounting holes facing down and out. Turn rail over so the baluster openings are facing up. Position the bracket flush with the end of the rail, locate the bottom mounting hole, and pre-drill a 5/32" hole. Install (1) #10x1" (E) screw through bracket and into rail. Repeat for opposite end of rail.
11. Install remaining balusters (H). Attach top rail to balusters. Position top rail between top brackets and install #10-32x7/16" machine screws, 2 on each bracket. Tighten set screws (G) in top bases.
12. Install caps onto posts.