# TREX SIGNATURE® X-SERIES™ STAIR CABLE RAIL

Installation Instructions



#### NOTES:

- » PLEASE READ ALL INSTRUCTIONS BEFORE BEGINNING INSTALLATION. USE ALL REQUIRED PARTS WHERE SPECIFIED. TWO PEOPLE ARE RECOMMENDED FOR THIS INSTALLATION.
- » X-SERIES ANCHOR POSTS MUST BE USED AT ALL STAIR POST LOCATIONS. DO NOT USE PASS-THROUGH POSTS. FOR 36" RAIL HEIGHT, USE 43" X-SERIES POSTS; FOR 42" RAIL HEIGHT, USE 53" X-SERIES POSTS.
- » FOR A 6' STAIR RAIL, POST TO POST SPAN WILL BE LESS THAN 6'. PRIOR TO INSTALLING STAIR POSTS, CALCULATE POST-TO-POST SPAN USING THE MAXIMUM STAIR RAIL LENGTH REQUIRED AND THE ANGLE (32°-37°) AT WHICH THE STAIR RAILS WILL BE INSTALLED. DO NOT INSTALL STAIR POSTS AT 6' HORIZONTAL SPAN, AS STAIR RAILS WILL THEN BE TOO SHORT.
- » X-SERIES STAIR CABLE RAIL IS ONLY COMPATIBLE WITH X-SERIES ANCHOR POSTS. IT CANNOT BE USED WITH STANDARD SIGNATURE POSTS OR PRESSURE-TREATED POSTS/POST SLEEVES.

# **Tools Required:**

- Please wear safety glasses during installation.
- Note that tools are NOT included unless otherwise specified.

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- WD-40 Specialist® Corrosion Inhibitor (RECOMMENDED for saltwater environments)
- Min 18V drill
- Min 18V impact driver (post install only)
- Clamp
- Tape measure
- 3/4" socket
- Hammer

- Level
- 9/16" drill bit
- 9/64" drill bit
- Cable cutters
- 5/32" Allen wrench
- 3/32" Allen wrench
- T-20 drive bit
- Cable tension gauge
- Turnbuckle wrench (included)
- Adjustable wrench (if needed)

WD-40 Specialist\* Corrosion Inhibitor is a registered trademark of WD-40 Company.

## 6' Stair Cable Rail Configuration

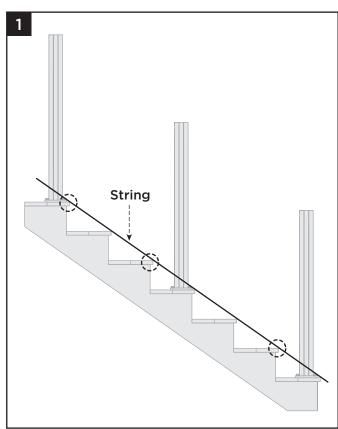
- » (2) X-Series Anchor Posts (sold separately)
- » (1) 6' Top Rail
- » (2) Compound Swivel Bracket Packs
  - (1) Compound Swivel Bracket
  - (1) Screw Pack
  - (1) Top Rail Locking Assembly
- » (2) Cable Infill Adapters

- » (1) Cable Brace (w/ set screws included)
- » (1) Turnbuckle Wrench
- » 6' Cable Assemblies

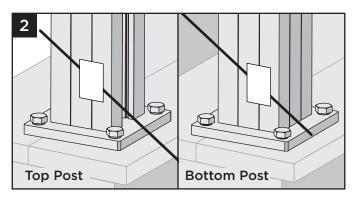
(Qty 11 for 36" height) (Qty 13 for 42" height)

NOTE: Install X-Series Anchor Posts as per instructions provided with these posts, then proceed to instructions below. Ensure that the stair posts are installed close to the nose of the stair tread.

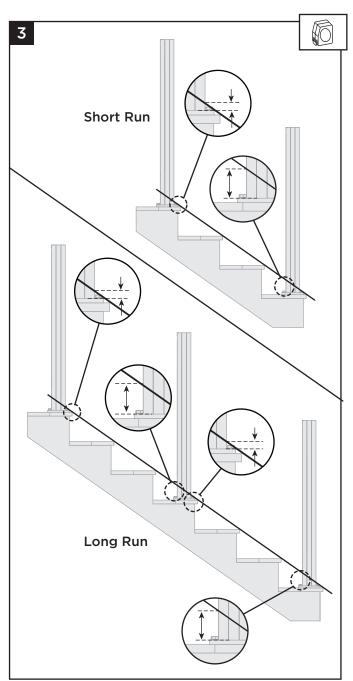
# Measuring and Marking X-Series Anchor Posts



 Run a string line from the front face of the bottom X-Series Anchor Post to the back face of the topmost X-Series Anchor Post, ensuring that the string line touches the stair tread nose closest to each post. If applicable, string line will run across multiple X-Series Anchor Posts for long stair runs.



2. Tape string line to top and bottom X-Series Anchor Posts. Ensure that string line is taut and straight.



- 3. Measure up from top of baseplate to stringline at each post location as shown.
- 4. Add 7/8" to each measurement taken above and document this dimension at each post location to establish the bottom cut dimension for each cable infill adapter. Do not assume measurements will be the same at all post locations.



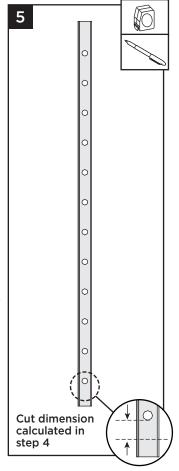


### Measuring and Cutting Cable Infill Adaptors

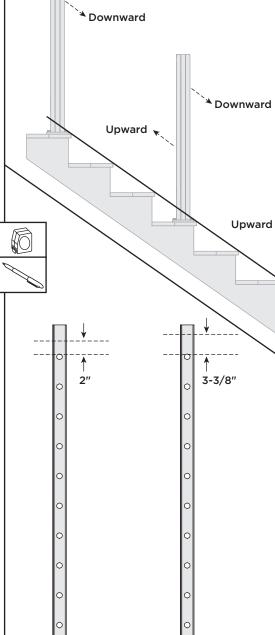
5. Use the cut dimension calculated in step 4 to establish the bottom of each cable infill adapter. At one end of the cable infill adapter, measure from the edge of the hole closest to the end, and mark and cut at this location. Repeat for each cable infill adapter.

### Important Notes:

- » Stair cable infill adapters are reversible and can be cut from either end for the first cut.
- » Be sure to designate which cable infill adapter goes with each post. Mark location and orientation of each cable infill adapter after cutting.

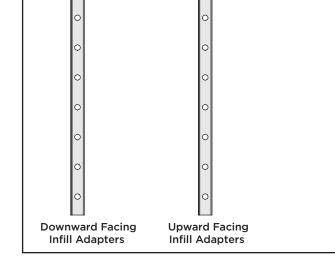


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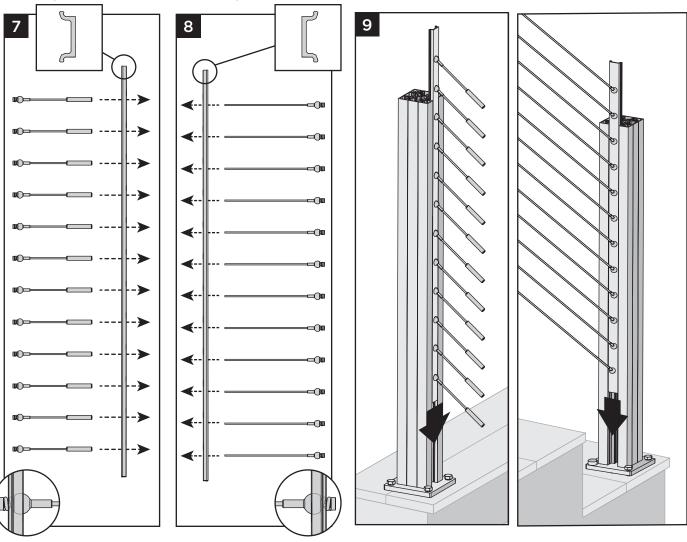


- 6. Cut the opposite end of each cable infill adapter to establish the top.
- » For downward facing cable infill adapters, measure up 2" from top of top hole and cut.
- » For upward facing cable infill adapters, measure up 3-3/8" from top of top hole and cut.

Important Note: Do Not throw away these cut pieces as these will be used later.



# **Inserting Cables into Cable Infill Adapters**

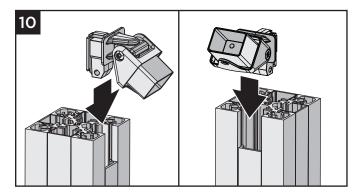


- 7. Insert short cables into cable infill adapter as shown.
- 8. Insert long cables into opposite cable infill adapter as shown.
- 9. Slide cable infill adapters into X-Series Anchor Posts as shown.

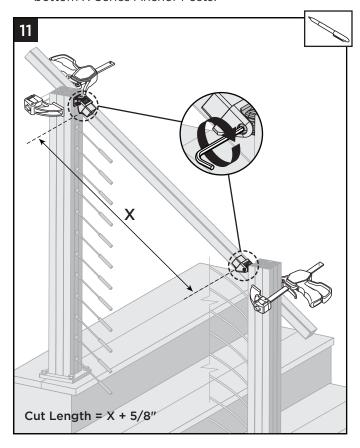
**IMPORTANT:** Ensure cable infill adapters are oriented correctly and installed into their designated post location as marked in step 5.



### **Measuring and Cutting Top Rail**

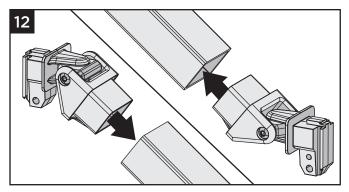


10. Slide compound swivel brackets into top and bottom X-Series Anchor Posts.



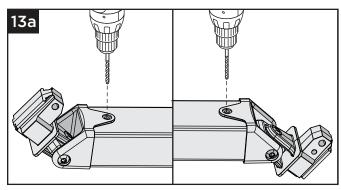
11. Clamp top rail to side of X-Series Anchor Posts, ensuring that top rail is running parallel to the stairs. Adjust each compound swivel bracket to align with direction of top rail and hand-tighten screws using a 5/32" Allen wrench to temporarily stabilize the brackets. Measure between the brackets as shown, add 5/8" and cut top rail to this length.

# Inserting Brackets onto Top Rail



 After removing compound swivel brackets from X-Series Anchor Posts, insert brackets onto top rail as shown. Ensure that brackets are fully seated.

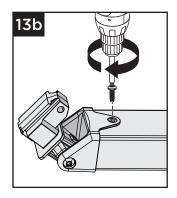
## **Pre-Drilling Top Rail at Bracket Locations**



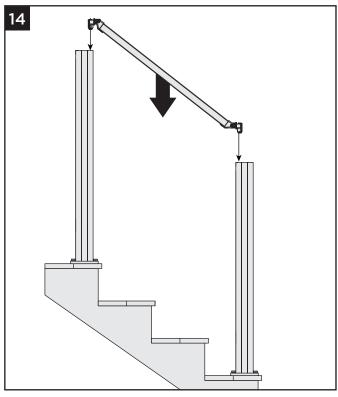
13a. Using a 9/64" drill bit, pre-drill at all bracket locations as shown.

**Note:** Only pre-drill through the first layer of the rail and bracket.

13b. Install #8 x 1/2" screw into compound swivel bracket at top post location only.

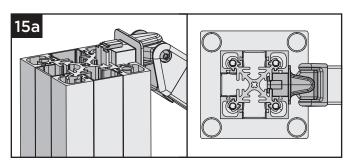


### Installing Compound Swivel Brackets in X-Series Anchor Posts

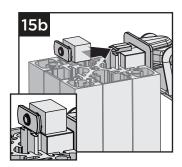


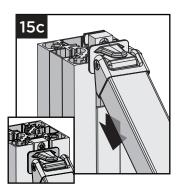
Note: Cables removed from image above for clarity.

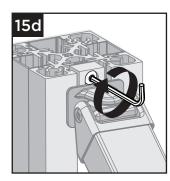
14. Install top rail onto X-Series Anchor Posts.



- 15a. Position the compound swivel bracket PARTIALLY into the X-Series Anchor Post as shown.
- 15b. Slide top rail locking assembly onto the dovetail on the top of both brackets.

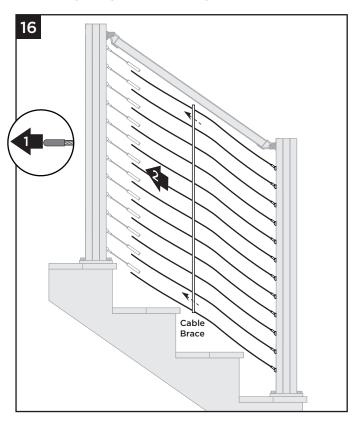






- 15c. Slide the bracket down until it sits on the cable infill adapter. Note that the screw in the locking assembly may need to be loosened to allow the locking assembly to fit properly in the X-Series Anchor Post.
- 15d. Tighten screw in locking assembly using a 5/32" Allen wrench.

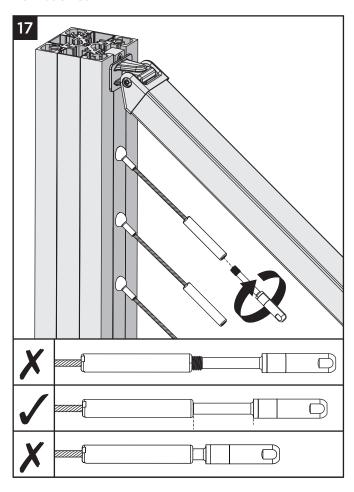
### Threading Long Cables Through Cable Brace



16. Remove cover on end of each cable. Thread cables through the holes in the cable brace.

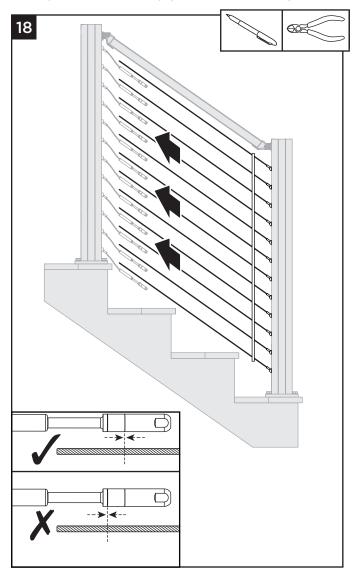


# Threading Push-to-Connect Fittings into Turnbuckles



17. Thread each push-to-connect (PTC) fitting into the turnbuckle on each short cable until the threads just disappear in the turnbuckle. Ensure threads are flush with the end of the turnbuckle.

# Cutting Long Cables (Safety Note-Wear safety glasses when cutting cables)



18. Pull each long cable taut and straight by hand and mark cable at cut line on PTC fitting as shown. Cut each long cable on mark using cable cutters.

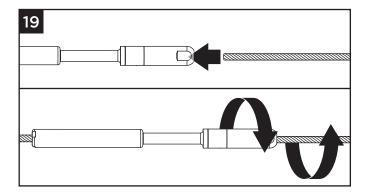
### Notes:

- » BE SURE TO USE GOOD CABLE CUTTERS. DO NOT FRAY CABLE ENDS.
- » THIS APPLICATION MAY REQUIRE TWO PEOPLE IN ORDER TO PULL CABLE TAUT AND CUT.

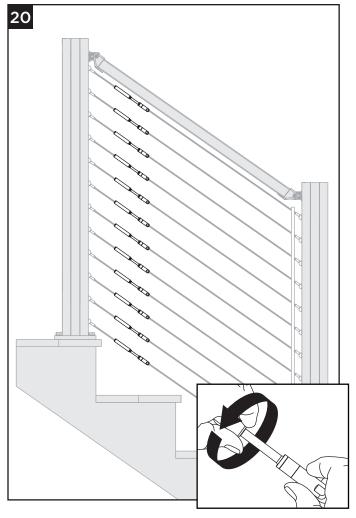
### Installing Long Cables into Push-to-Connect Fittings and Tensioning Cables

#### **IMPORTANT NOTE:**

» If installing X-Series Cable Rail near saltwater environments, spray a small amount of WD-40 Specialist® Corrosion Inhibitor in the open end of the PTC fitting before inserting the cable. Do this IMMEDIATELY before inserting the cable to prevent dirt and dust from collecting inside the fitting. Use caution not to get this on the decking surface! Protect decking from drips and runs.

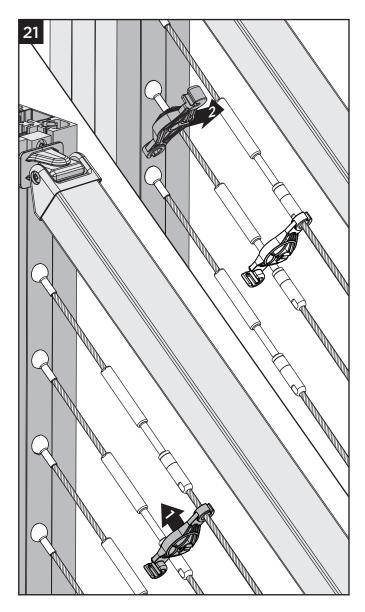


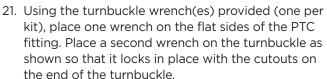
19. Push the end of each long cable into opposite PTC fitting, slightly rotating the PTC fitting counterclockwise and cable clockwise (approximately 1/4 turn) until cable is fully seated.



20. Hand-tighten all cables by holding the PTC fitting fixed and rotating the turnbuckle. Do NOT rotate PTC fitting when tightening cables.

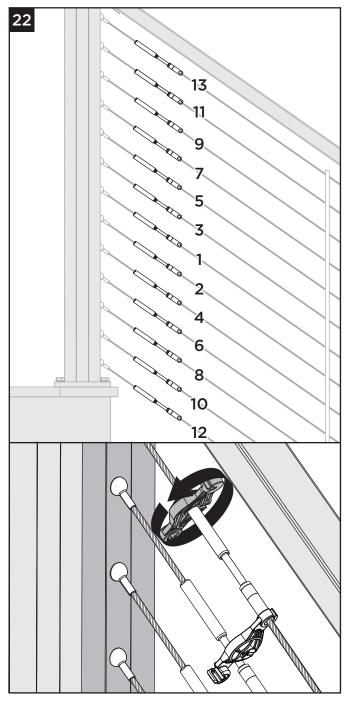






# Notes:

- » An adjustable wrench can also be used on the flat sides of the PTC fitting.
- » Use the release tool on the turnbuckle wrench to release the cable from the PTC fitting if needed. PTC fittings are intended to be single use after the cable has been tensioned. Do NOT reuse PTC fittings after tensioning.

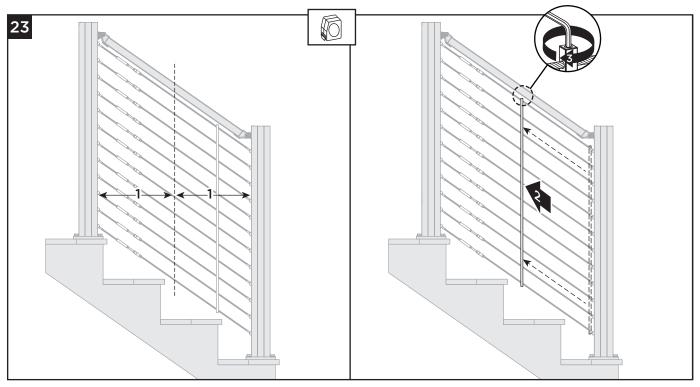


- 22. Tension each cable to 100 lbs by rotating the turnbuckle-side wrench. Do NOT rotate PTC fitting when tensioning cables. Tension cables from the center outward, following the sequence shown. Repeat sequence as necessary until all cables are fully tensioned.
- » NOTE: 42" rail height (with 13 cables) shown here.

# TREX SIGNATURE® X-SERIES™ STAIR CABLE RAIL

**Installation Instructions** 

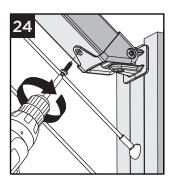
# **Centering Cable Brace**



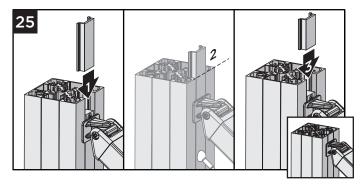
23 Locate the center of the span and slide cable brace to its center position. Ensure that cable brace is straight/vertical, and then tighten both top and bottom set screws using a 3/32" Allen wrench.

### Fastening Top Rail to Bracket at Bottom Post

24. Install #8 x 1/2" screw into compound swivel bracket at bottom post location.



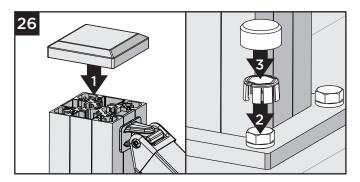
### **Cutting and Installing Top Inserts**



25. Use the leftover cut pieces of the cable infill adapters to fill the open channel above each bracket in the X-Series Anchor Posts by trimming each piece to be flush with the top of the post as shown.



# **Final Installation Steps**



26. Install post caps and bolt caps to complete installation. For bolt caps, align hex shadow line on inner cap with bolt head before installing outer cap.

NOTES	

