# Installation Instructions for Wood Posts on Stair Runs, Tensioning



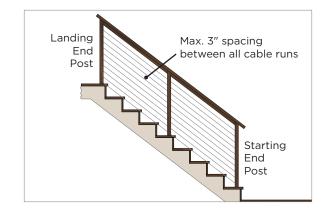
Toggle

Supplied with two #8 x 1-3/4" stainless steel alloy 316 screws for wood posts. Fasteners for metal posts are not supplied.



## **A. Post Preparation**

A1. Ensure that framework for End Posts and Intermediate Posts have been mounted to the stair or staircase.



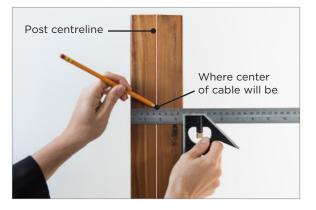
A2. Begin at the lowest cable run of the Starting End Post and run a chalk line to the top of the Landing End Post. Snap and mark the chalk line parallel the slope angle of the stairs. Measure 3" on center perpendicular to the line snapped and sequentially snap and mark a chalk line for the cable runs above.

#### **IMPORTANT INSTALLATION NOTE**

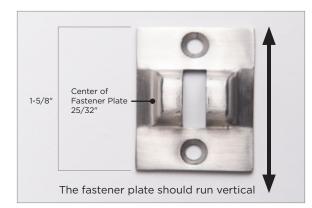
#### STAIR RUNS LESS THAN 25'

Prior to installing the tensioner CR1630 ensure that the cable and non-tensioner CR1635 fitting is affixed to the cable on the opposing end post.

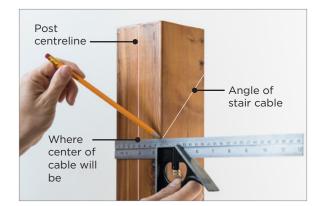
**STAIR RUNS MORE THAN 25' AND LESS THAN 45'** CR1630 tensioning fitting must be affixed to each end post.



A3. Using a carpenter's square, measure and draw a line to the inside of the post face to find the center of your cable. Use the fitting as a guide to determine to centerline.



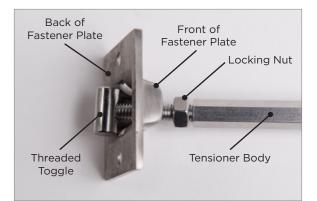
- A4. The center of each Fastener Plate must be spaced 3" on center. Draw a line across the face of the Fastener Plate to determine the horizontal centerline. Mark the holes on the centerline of the end post for drilling beginning from the top of the end post.
- A5. End post: Drill a pilot hole using a 1/8" drill bit for wood. Drill 1/2" deep, <u>do not</u> drill through the end post.



A6. Intermediate post: Determine the marked angle on the post. An angled jig (not shown) can aid in drilling on an angle to minimize errors. Drill at the marked angle through the intermediate posts to accept 1/8" cable with a 5/32" drill bit. Ensure that the drill holes are in line and at the same angle as subsequent intermediate posts before drilling. Remember to measure twice, drill once.

NOTE: The maximum hole spacing must be 3" apart to meet Building Code requirements

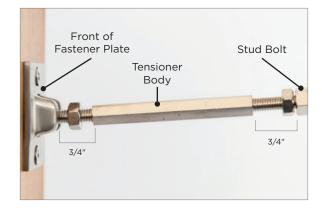
# **B.** Fastening the Tensioning Body to the Post



B1. To allow for the Fastener Plate to be securely attached to the end post with screws ensure that the threaded toggle can swivel freely within the base. The Locking Nut may need to be backed away from the front of the Fastener Plate.

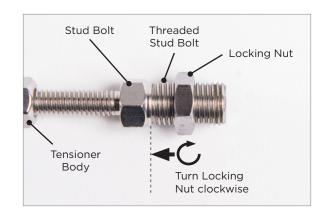


B2. Affix the Fastener Plate to the post with the two  $\#8 \times 1-3/4"$  stainless steel alloy 316 screws for wood posts.



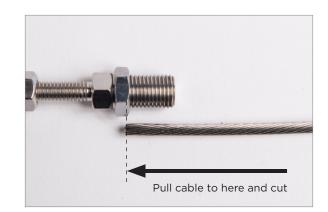
B3. Ensure there is a 3/4" gap between the Fastener Plate and the Tensioner Body as well as a 3/4" gap between the Tensioner Body and the Stud Bolt. Adjust the Hex Shaft on the Threaded Toggle and Tensioning Screw until a 3/4" gap on each side of the Tensioning Body has been achieved.

## C. Fastening the Locking Nut to the Threaded Stud

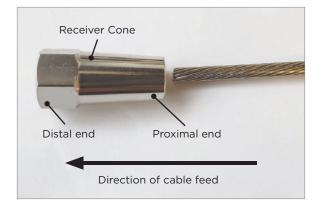


C1. Screw the Locking Nut in a clockwise motion on to the Threaded Stud until the Locking Nut is flush against the Threaded Stud Bolt.

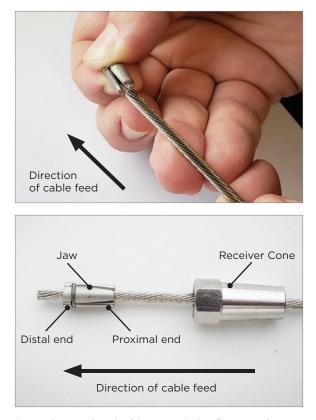
### **D. Fastening the Cable**



D1. Pull the cable, which is already attached to the non-tensioning fitting on the opposing end post, to the face of the Locking Nut. Measure, mark, and then cut the cable using a cable cutter.

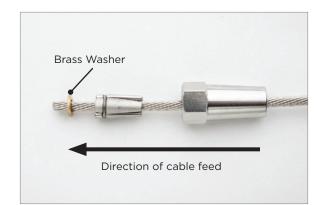


D2. Feed the 1/8" cable through the Receiver Cone from the proximal end.

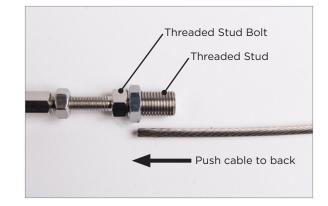


D3. Open the Jaw by pinching your index finger and your thumb on the distal end of the Jaw. Feed the 1/8" cable through the Jaw.

The triangular teeth of the Jaw may come apart during pinching and can easily be placed back in the circular spring. If experiencing difficulty, please refer to "Helpful Hints: Working with the Jaw."



D4. Feed the cable through the Brass Washer.

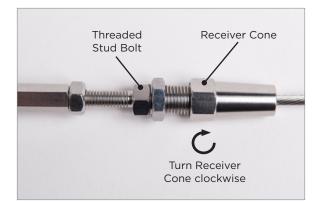


D5. Push cable towards the back of the hollow Threaded Stud.



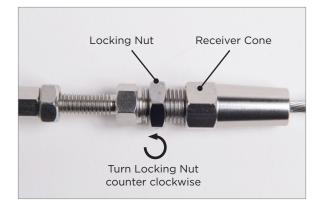
## Installation Tips: Working with the Jaw

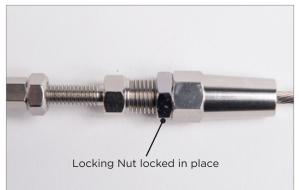
Before working with the jaw clamping mechanism that secures the cable safely by hand, learn valuable tips and tricks in this <u>YouTube video</u>.



D6. Use a 10mm wrench to hold the Threaded Stud Bolt. Holding the Threaded Stud Bolt will keep it from spinning while the Receiver Cone is being tightened.

Thread the Receiver Cone onto the Threaded Stud. This step will crimp the Jaw and Receiver Cone onto the cable. Use a 12mm wrench to turn the Receiver Cone clockwise and securely fasten onto Threaded Stud until the Receiver Cone can no longer turn.

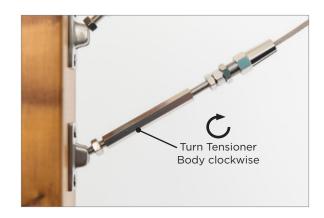




D7. Use a 12mm wrench to turn the Locking Nut in a counter clockwise direction, this will lock the Receiver Cone into place.

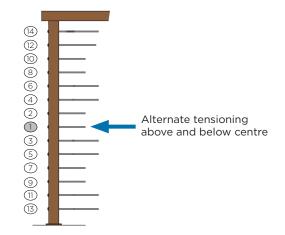
Use a 12mm wrench wrench to hold the Receiver Cone while the Locking Nut is being tightened.

#### E. Tensioning



E1. Use an 8mm wrench to tighten the Tensioning Body in a clockwise direction.

Follow the recommended tensioning sequence (below) to ensure proper installation.



Alternating between cables above and below the center run of cable, tighten until the cable is taut.

As tension is applied the surrounding cables may become loose. If this happens move onto the next sequenced cable run.

Repeat the sequence if necessary, re-tensioning the cables starting from the center cable run.

It is important to keep the cable from spinning during tensioning. Do not over tension.



E2. Once all tensioners have been been tightened, test the cable run for deflection. Once all cable runs are properly tensioned the cable spacing should measure 3". The cable runs should be taut. The cable should not exceed a 1/2" deflection and a 4" sphere should not be able to pass between two cable runs. If more than 1/2" deflection exists, repeat step 12 until greater tension has been achieved. Do not over tension.



E3. Finish by tightening the Locking Nut on the Threaded Toggle in a clockwise direction until it sits flush with the Tensioning Body or a counter clockwise direction until it sits flush with the fastening plate.

# Limited Warranty

Bezdan warrants to the original property owner/purchaser that Bezdan stainless steel cable and fittings are free of defect for a period of ten (10) years from the date of receipt. This warranty covers defects in workmanship and materials under normal use, conditions, installation and maintenance in accordance with the product specifications and procedures described in the cable rail installation and maintenance instructions. Learn more at <u>geobezdan.com/bezdan-cable</u>.