

Kit 471 Series Installation Instructions for Metal Posts

A. Drill Posts

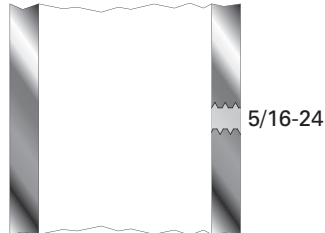
Hole sizes through intermediate posts and/or cable braces are:

- 5/32" for 1/8" cable
- 7/32" for 3/16" cable

End posts:

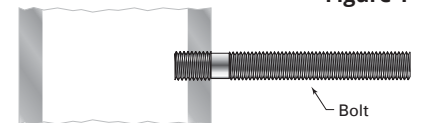
Drill and tap 5/16-24 threaded holes on the inside of each end post.

All holes should be burr-free.

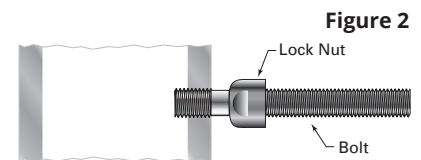


B. Install Tensioning Terminal

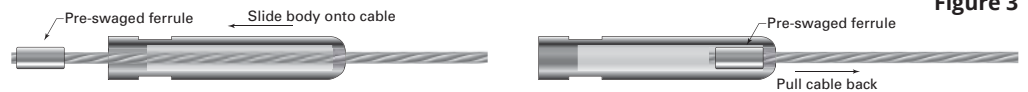
1. Install the Adjust-A-Body® with Threaded Bolt Tensioner by threading the short end of the bolt into the pre-tapped hole in your end post using a 1/4" open-end wrench. (Figure 1)



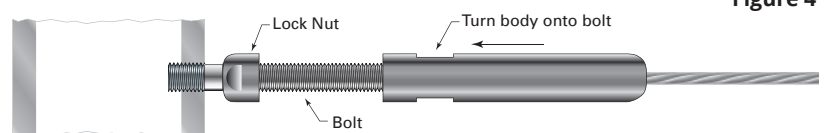
2. Screw the lock nut all the way onto the 2"-long threaded end of the bolt. (Figure 2) Note: turn counter-clockwise to tighten/tension/close.



3. Slide the body of the Adjust-a-Body® with Threaded Bolt Tensioner onto the bare end of the cable, threaded end first, and pull it the length of the cable until it is stopped by the ferrule already swaged onto the cable. (Figure 3)

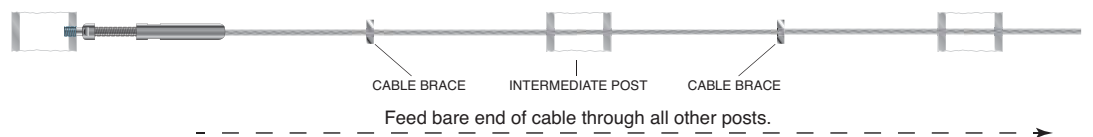


4. Thread the body (with the cable attached) onto the Threaded Bolt and turn 8 turns onto the male threads. (Figure 4)



C. Feed Cable through Intermediate Posts

1. Feed the bare end of the cable through all your intermediate posts and through the end post where you will be installing the Push-Lock® fitting.



D: Passing Cable Through A Two-Post Corner Configuration

When passing cable railing through a corner, do not bend the cable past 45° at any time.

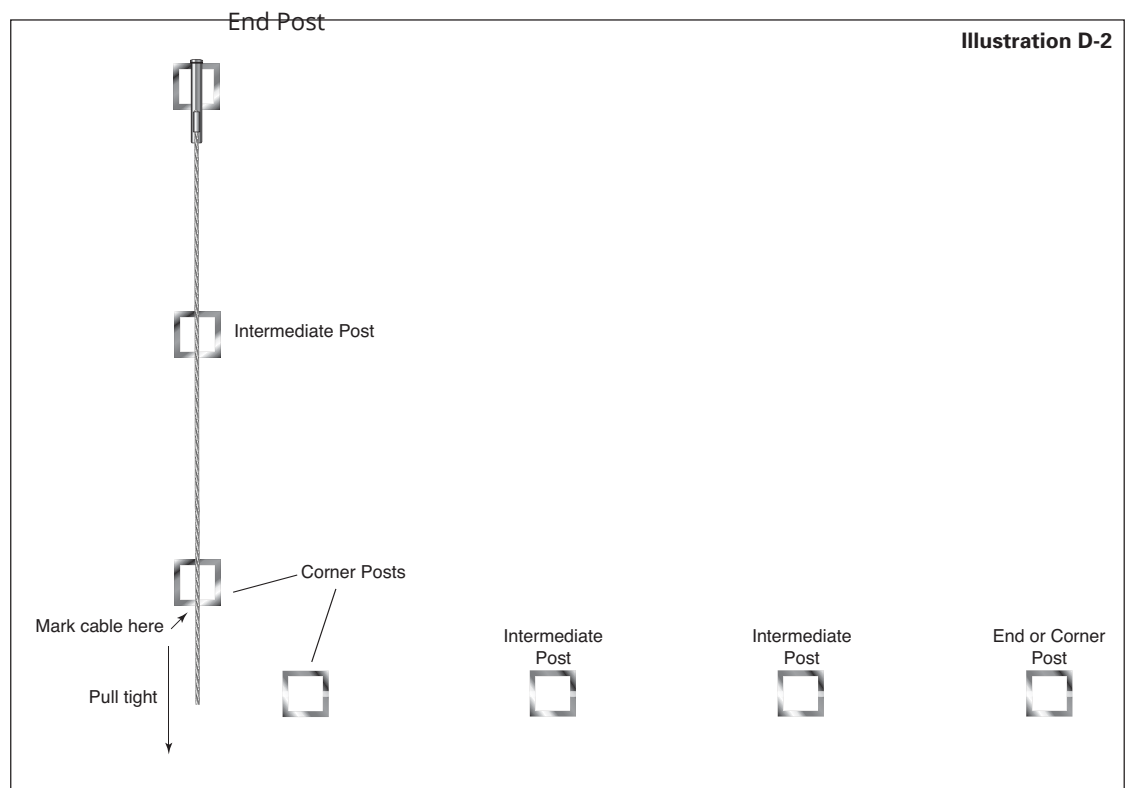
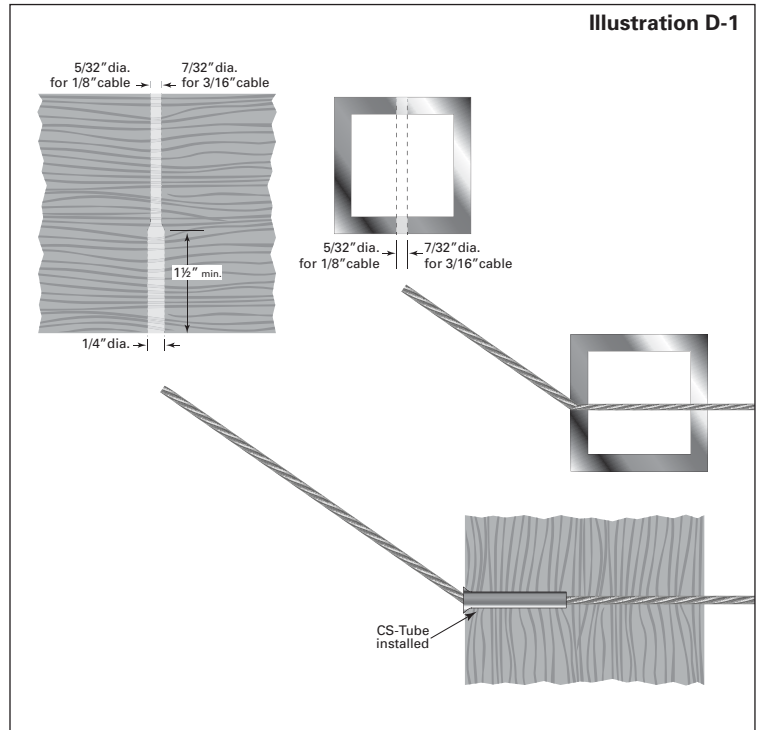
If turning 90°, a 2-step turn using a double corner post configuration is required, as illustrated. For cable runs with up to 90° of turn, kits with single tensioners are sufficient. If going through corners totaling more than 90°, you will want to use a kit with tensioners at both ends.

Corners require two posts because the cable itself, being rigid, will not cooperate in bending cleanly through a single post. When you go through a wood corner post, you will need to prevent the cable from slicing into the wood as it exits the post on an angle by using a Post Protector Tube (aka CS-TUBE).

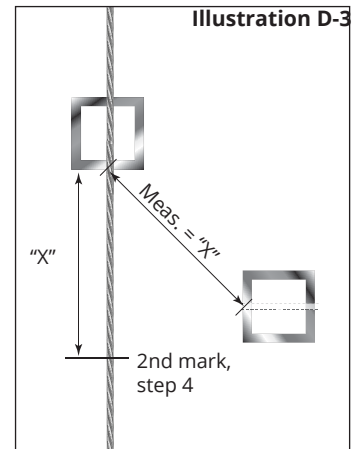
1. For wood posts only, insert a Post Protector Tube (order separately from Accessories) into all wood posts where the cable angles out of the post. Drill 1/4" diameter holes 1-1/2" deep into the face of the post where each cable angles out of the post. Force tube into post so it is flush with post face.
(Illustration D-1)

2. As you feed the bare end of your cable through your intermediate posts (per Section C in your installation instructions), stop after you feed it through the first of your two corner posts.

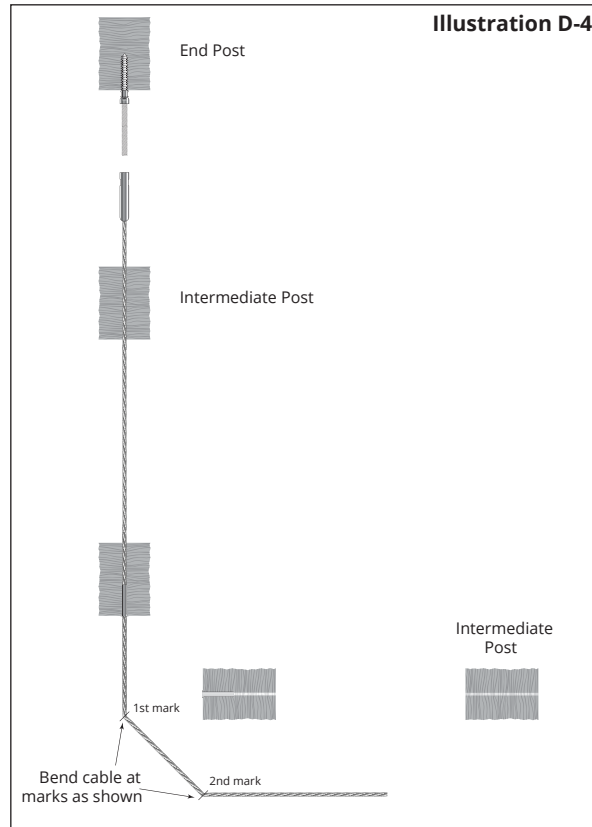
2. Mark the cable at the point where it exits the face of the first post.
(Illustration D-2)



4. Take a measurement in a straight line between the adjacent posts. Make a second mark on the cable that is the same distance away from the first mark as the measurement that you have just taken. (Illustration D-3)

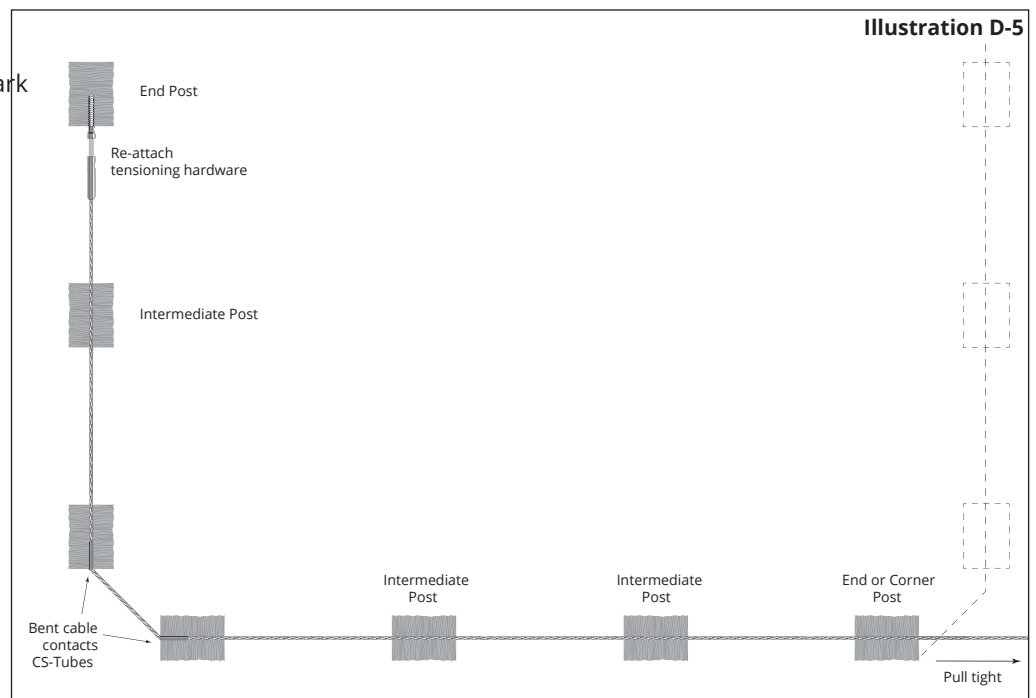


5. Remove the tensioning terminal that was installed in Section B of your kit instructions. (If you used a threaded stud, you will have to remove the fitting and all the cable as well.) This will make it possible to pull the first mark away from the face of the post so that you can access the mark for bending the cable. (Illustration D-4)



6. Bend the cable in both locations that you have marked to approximately 45° (in the same plane). Use a tool such as Ultra-tec Cable Gripping Pliers to help you make "sharp" bends in your cables at the marked locations. (Illustration D-4)

7. Re-attach the tensioning terminal such that the first mark is at the face of the first corner post. Feed the bare end of the cable through the second post and continue to feed the cable through all other intermediate posts and/or another corner section. Pull tight until the second mark contacts the second post. (Illustration D-5)



8. When the bare end of the cable has been passed through all remaining intermediate posts (if another 2-post corner is encountered, repeat Steps 1-7) proceed to Section E of the installation instructions for your kit application.

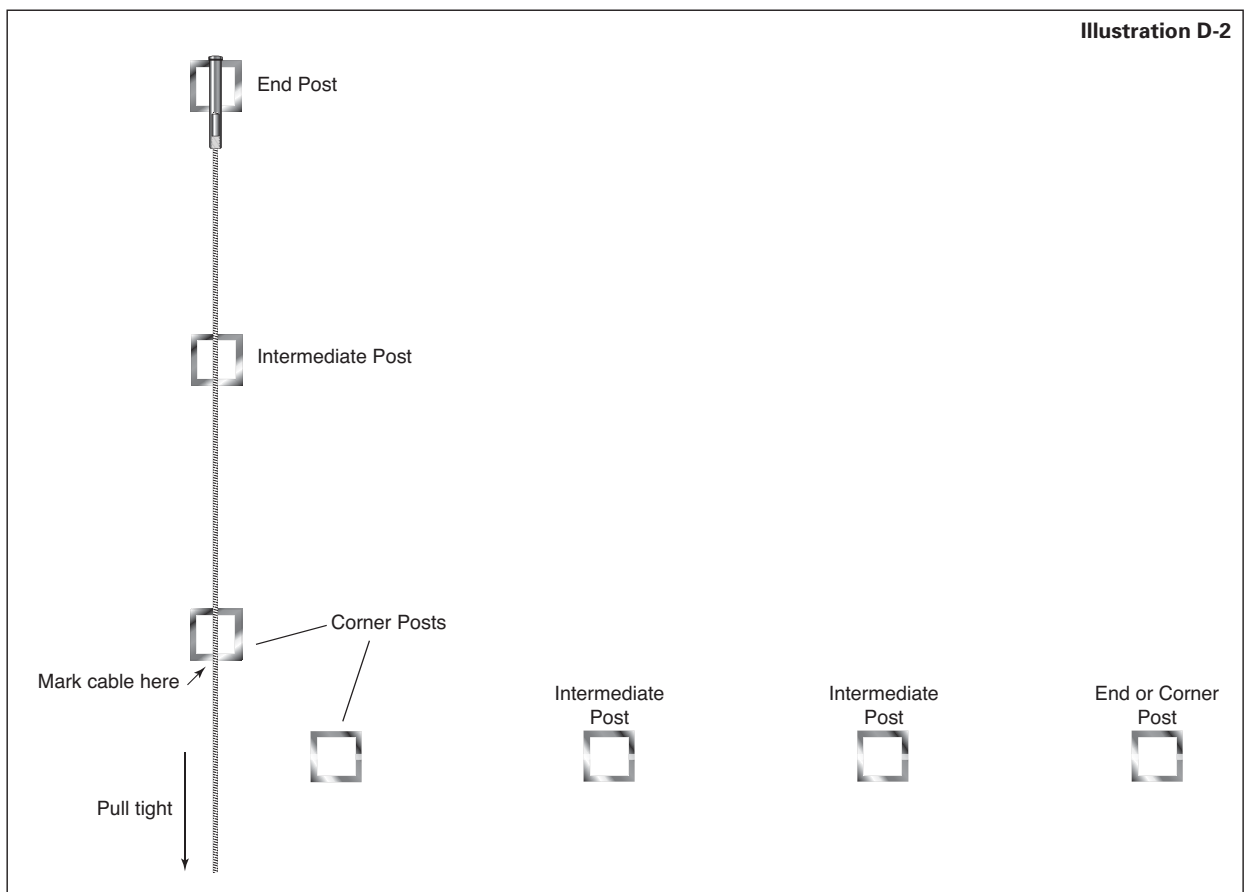
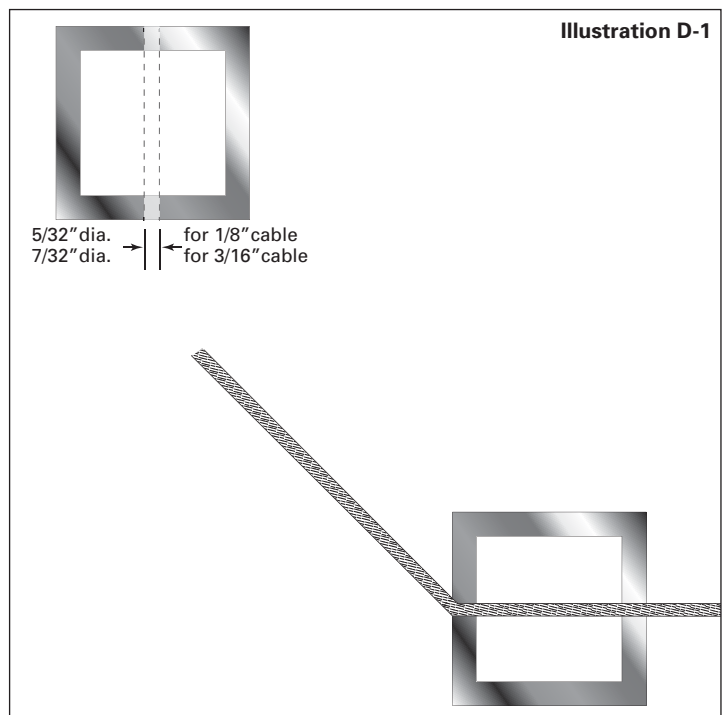
Installation Instructions / Step 5 continued for corners

When taking cable railing through a corner, do not bend the cable past 45° at any time.

If turning 90°, a 2-step turn using a double corner post configuration is required, as illustrated. For metal frame cable runs with up to 90° of turn, kits with single tensioners are sufficient. If going through corners totaling more than 90°, you will want to use a kit with tensioners at both ends.

Corners require two posts because the cable itself, being rigid, will not cooperate in bending cleanly through a single post.

- 5a.** As you feed the bare end of your cable through your intermediate posts, stop after you feed it through the first of your two corner posts.
- 5b.** Mark the cable at the point where it exits the face of the first post. (Illustration D-2)



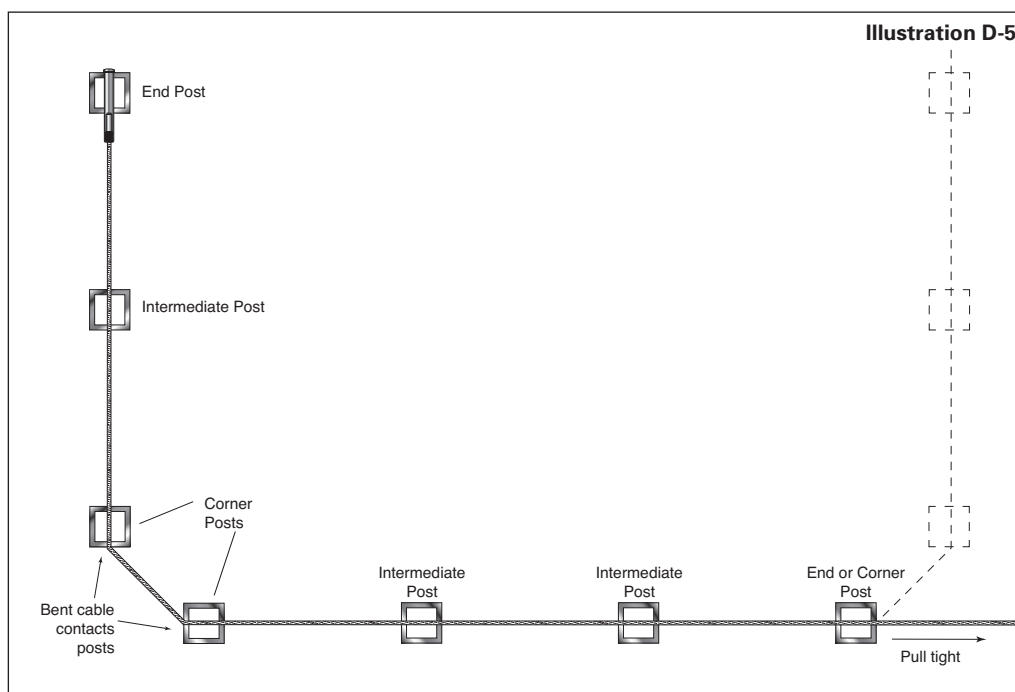
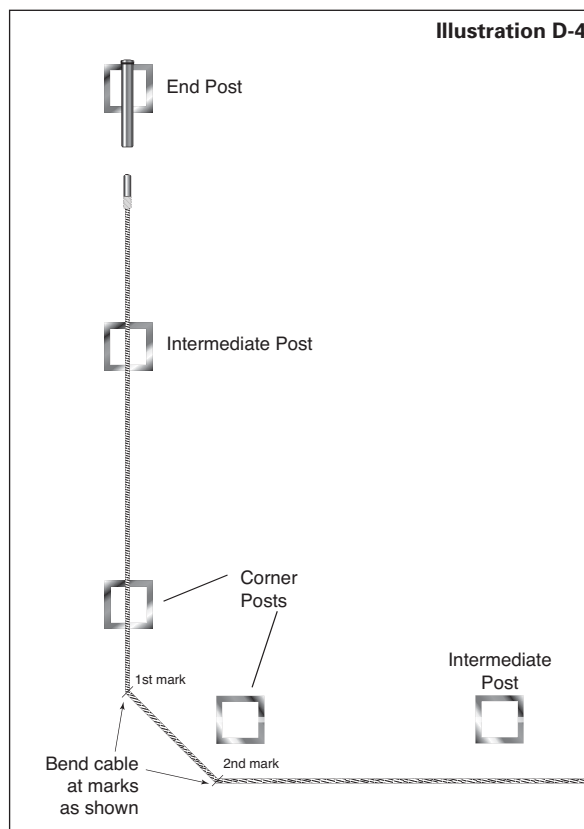
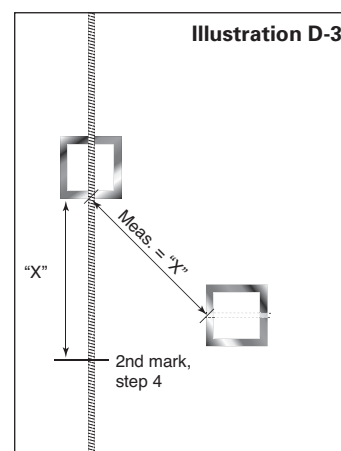
5c. Take a measurement in a straight line between the adjacent posts. Make a second mark on the cable that is the same distance away from the first mark as the measurement that you have just taken. (Illustration D-3)

5d. Remove the stud from the tensioning terminal end that was installed in Section B of your kit instructions. This will make it possible to pull the first mark away from the face of the post so that you can access the mark for bending the cable. (Illustration D-4)

5e. Bend the cable in both locations that you have marked to approximately 45° (on the same plane). Use a tool such as Ultra-tec Cable Gripping Pliers to help you make "sharp" bends in your cables at the marked locations. (Illustration D-4)

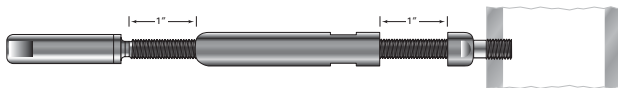
5f. Re-attach the tensioning terminal to the point that the first mark is at the face of the first corner post. Feed the bare end of the cable through the second post and continue to feed the cable through all other intermediate posts and/or another corner section. Pull tight until the second mark contacts the second post. (Illustration D-5)

5g. When the bare end of the cable has been passed through all remaining intermediate posts (and maybe one more 2-post corner configuration) proceed to Step 6 of the installation instructions for your kit application.

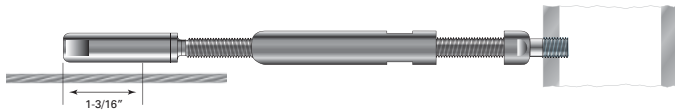


E. Install Swageless Terminal

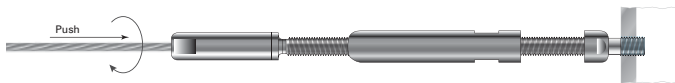
1. Install the Push-Lock® Turnbuckle with Hanger Bolt by driving the hanger bolt / lag end into the pre-drilled pilot hole in your end post using a 5/32" hex wrench in the hex-broached end of the hanger bolt.
2. Screw the lock nut all the way onto the 2" long threaded end of the bolt.
3. Thread the Turnbuckle body onto the threaded end of the Hanger Bolt and turn until 1" of thread is showing between the nut and the body.
4. Thread the Push-Lock® Stud into the Turnbuckle body until there is 1" of thread showing between the Turnbuckle body and the shoulder of the stud.



5. Mark the Push-Lock® Stud body at 1-3/16" from the cable entrance of the stud. Holding the fitting, pull the cable taut over the mark on the stud and transfer the mark to the cable. Cut cable at mark.



6. At opposite post, detach the body from the Hanger Bolt to allow cable slack so you can perform the next step.
7. Return to the post with swageless terminal, push the cable into the hole in the fitting as far as it will go (approximately 1-1/16"). Twist the cable in a clockwise direction as you push it into the fitting.

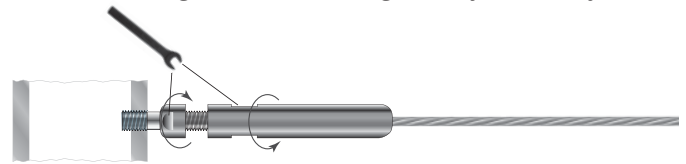


Note: If you have trouble inserting the cable into the fitting, it may be because the locking wedges have become stuck. This is not a defect! Here's what you can do to "free the wedges" — For Pull-Lock® or Push-Lock® fittings for 1/8" cable, using either a PL-KEY or 1/4" diameter bolt, insert the PL-KEY or bolt into the hole and press until the wedges move freely. Perform the same operation for a 3/16" Pull-Lock® or Push-Lock®, except use a 16d nail or another tool with 1/8" or smaller diameter. Anything larger than what is recommended can actually get stuck inside the fitting – NOT what you want!

8. Return to the post with tensioning terminal and hand turn the body back onto the Hanger Bolt as far as possible.

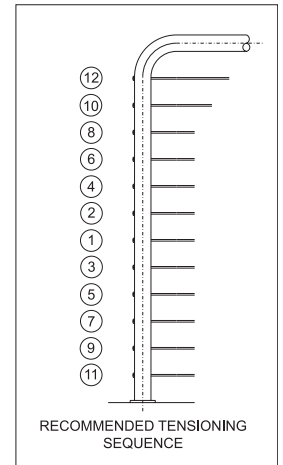
F. Tension Cables

1. Tension the cable by holding it to prevent the cable from turning while you turn the Adjust-A-Body® with a 7/16" open-end wrench. Be careful to protect the cable from damage while tensioning the Adjust-A-Body®.

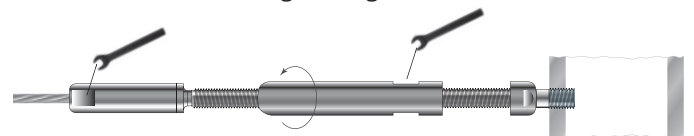


2. While holding the body still with a 7/16" open-end wrench, turn the lock nut against the body and tighten with a wrench.

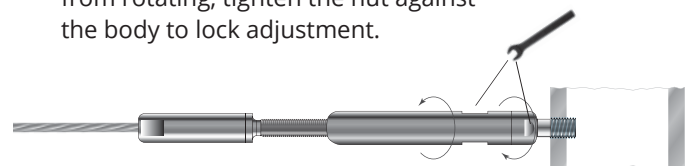
3. Tension all cables to desired amount in sequence, beginning with the center cables, moving up and down toward the top and bottom. As you tension each cable, give it a sharp pull downward mid-span to help set the wedges, then re-tension as necessary in the same sequence.



4. Return to the post with swageless terminal and finish tensioning using the Turnbuckle. While preventing the Push-Lock® Stud from turning by holding it in place with a 3/8" open-end wrench (using wrench flat), turn the body of the Turnbuckle with a 7/16" wrench until the cable is suitably tensioned. Once tensioned, there may be 1/2"-3/4" of thread left showing on either side of the turnbuckle body. Any remaining visible thread may be needed for future tightening.



5. Remove 3/8" wrench from the Push-Lock® body. Using another 7/16" wrench to prevent the Turnbuckle body from rotating, tighten the nut against the body to lock adjustment.



6. Tension in sequence as in Step F-3. Finished cables should be tensioned to have only 1/4" of play when finger-pulled.