

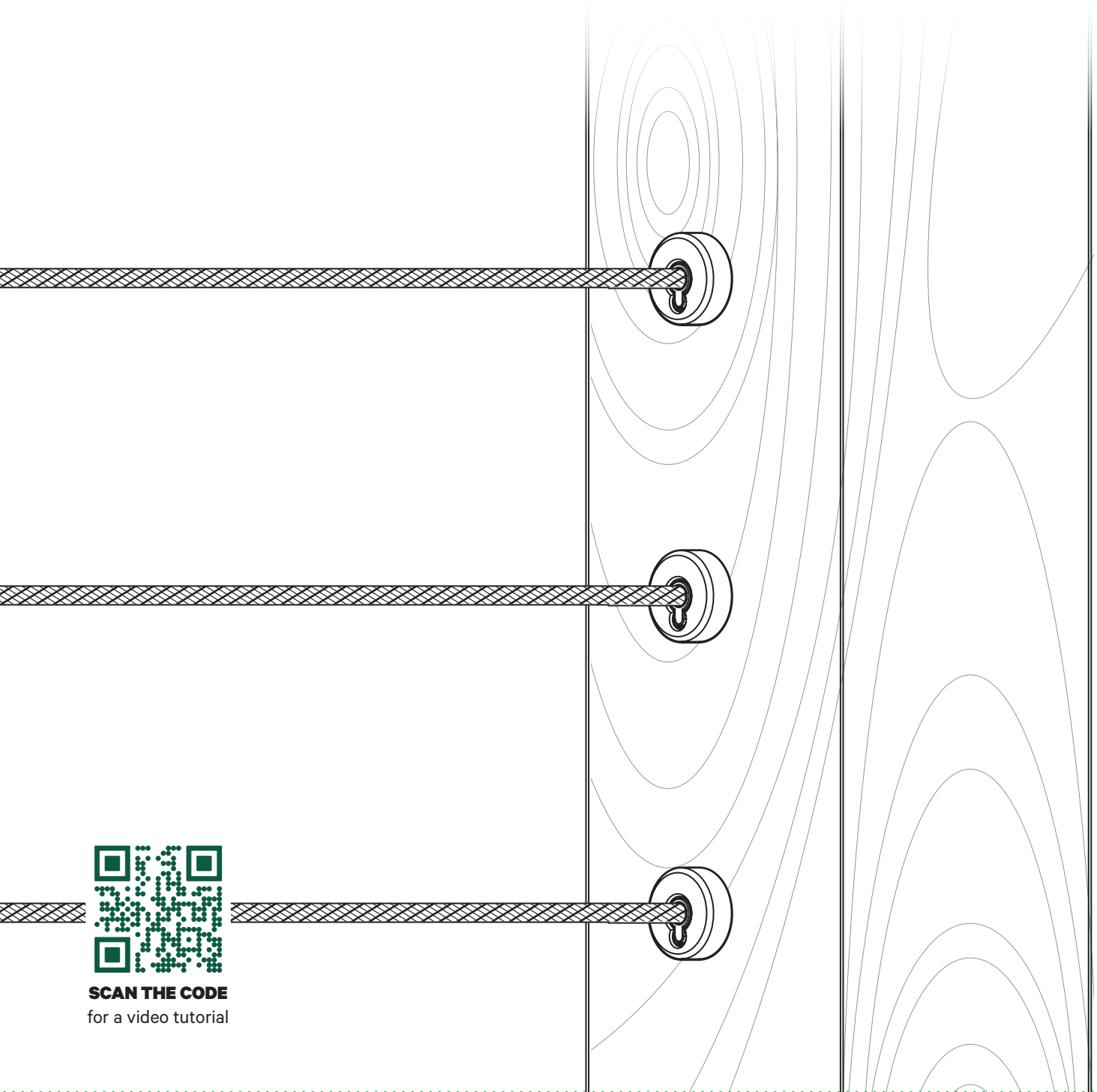
how to install

Cable Infill for Wood Posts

Tensioners | Post Hole Covers | Spacer Bars | Cable

Install hardware and tension cables between wood posts, columns, and surfaces.

TENSIONING SYSTEM FOR WOOD POSTS



SCAN THE CODE
for a video tutorial

Project Overview

tools

- ❑ Cable Cutter*
- ❑ Cable Crimper*
- ❑ 9/16" brad point drill bit*
- ❑ 3/32" drill bit (Post Hole Covers on hardwood posts only)
- ❑ 3/16 x 12" drill bit*
- ❑ Cable Bullet Driver*
- ❑ 3/32" Allen wrench*
- ❑ 3/32 x 6" power bit*
- ❑ T10 power bit* (Post Hole Covers only)
- ❑ Power drill
- ❑ Socket wrench with a 7/16 socket (optional)
- ❑ Tape measure
- ❑ 5/8" Forstner bit (for wrapped posts only)*
- ❑ Hardwood Tap (for hardwood posts only)*
- ❑ Drill Guides (optional)*
- ❑ Clamps (optional)

supplies

- ❑ Cable Tensioners for Wood Posts*
- ❑ 5/32" Stainless Steel Cable*
- ❑ Boeshield T-9®*
- ❑ 3/4" Painter's tape (optional)
- ❑ Screw wax* (for hardwood posts only)
- ❑ Optional Hardware:
 - ❑ Post Hole Covers*
 - ❑ Deluxe Post Hole Covers*
 - ❑ Cable Spacer Bars*

*available at cablebullet.com



PLEASE NOTE: All Cable Bullet recommendations and rail components are designed to comply with International Residential Code (IRC).

Building codes may vary, and it is the installer's responsibility to verify that the installed system complies with all applicable state and local building codes.

For more information on Cable Bullet and building code standards visit: www.cablebullet.com/pages/terms-conditions



CAUTION: 

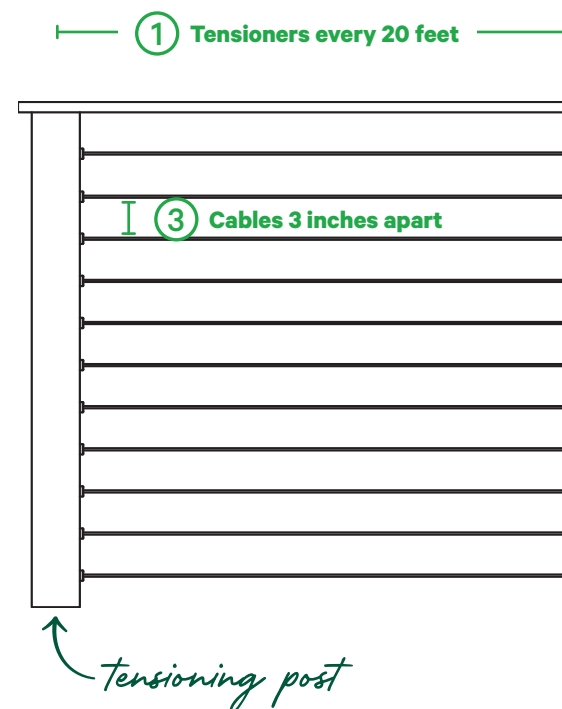
Wear eye protection during installation.

Project Guidelines

- 1 Cable tensioning posts** can be spaced up to 20 feet apart. To maintain optimal tension, add additional tensioning posts for runs longer than 20 feet.
- 2 Add Cable Spacer Bars** or pass-through posts (line posts) every 42 inches to minimize cable deflection under load.
- 3 Space your cables** 3 inches apart to ensure you don't exceed a 4-inch gap between cable runs even with cable deflection.
- 4 Support your top rail** as needed with structural posts. Consult your builder for post spacing and top rail design on your project.

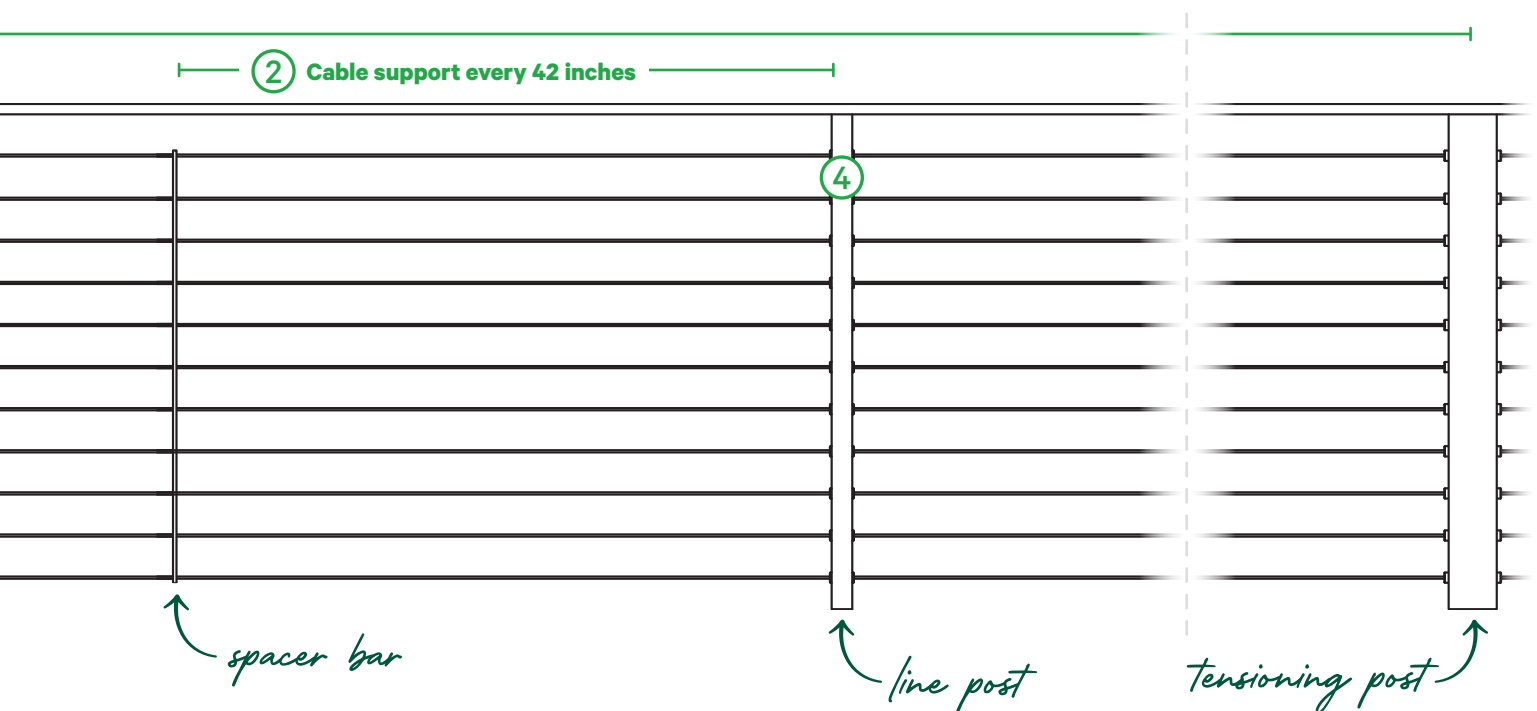
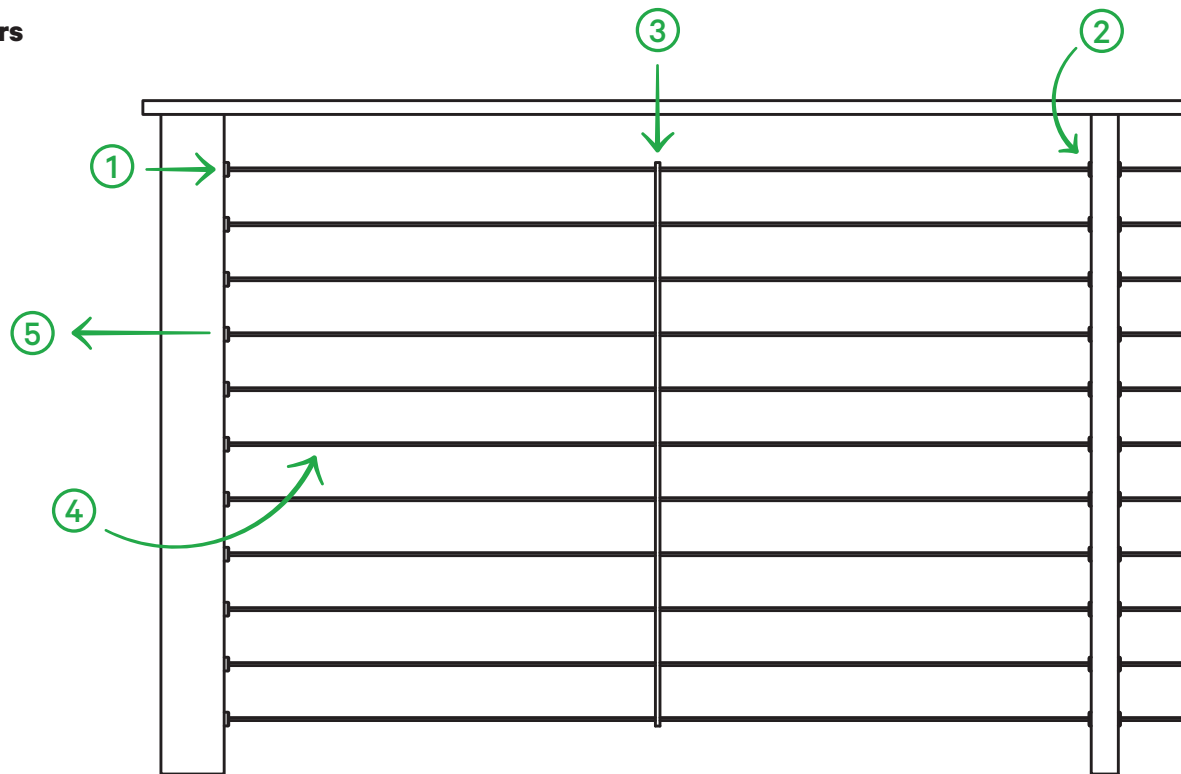


IMPORTANT: your posts and top rail must be able to support the combined tension of the cable runs, 150–200 pounds each.



Order of Installation

- ① Install Tensioners
- ② Attach Post Hole Covers
- ③ Place Spacer Bars
- ④ Run Cables
- ⑤ Tension Cables




Installation Instructions


1. Measure and Mark Posts

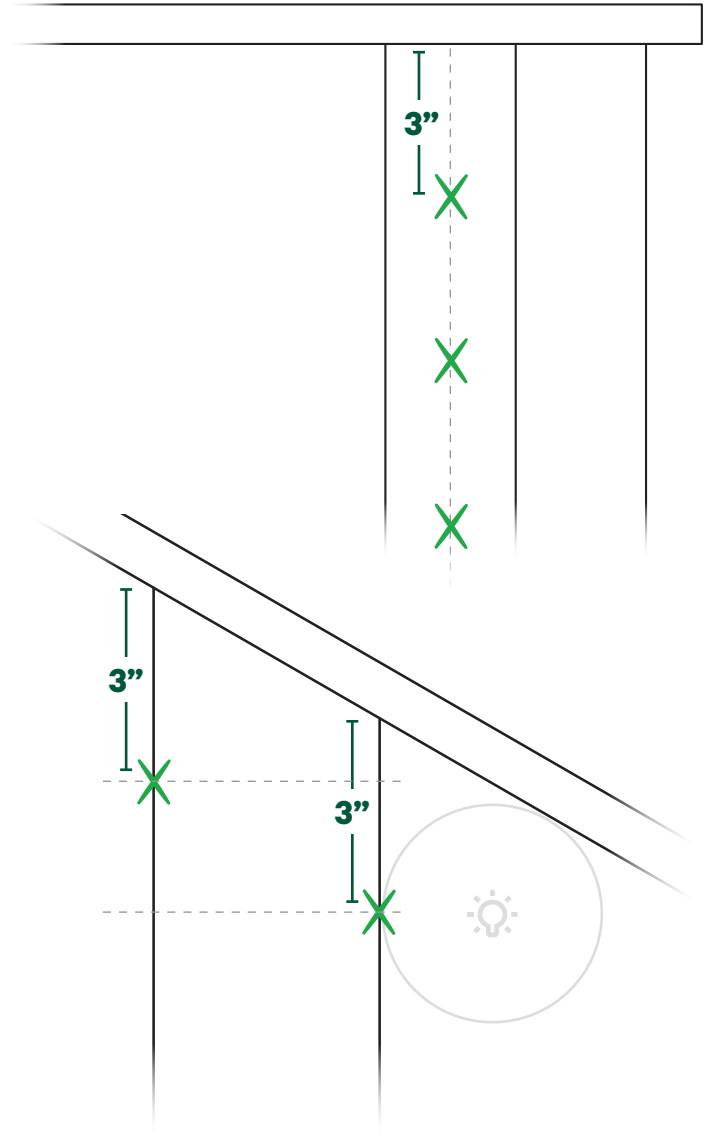
Hardware should be centered on your post and spaced at 3" on center. Find the midline of your post and make marks at 3-inch intervals starting 3" down from the underside of your handrail. Mark all pass-through and tensioning posts—this is where you will install your tensioners as well as drill any pass-through holes.


stair posts

Tensioner installation is the same on angled runs (stairs) as it is on level runs. Make your marks starting 3" below the underside of your handrail. Your hardware will be offset on 2-way or pass-through posts.

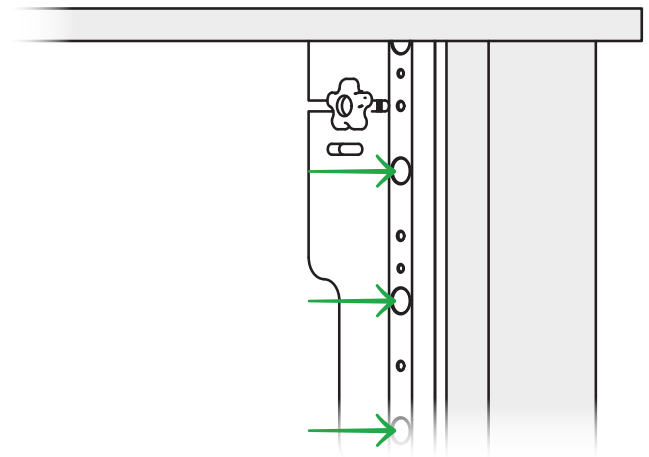
 **PRO TIP:** If possible, install your tensioners and cables before installing your handrail to allow room for your drill.

 **CAUTION:** International Residential Code (IRC) dictates that no gap in your handrail (this includes between cables that are under load) may allow a 4-inch sphere to pass through.



 **PRO TIP:** With our Drill Guide and Template for Level Runs you can breeze through this step effortlessly. The guide is pre-set with 3" spacing for both tensioner holes and pass-through holes.

See Drill Guide and Template for Level Runs guide for instructions.



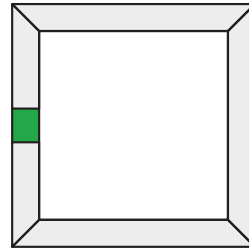
2. Drill & Tap Posts

Tensioner holes

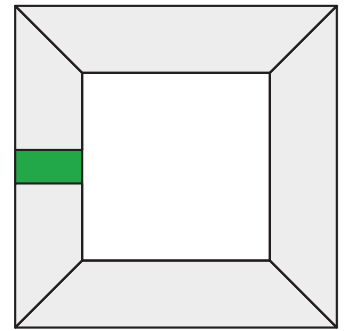
XL or XXL tensioners ONLY.

Before drilling tensioner pilot holes, use the Forstner bit to drill a 5/8" hole through any post wrap or veneer only to provide extra room around the tensioner shank.

XL



XXL

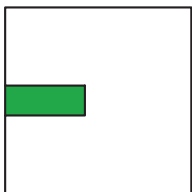


DRILLING TENSIONER PILOT HOLES

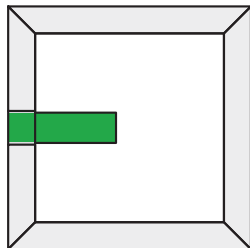
Use a 9/16" brad point bit to drill a level pilot hole 1-1/2" deep for each tensioner (drill 2" for XL tensioners and 2-3/4" for XXL).

Tensioner pilot holes on angled (stair) runs will also be drilled level.

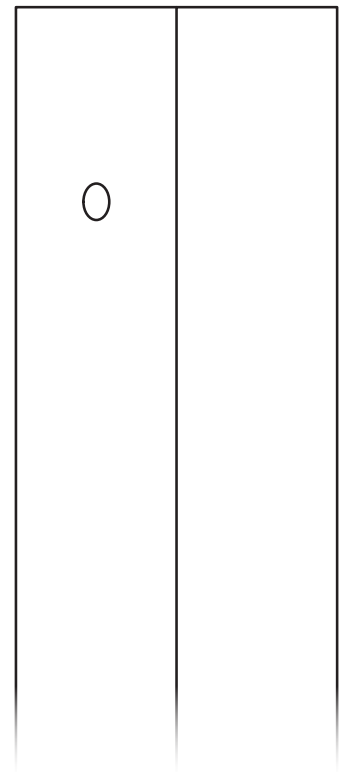
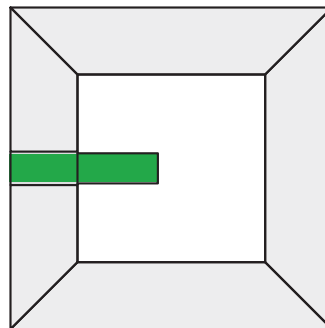
Standard



XL

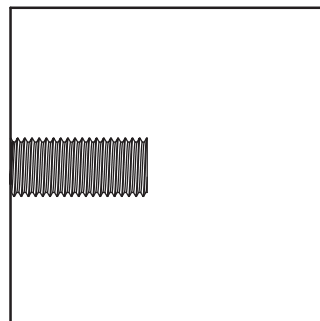


XXL



Hardwood posts ONLY


Use a drill set to low speed, high torque (1st gear) and the hardwood tap to pre-thread your tensioner pilot holes. Let the tap pull itself in. This will ease your tensioner installation.




pass-through holes

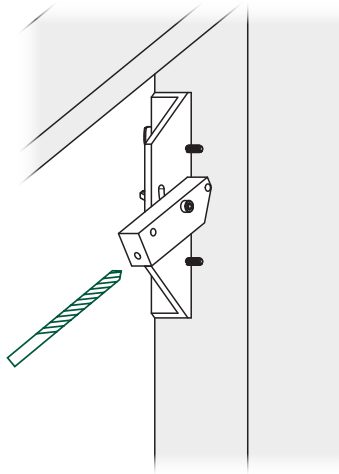
DRILLING PASS-THROUGH HOLES

Use the 3/16 x 12" drill bit to drill your cable pass-through holes. Thicker posts and columns will need to be drilled from both sides to maintain a level hole.

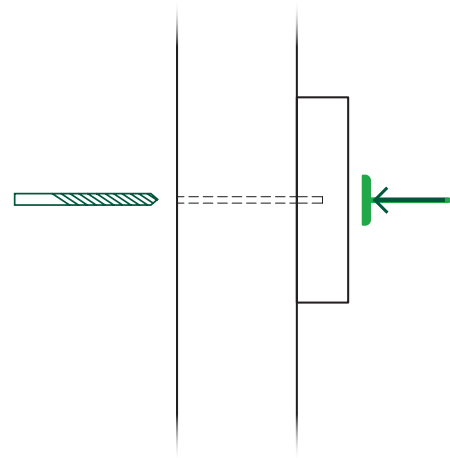
 **PRO TIP:** Clamp a piece of wood to the backside of your post to avoid blowout.

 **PRO TIP:** Use the Pivot-Head Drill Guide to drill angled pass-through holes on stair posts.

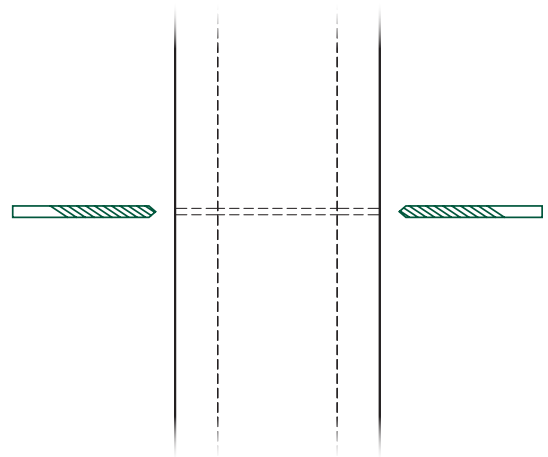
See Pivot-Head Drill Guide for Stair Runs guide for instructions.



Standard Post




Thick Post




3. Install Tensioners

Use a drill with a 1/2" chuck and a Bullet Driver to drive the tensioners into each post. Use a slow, steady speed with controlled torque (1st gear with a mid-high clutch setting) to avoid damaging the internal tensioning mechanism.

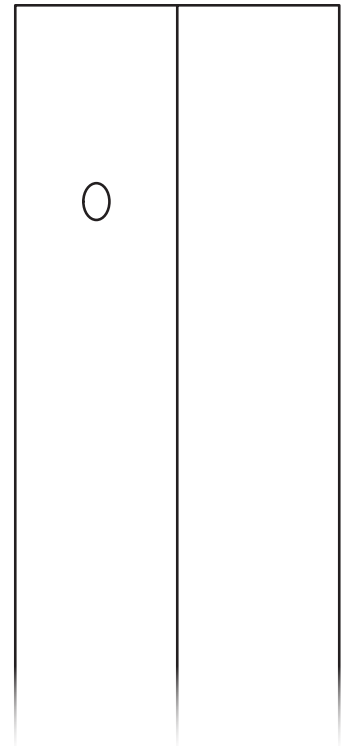


 **WARNING:** Do not use an impact driver to install tensioners.



 **PRO TIP:** For hardwood posts, use Screw Wax to lubricate the tensioner threads during install. This will greatly ease your installation.


A socket wrench with a 7/16" socket can be used to fine-tune the orientation of the tensioner for accessibility and/or aesthetics.



4. Install Post Hole Covers


standard post hole covers

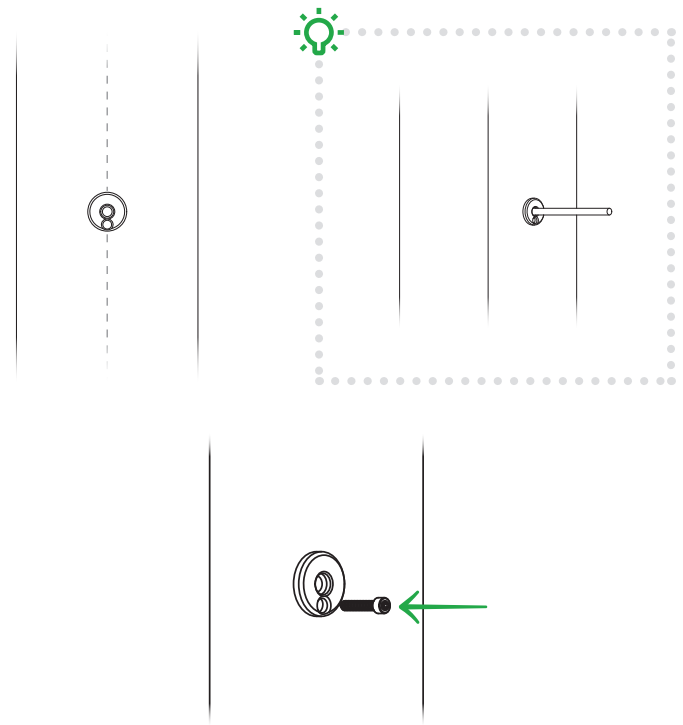
Center your Post Hole Cover over the hole.

 **PRO TIP:** Use the 3/16" drill bit or a spare piece of cable to "hang" the post hole cover while you attach it.

Attach the Post Hole Cover using the included screw and a manual T10 driver.

In hardwood posts, you may need to drill a 3/32" pilot hole for the screw.


 **WARNING:** Overdriving the screw will angle the Post Hole Cover. Drive screws just enough to keep it flush with the post.

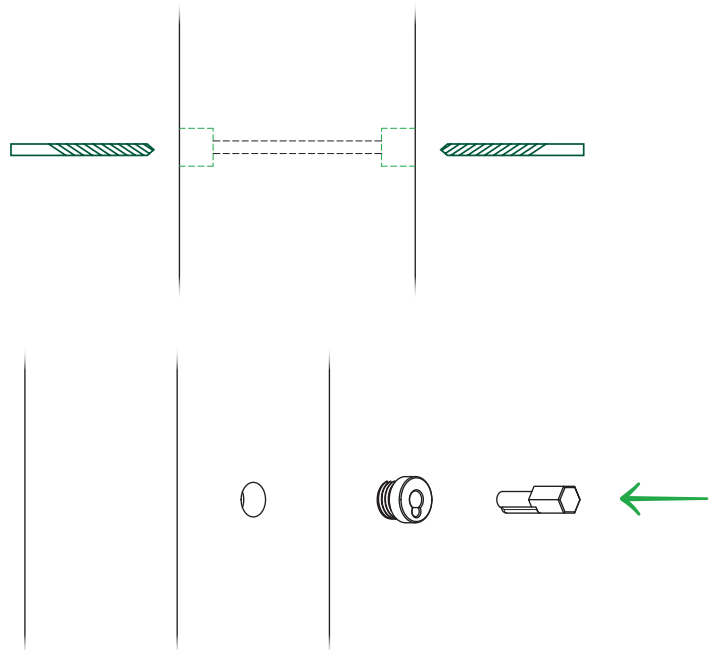



deluxe post hole covers

Drill a 9/16" pilot hole 1/2" deep centered on your 3/16" pass-through hole.

Install the Deluxe Post Hole Cover the same as you did for the tensioners—using a Bullet Driver and a drill or socket wrench.

 **CAUTION:** On sleeved posts, Deluxe Post Hole Covers will anchor into the post sleeve, not the center column. Avoid over-tightening the Deluxe Post Hole Covers as this can damage your post sleeves.



 **PLEASE NOTE:** There is a groove cut into the threaded body that allows cable to pass through at an angle. Ensure these grooves are positioned correctly inside your post when installing on angled sections.



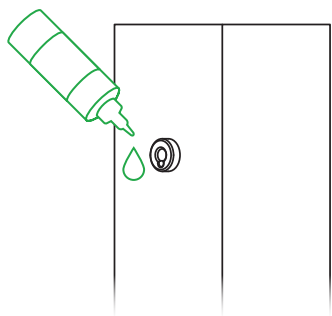
5. Cut Rough Cable Lengths

Measure your runs and cut oversized, rough lengths of cable for each.

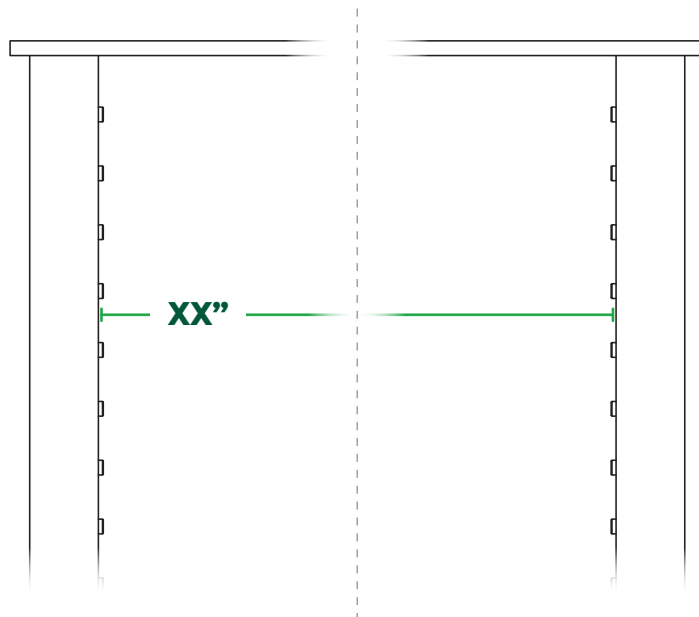
When cutting, leave a few extra inches on each run to avoid ending up short. You will make an accurate, finished cut later.

6. Lubricate Tensioners

Apply a drop of Boeshield T-9® lubricant to the set screw channel of each tensioner. This will ease installation, reduce the likelihood of seizing, passivate the stainless steel, and help prevent corrosion.



WARNING: To avoid staining, take special care to avoid spilling T-9 on any wood surface.



PRO TIP: Use our Cable Cutter or steel wire cutters to ensure clean cut ends without fraying.

7. Crimp Cable Ends

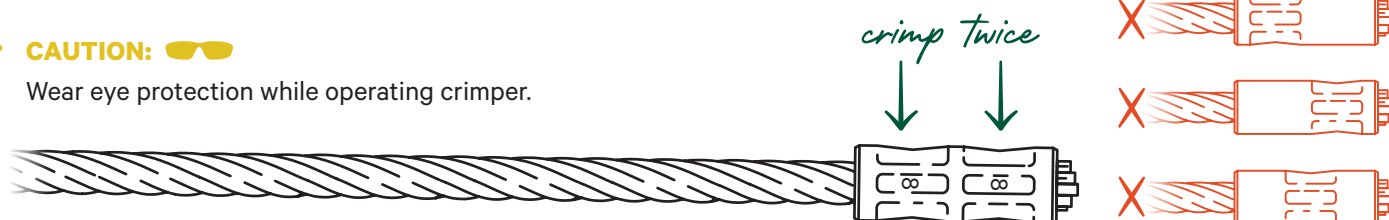
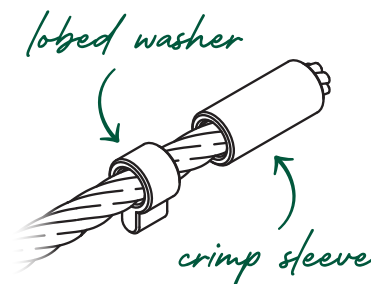
Fit one end of a cable length with a lobed washer and a crimp sleeve.

Use our Cable Crimper to firmly crimp the sleeve using the #8 die setting. Each crimp sleeve will need to be crimped twice.

PRO TIP: A crimp using the proper die size and crimping pressure will be imprinted with an “8.” Check for this indication of a secure connection.

PLEASE NOTE: The integrity of your cable tension is held in this crimp. Make sure to fully and properly crimp the sleeve onto the cable.

CAUTION:  Wear eye protection while operating crimper.

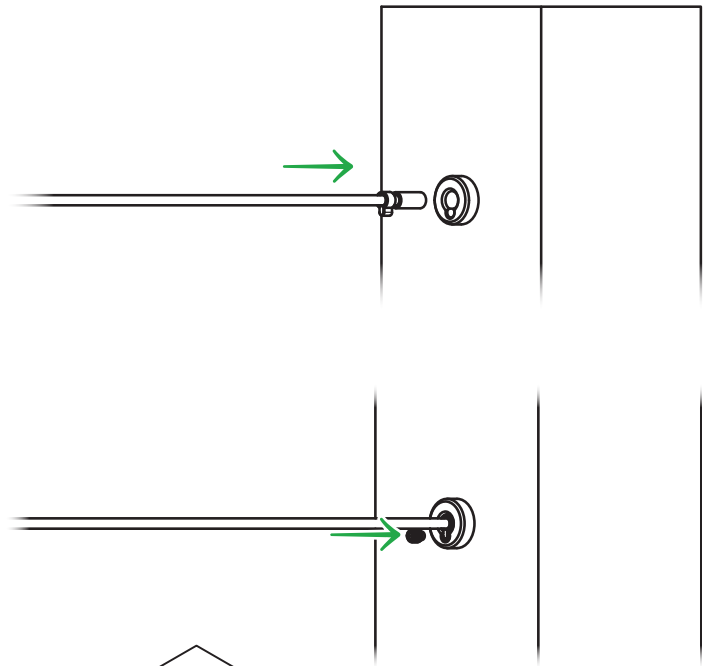


8. Set Cable Ends

Insert the crimped cable and lobed washer into the tensioner and use a 3/32" Allen wrench or manual bit driver to advance the set screw until it is flush with the face of the tensioner.



WARNING: Do not use power tools to drive in the set screws—they can strip and/or seize in the tensioning channel.

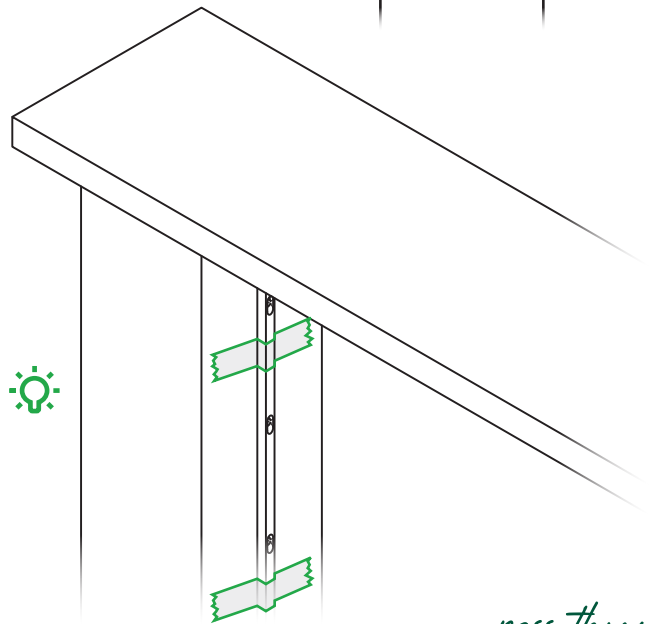


9. Run Cables

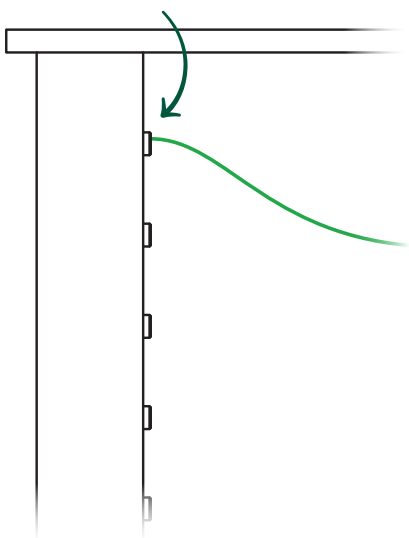
With the crimped end locked in place, thread your un-crimped cable end through all pass-through posts and spacer bars (if applicable).



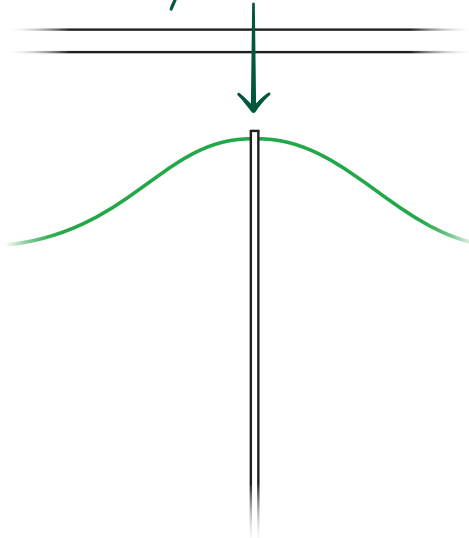
PRO TIP: Tape your Spacer Bars to the closest post until all your cables are set to ease installation.



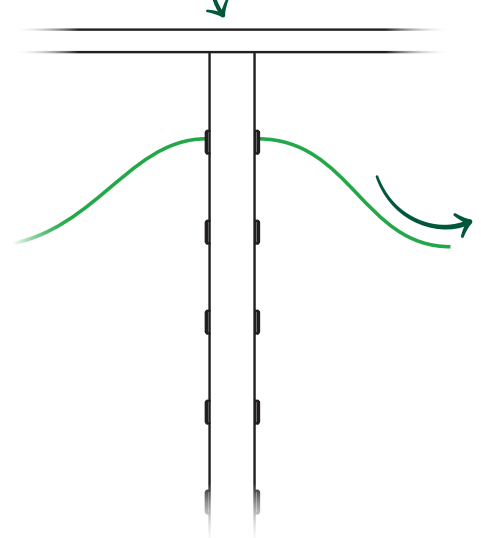
locked cable end



spacer bar




*pass-through
(line) post*



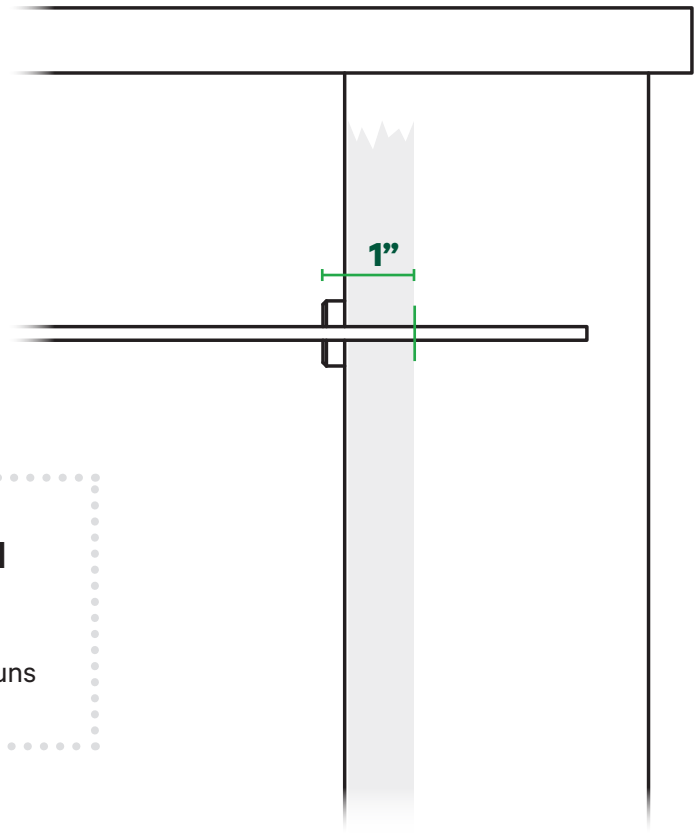
10. Cut Exact Cable Lengths

Pull the cable hand-tight, measure one inch past the face of the tensioner, and make your finished cut.

 **PRO TIP:** Apply 3/4" painters tape to the edge of your post and cut at the far side of the tape. This will be 1" past the face of the tensioner.

Repeat steps 7 and 8 to secure the second end of your cable.

Then repeat the entire process for each of your cable runs



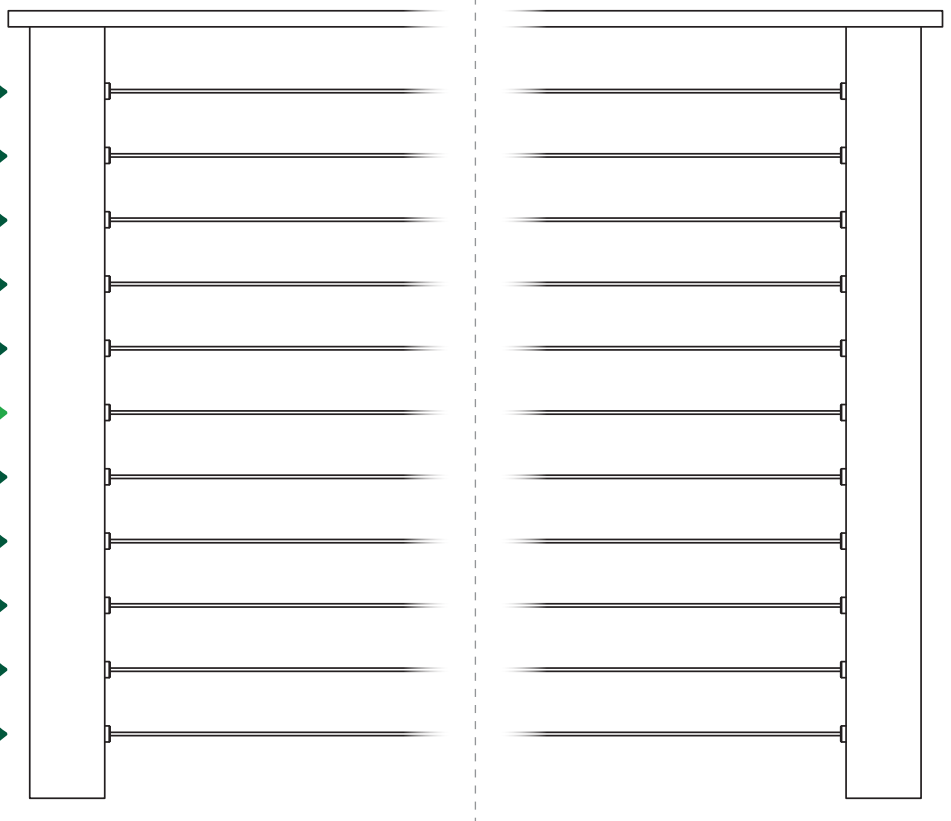
11. Final Tensioning

Once all your cables are in place, begin tensioning each run by driving in the set screw using the 3/32" Allen wrench or manual power bit. Tension from the innermost cable outwards.

HOW TIGHT IS TIGHT ENOUGH?

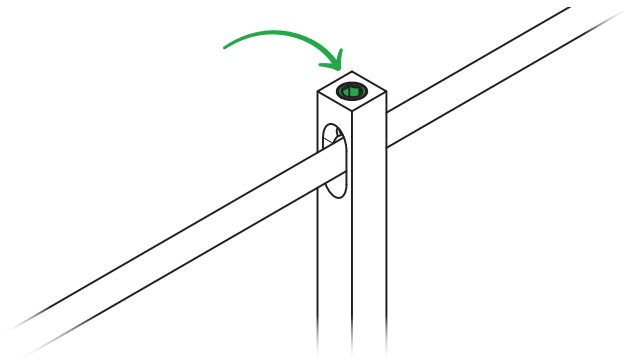
A properly tensioned cable will deflect approximately 1/4" per foot under a 50 lb load. In other words, it will feel more like a bass guitar string, less like a piano wire.

- ⑩ →
- ⑧ →
- ⑥ →
- ④ →
- ② →
- ① →
- ③ →
- ⑤ →
- ⑦ →
- ⑨ →
- ⑪ →



12. Lock Spacer Bars


Tighten down the locking set screws (top and bottom) of any Spacer Bars using a 3/32" Allen wrench.





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