

Application Guide For Cable Railing



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Cable Railing

By: Ultra-tec

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Framework You Will Need for Cable Railing

End Post Construction

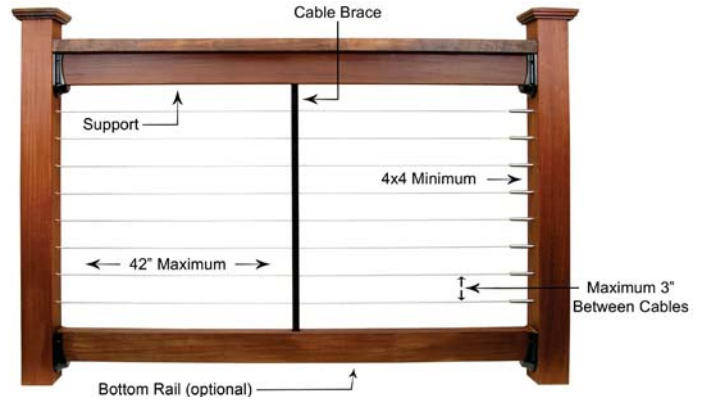
Since hundreds of pounds of tension are being applied to end posts using cable railing, those posts must be substantial enough to handle that tension.

For wood posts a minimum 4x4 post is required to keep the post from bending when the cables are tensioned. You will need a top rail, and we recommend that it be reinforced with a support such as a 2x4 on end under the top rail (see illustration at right). End posts must be securely mounted to the deck to prevent the post from coming loose when the cables are tensioned. A bottom rail helps distribute the force away from the bottom of the post, but is not required.

Of course, secure mounting of the intermediate posts to the deck is just as important as with end posts.

Intermediate Posts / Cable Braces

To keep the cable from spreading beyond IBC code requirements, we recommend that the cable be supported in some manner no more than every 42" along its run. Intermediate posts, through which the cable is strung, act as supports for the cable. To avoid having to use more intermediate posts than is structurally necessary, an aluminum cable brace with holes for the cables to pass through can be used to support the cables (see illustrations). A typical cable brace is 3/4" x 3/4" square aluminum tube.

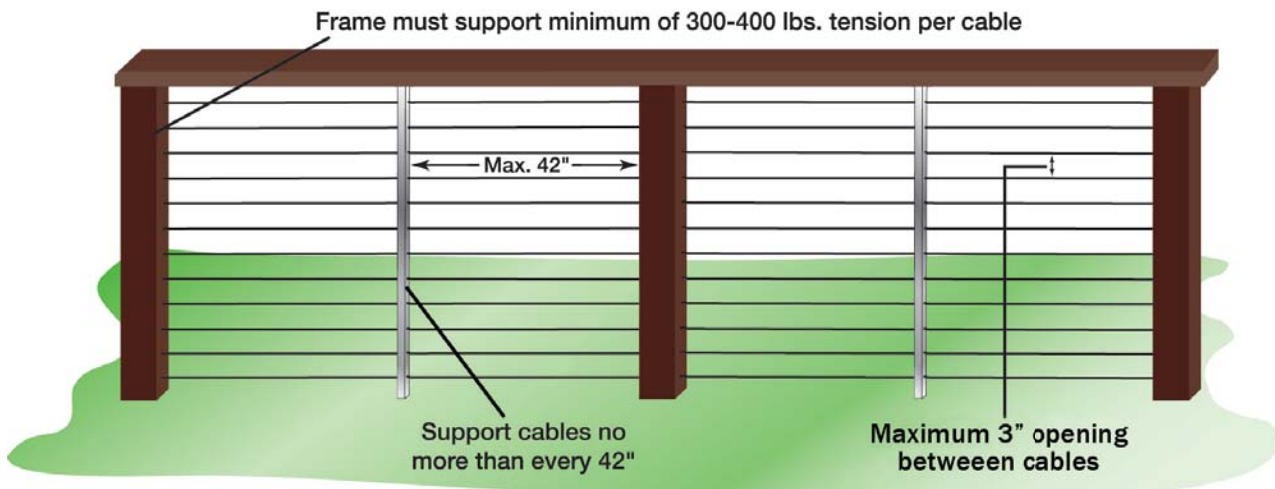


Cable Spacing

We recommend that you space the cables with no more than a 3" clear span between the cables (see illustrations). For example, if you are using 1/8" diameter cable, you would drill your holes on center no more than 3-1/8" apart.

Cable Diameter Sizes

The most common cable sizes are 1/8" diameter cable and 3/16" diameter cable. 1/8" is used mostly for residential railing systems and maximizes the view that cable is known for. 3/16" Cable is used for commercial rail jobs that require a more heavy duty cable rail application.



Kit Assemblies for Wood Posts

For level runs:

224 Series (outside to outside)
2-3/8" Invisiware® Receiver
to Pull-Lock®.

300 Series (inside to inside)
Adjust-a-Body® with Hanger Bolt to
Push-Lock Lag.

601 Series (inside to outside)
3½" Invisiware® Receiver to
Push-Lock Lag.



For stairs, pitched runs:

500-W Series (inside to inside)
Push-Lock® with Threaded Eye and
Lag Eye to Adjust-a-Body® with
Threaded Eye and Lag Eye.

Kit Assemblies For Composite Sleeved Wood Posts

For level runs using wood posts with composite sleeves.

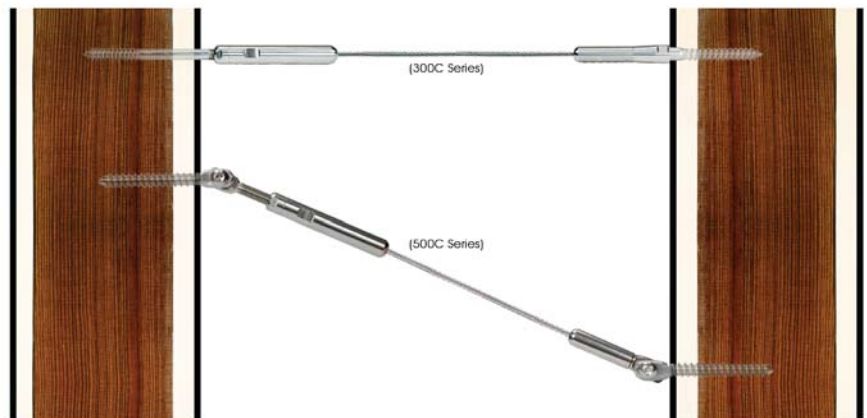
(Outside diameter GREATER than 4-1/2")

300-C Series (inside to inside)
Adjust-a-Body® with Extended Length
Hanger Bolt to
Push-Lock® with Extended Length Lag.

For stairs using wood posts with composite sleeves:

(Outside diameter GREATER than 4-1/2")

500-C Series (inside to inside)
Adjust-a-Body® with Threaded Eye and
Extended Length Lag Eye to
Push-Lock® with Threaded Eye and
Extended Length Lag Eye.



Recommendations for wood railings:

Outside attachments can only be used if your end posts are not obstructed on the back side: Series 200; or Series 601 or if only one end is obstructed.

If you are unable to access the back side of your end post, then you will need to use a series with an inside attachment: Series 300 or 500 if both ends are obstructed; Series 601 if only one end is obstructed.

If you are installing a railing with a pitch, you will need a series that can be run on an angle: 500 Series.

Warranty: Stainless steel hardware and cable are covered by a limited warranty for a period of ten (10) years from the date of receipt to be free from defects due to defective materials and workmanship.

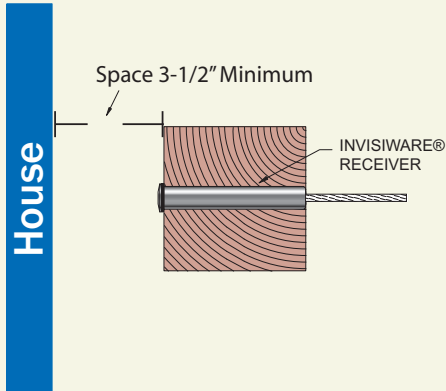
For complete warranty details, please visit <http://www.absolutedist.com/images/Warranty.pdf>

Single Post Options

Cable Options for Post Against a Structure

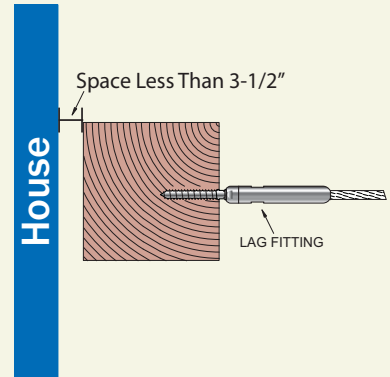
1. Through Post Fittings

Fittings that go through the post need at least 3-1/2" of space between the post and the structure to allow for cable to be installed and/or tensioned without issue.



2. Lag Style Fittings

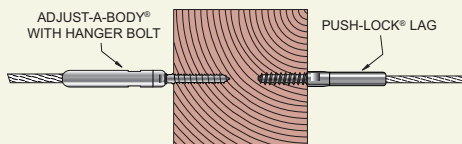
Lag style fittings MUST be used when a post is set less than 3-1/2" from a structure. This fitting allows the cable to be attached to the inside of the post and does not require access to the back side of the post.



Cable Options for Intermediate Post

1. Shared Line Post

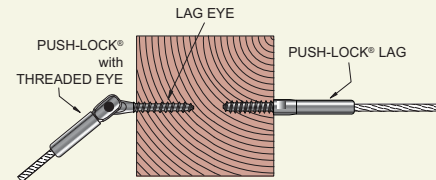
If ever, you need to start and stop cable on a single line post, two lag style fittings must be used. This scenario may occur for very long runs that need to be broken up into multiple sections of cable.



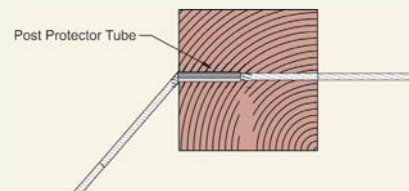
2. Cable Bending at a Single Post

When cable needs to go out of the post at an angle, this can be achieved by a couple methods.

1. Starting and stopping cable at a single post.
(Commonly used for Stairs or Sleeved Posts)



2. Running continuous cable and bending cable at post with post protector tube.
(not to exceed 45 degrees)



4

A Closer Look at Corner Posts

Where Two Cable Runs Intersect

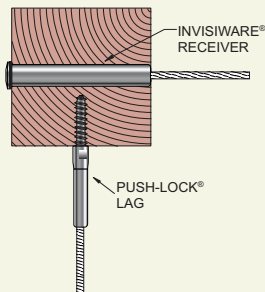
While you can offset cables on intersecting runs to use less expensive fittings, most people want all their cables to exist on the same plane, to give the impression that cables are continuous.

Ultra-tec® fittings are designed to be able to reside within the same post in many configurations. Below are some examples of how your kit components work together.

Single Corner Post Options

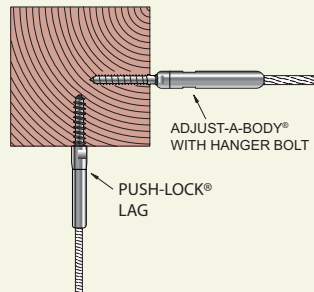
1. Same Plane (Option 1)

Fittings are designed so the lag style fitting and a through post fitting can share a single corner post on the same plane.



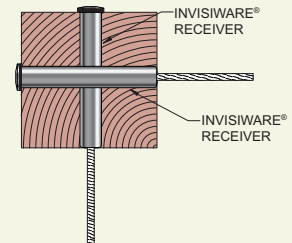
2. Same Plane (Option 2)

Lag style fittings are able to share a single corner post on the same plane without colliding in the post.



3. Offset Fittings

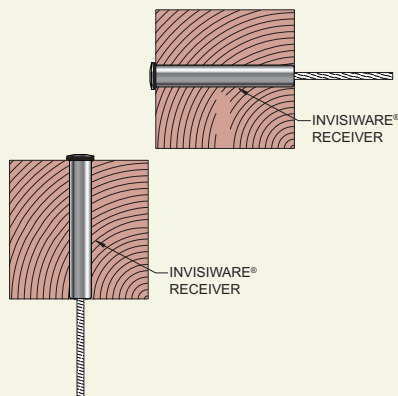
Fittings that go through the post and share a single corner post, must be offset so they do not collide in the post.



Double Corner Post Options

1. Start and Stop Cable Runs

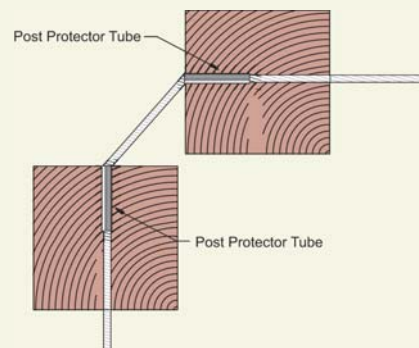
Any cable fitting can be used on corners with two post. Cables are able to stay on same plane.



2. Continuous Cable Run Through a Corner

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 wood frame cable runs with up to 90° of turn, kits with single tensioners are sufficient. If going through multiple corners totaling more than 90°, you will want to use a kit with tensioners at both ends. (See Pages 18-19)

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 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.



Your Deck Type

Decks come in all shapes and sizes, but there are only a few types of cable runs that go on those decks: inside-of-post to inside-of-post, inside-of-post to outside-of-post, and outside-of-post to outside-of-post. The following illustrations represent several ways you can run cable on your deck. Every run will require a fitting that will act to tension the cable once installed. Depending on the length of the run, the tensioning device in the kit, and whether you plan to bend the cable through a corner, you will either be able to use a

non-tensioning Push-Lock® or Pull-Lock® on the other end or you will need to use a Push-Lock tensioner on the other end.

The VIP Run

You will see that Run #1 on each drawing is the “view run” — the one that is most important, most visible of all your runs. It’s the one on which you want to have the least interference with the view, so you always start with that run and build around it.



Stained Cedar Rail with Cable



Wood Rail with Cable

Azek Composite Sleeve w/ Cable

Redwood Rail with Cable

Wood Posts - Outside-of-Post to Outside-of-Post Mount

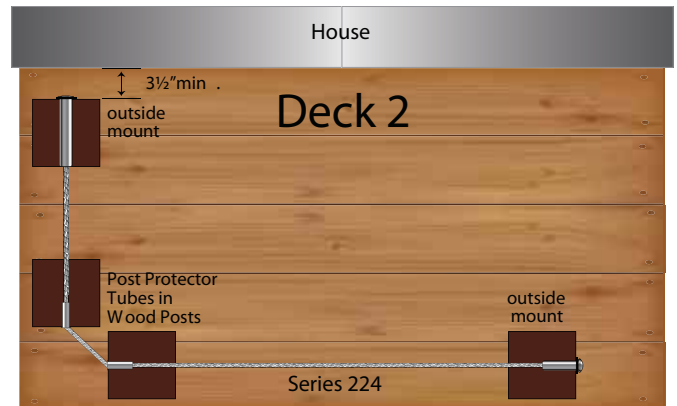
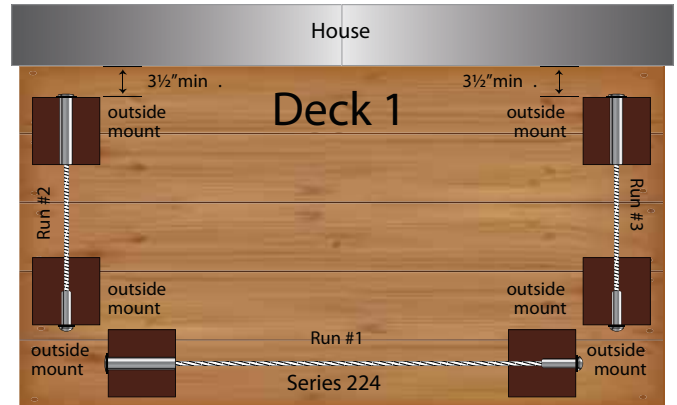
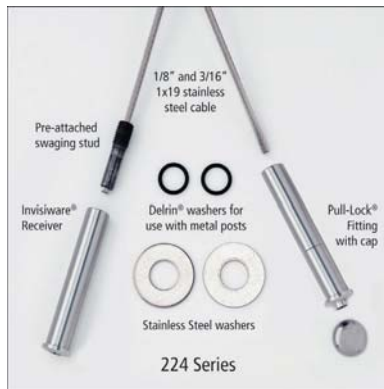
Straight Cable Runs and Cable Runs Through One Corner

Deck 1 has dedicated end posts for each run, and the posts are situated such that the back side of the posts are all accessible, meaning you can use an *outside-of-post to outside-of-post* configuration for all runs. This is both the most economical solution and where the fittings are least visible.

Deck 2 illustrates how the 224 series can also be used to go around a single corner up to 90°.

Applicable kit is the 224 Series.

The tensioning device is a 2-3/8" long Invisiware® Receiver, which installs through the post on one end. A Pull-Lock® fitting is installed through the other end.



For Post Protector Tubes, see Accessories and Equipment page.

Tools needed for 224 Series:

- 5/32 drill bit if 1/8" cable, 7/32 if 3/16"
- 29/64 drill bit for Receiver® and Pull-Lock® installation
- 3/16 Hex wrench for tensioning Receiver
- Cable cutting tool
- If using Post Protector Tubes, 1/4 drill bit
- See ADI™ Cable Rail Basic Install Kit - ADICRKIT

Series 224 Kits

Cable Length	1/8" cable	3/16" cable
	PART NO.	PART NO.
5'	22405	22405-6
10'	22410	22410-6
15'	22415	22415-6
20'	22420	22420-6
25'	22425	22425-6
30'	22430	22430-6
40'	22440	22440-6
50'	22450	22450-6



Wood Posts - Inside-of-Post to Outside-of-Post Mount

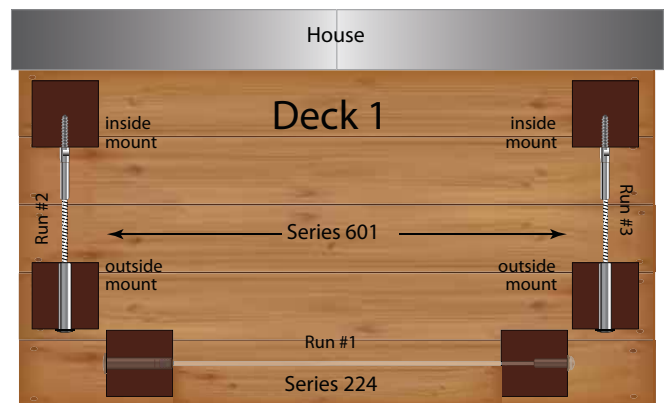
Straight Cable Runs and Cable Runs Through One Corner

Deck 1 has dedicated end posts, but the posts next to the house are too close to access the back side of the posts. Run #1 is outside to outside, so it will take a Series 224 kit. However, for Runs #2 and #3, you will attach to the *inside* of the posts next to the house and run *through* the post at the other end.

Deck 2 illustrates how the 601 series can also be used to go around a single corner up to 90°.

Applicable kit is the 601 Series

The tensioning device is a 3½" long Invisiware® Receiver, which installs through the wood post on one end. A Push-Lock® Lag is lagged into the other end.



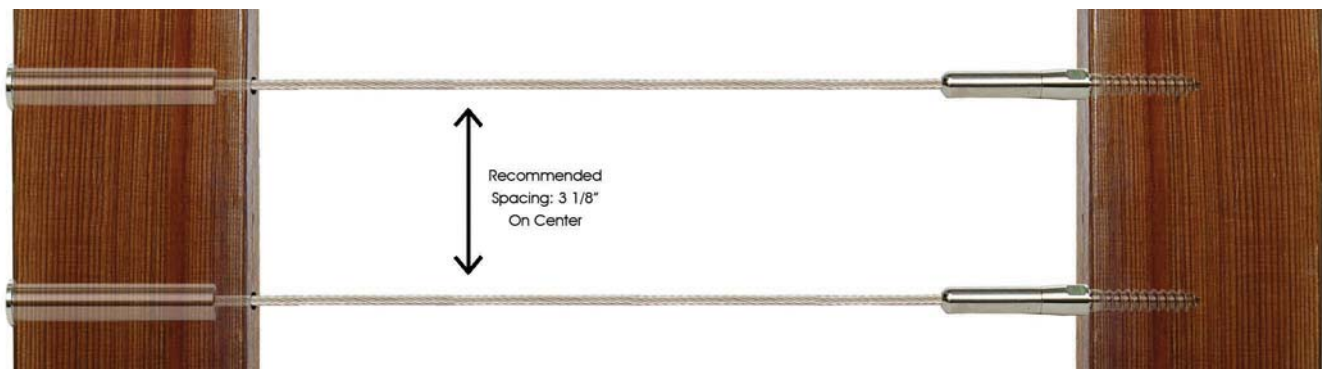
For Post Protector Tubes, see Accessories and Equipment page.

Tools needed for 601 Series:

- 5/32 drill bit if 1/8" cable, 7/32 if 3/16"
- 29/64 drill bit for Receiver installation
- 3/16 Hex wrench for tensioning Receiver
- 9/32 drill bit for Push-Lock® Lag installation
- 7/16 wrench for tightening Push-Lock® Lag
- Cable cutting tool
- If using Post Protector Tubes, 1/4 drill bit
- See ADI™ Cable Rail Basic Install Kit - ADICRKIT

Series 601 Kits

Cable Length	1/8" cable	3/16" cable
	PART NO.	PART NO.
5'	60105	60105-6
10'	60110	60110-6
15'	60115	60115-6
20'	60120	60120-6
25'	60125	60125-6
30'	60130	60130-6
40'	60140	60140-6
50'	60150	60150-6



Wood Posts - Inside-of-Post to Inside-of-Post Mount

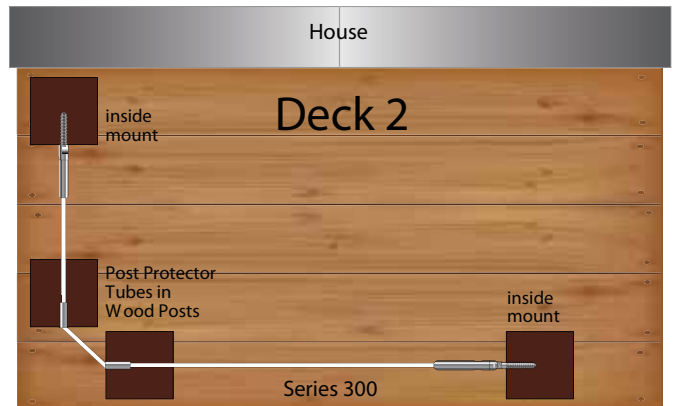
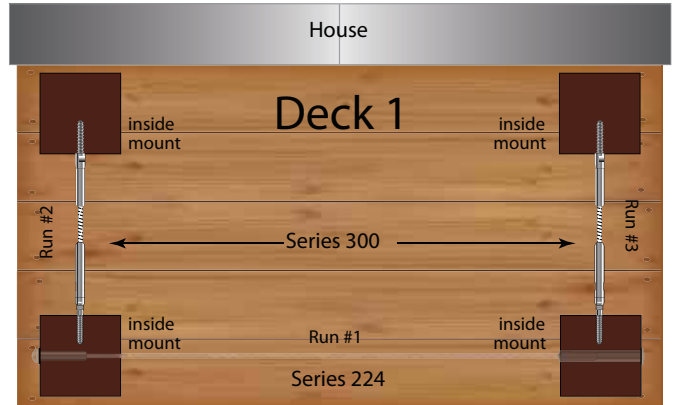
Straight Cable Runs and Cable Runs Through One Corner

Deck 1 has only one end post at the corners. The posts next to the house butt right up to it so the back sides of those posts are not accessible. Run #1 is still outside to outside, so it will take a Series 224 kit. Runs #2 and #3 connect to the *inside* of the corner post going back toward the house to keep the cables on the same plane. They also connect to the *inside* of the posts next to the house as well.

Deck 2 illustrates how the 300 series can also be used to go around a single corner up to 90°.

Applicable kit is the 300 Series.

The tensioning device is an Adjust-a-Body® with Hanger Bolt, which lags into the wood post on one end. A Push-Lock® Lag is lagged into the other end.



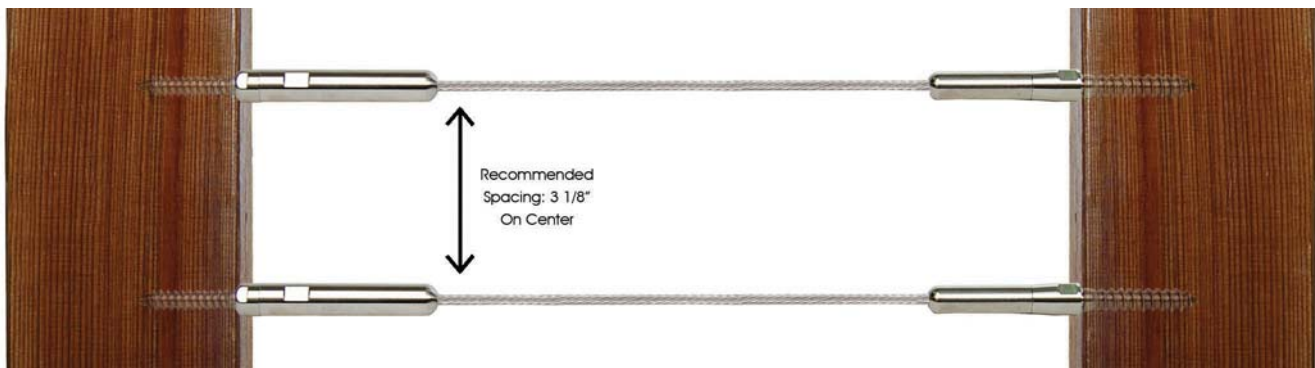
For Post Protector Tubes, see Accessories and Equipment page.

Tools needed for 300 Series:

- 5/32 drill bit if 1/8" cable, 7/32 if 3/16" cable
- 3/16 Hex wrench for tensioning Receiver
- 1/4 drill bit for Adjust-a-Body® with Hanger Bolt installation and installing Post Protector Tubes
- 1/4 wrench for turning Hanger Bolt
- 9/32 drill bit for Push-Lock® Lag installation
- 7/16 wrench for tensioning Adjust-a-Body® and tightening Push-Lock® Lag
- 3/8 wrench for Push-Lock® Stud
- Cable cutting tool
- See ADI™ Cable Rail Basic Install Kit - ADICRKIT

Series 300 Kits

Cable Length	1/8" cable	3/16" cable
	PART NO.	PART NO.
5'	30005	30005-6
10'	30010	30010-6
15'	30015	30015-6
20'	30020	30020-6
25'	30025	30025-6
30'	30030	30030-6
40'	30040	30040-6
50'	30050	30050-6



Wood Posts on Stairs - Inside-of-Post to Inside-of-Post Mount

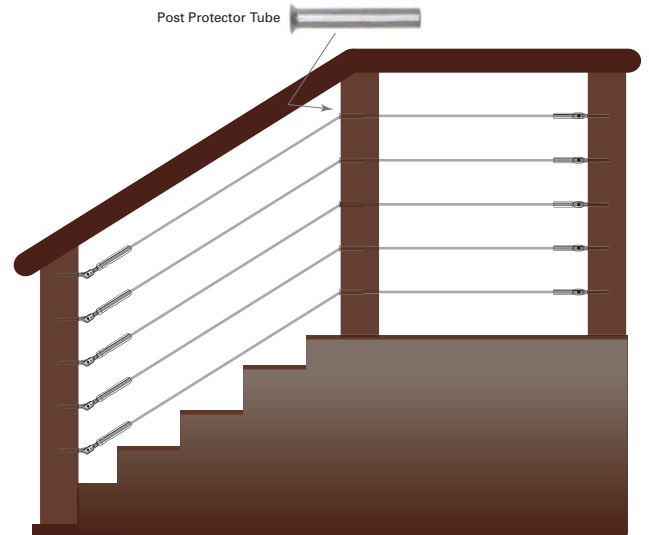
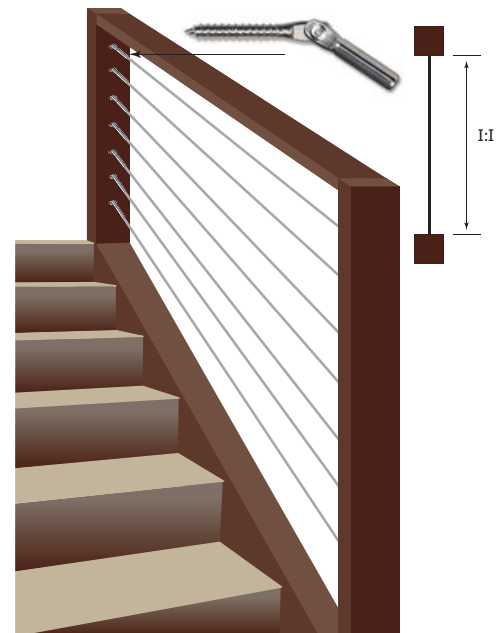
Cable Runs on a Pitch

Top posts are often corner posts, which may require the stair run to connect to the *inside* of the post. The top and bottom of the cable run would be connected perpendicular to those posts, and only the intermediate posts would be drilled on the angle for the cable to run through.

The 500-W Series can also be used to go up a stair and across a landing by inserting post protector tubes (order CS-TUBE-6 separately) in the break-over post. The tube will prevent the cable from carving a groove into your post where it exits at an angle.

Applicable kit for wood posts is the 500-W Series.

The tensioning device is an Adjust-a-Body® with Threaded Eye, which attaches via mounting screw to the lag eye. A Push-Lock® with Threaded Eye attaches the same way to the other end.



Series 500-W Kits for Wood Posts

Cable Length	1/8" cable PART NO.	3/16" cable PART NO.
5'	50005-W	50005-6W
10'	50010-W	50010-6W
15'	50015-W	50015-6W
20'	50020-W	50020-6W
25'	50025-W	50025-6W
30'	50030-W	50030-6W
40'	50040-W	50040-6W
50'	50050-W	50050-6W

Tools needed for 500-W Series:

- 5/32 drill bit if 1/8" cable, 7/32 if 3/16"
 - 9/32 drill bit for Lag Eye installation
 - 7/16 wrench for tensioning Adjust-a-Body®
 - 5/32 Hex wrench to tighten mounting screws
 - Cable cutting tool
 - If using Post Protector Tubes, 1/4 drill bit
- See ADI™ Cable Rail Basic Install Kit - ADICRKIT

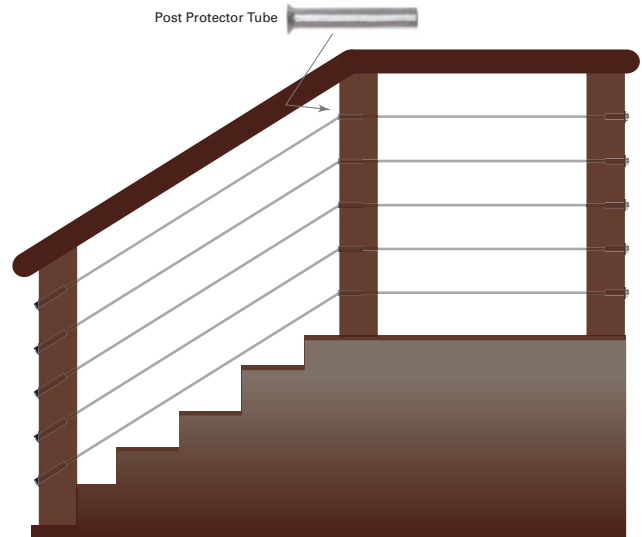
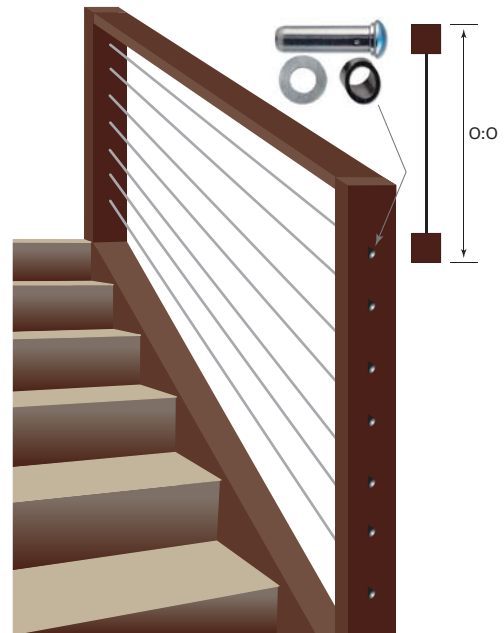
Wood Posts on Stairs - Outside-of-Post to Outside-of-Post

Cable Runs on a Pitch

An alternative to mounting to the inside of the stair posts is to go through both top and bottom end posts. The holes in the end posts, and any intermediate posts, must be drilled on the angle of the stairs.

The 224 Series can also be used to go up a stair and across a landing by inserting post protector tubes (order CS-TUBE-6 separately) in the break-over post. The tube will prevent the cable from carving a groove into your post where it exits at an angle.

Applicable kit is the 224 Series. Requires beveled washers. Order the beveled washer/flat washer combo separately from the kit. The tensioning device is a 2-3/8" long Invisiware® Receiver, which installs through the wood post on one end. A Pull-Lock® fitting is installed through the other end.



Series 224 Kits

Cable Length	1/8" cable	3/16" cable
	PART NO.	PART NO.
5'	22405	22405-6
10'	22410	22410-6
15'	22415	22415-6
20'	22420	22420-6
25'	22425	22425-6
30'	22430	22430-6
40'	22440	22440-6
50'	22450	22450-6

Order two BW356 (beveled washer/flat washer combo) per kit, one combo if one end post is on a landing. See Tools and Essentials section.

Tools needed for 224 Series on stairs:

- 5/32 drill bit if 1/8" cable, 7/32 if 3/16"
- 29/64 drill bit for Receiver and Pull-Lock® installation
- 3/16 Hex wrench for tensioning Receiver
- Cable cutting tool

If using Post Protector Tubes, 1/4 drill bit

See ADI™ Cable Rail Basic Install Kit - ADICRKIT

Wood Posts with Composite or Aluminum Sleeves Inside-of-Post to Inside-of-Post Mount

Straight Cable Runs

Deck 1 has wood posts with composite sleeves. For sleeved posts, the recommended approach is inside to inside for the best finished look. Each run must start and stop at corner posts. All three runs use the same kit.

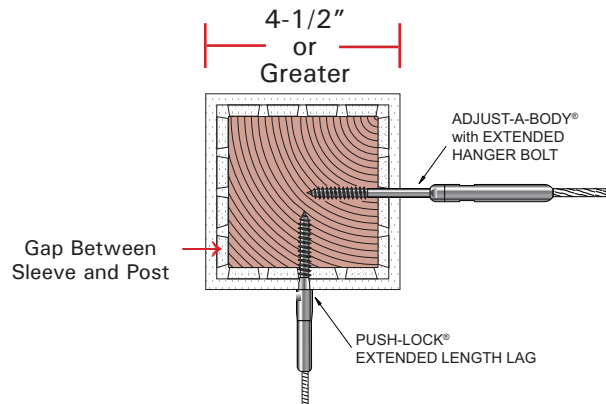
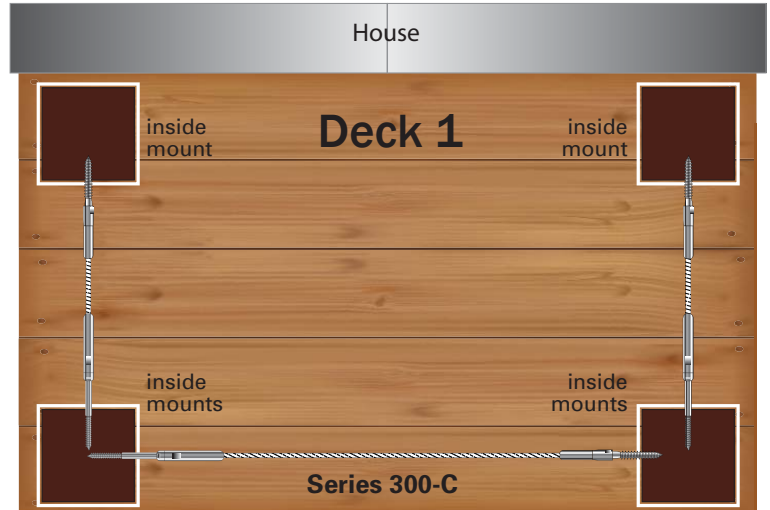
Applicable kits are the 300 and 300-C Series:

If the outside diameter of the composite sleeve is 4½" or LESS, use the 300 Series.

The tensioning device is an Adjust-a-Body® with Hanger Bolt, which lags into the wood post on one end. A Push-Lock® Lag is lagged into the other end.

If the outside diameter of the composite sleeve is GREATER than 4½", use the 300-C Series.

The fittings are the same as in the 300 Series, with extended length hanger bolt and lag respectively.



Series 300-C Kits

Cable Length	1/8" cable PART NO.	3/16" cable PART NO.
5'	30005-C	30005-C6
10'	30010-C	30010-C6
15'	30015-C	30015-C6
20'	30020-C	30020-C6
25'	30025-C	30025-C6
30'	30030-C	30030-C6
40'	30040-C	30040-C6
50'	30050-C	30050-C6

Sample: Aluminum Sleeves over 4x4 wood post & aluminum top rail



Wood Posts with Composite or Aluminum Sleeves For Stairs - Inside-of-Post to Inside-of-Post Mount

Cable Runs on a Pitch

Top posts are often corner posts, which may require the stair run to connect to the *inside* of the post. The top and bottom of the cable run would be connected perpendicular to those posts, and only the intermediate posts would be drilled on the angle for the cable to run through.

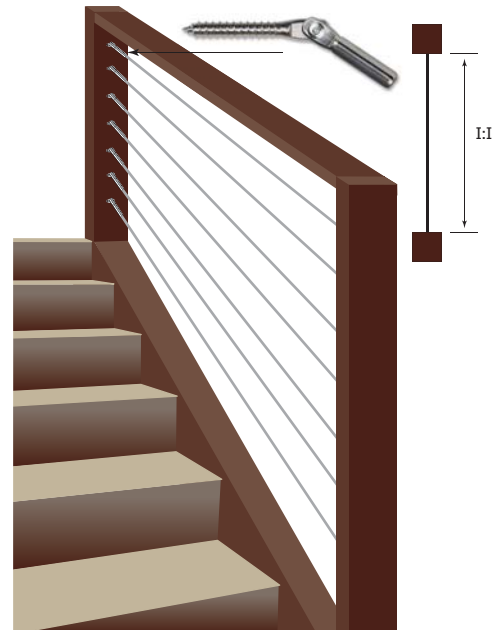
Applicable kits are 500-W or 500-C Series:

If the outside diameter of composite sleeve is 4½" or **LESS**, use the 500-W Series.

The tensioning device is an Adjust-a-Body® with Threaded Eye, which attaches via mounting screw to the lag eye. A Push-Lock® with Threaded Eye attaches the same way to the other end.

If the outside diameter of composite sleeve is **GREATER than 4½"**, use the 500-C Series.

The tensioning device is an Adjust-a-Body® with Threaded Eye, which attaches via mounting screw to the extended length lag eye. A Push-Lock® with Threaded Eye attaches the same way to the other end.



Series 500-C Kits for Wood Posts with Composite Sleeves

Cable Length	1/8" cable PART NO.	3/16" cable PART NO.
5'	50005-C	50005-6C
10'	50010-C	50010-6C
15'	50015-C	50015-6C
20'	50020-C	50020-6C
25'	50025-C	50025-6C
30'	50030-C	50030-6C
40'	50040-C	50040-6C
50'	50050-C	50050-6C



Tools needed for 500-C Series:

5/32 drill bit if 1/8" cable, 7/32 if 3/16"
 9/32 drill bit for Lag Eye installation
 7/16 wrench for tensioning Adjust-a-Body®
 5/32 Hex wrench to tighten mounting screws
 Cable cutting tool
 See ADI™ Cable Rail Basic Install Kit - ADICRKIT

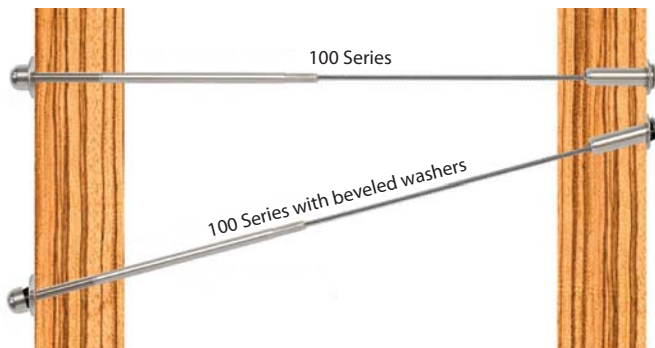
Tools needed for 300-C Series (page 12):

5/32 drill bit if 1/8" cable, 7/32 if 3/16" cable
 3/16 Hex wrench for tensioning Receiver
 1/4 drill bit for Adjust-a-Body® with Hanger Bolt installation and installing Post Protector Tubes
 1/4 wrench for turning Hanger Bolt
 9/32 drill bit for Push-Lock® Lag installation
 7/16 wrench for tensioning Adjust-a-Body® and tightening Push-Lock® Lag
 3/8 wrench for Push-Lock® Stud
 Cable cutting tool
 See ADI™ Cable Rail Basic Install Kit - ADICRKIT

Budget Kits for 1/8" Cable

Special Order - Allow Two Weeks Lead Time

Fitting combinations for wood posts



For level runs:

100 Series (outside to outside)
7½" long threaded stud to Pull-Lock®.

For stairs, pitched runs:

100 Series (outside to outside)
7½" long threaded stud to Pull-Lock®
with beveled washers
(BW-.250-32 for stud, BW32-6W for Pull-Lock®).

Important Notes for Budget Kits:

- Outside attachments can only be used if your end posts are not obstructed on the back side.
- 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 corner post (no more than 45° at any 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 (see Tools and Essentials section).
- If you are installing a railing with a pitch, you will need beveled washers for both ends.

Warranty: Stainless steel hardware and cable are covered by a limited warranty for a period of ten (10) years from the date of receipt to be free from defects due to defective materials and workmanship. For complete warranty details, please visit <http://www.absolutedist.com/images/Warranty.pdf>

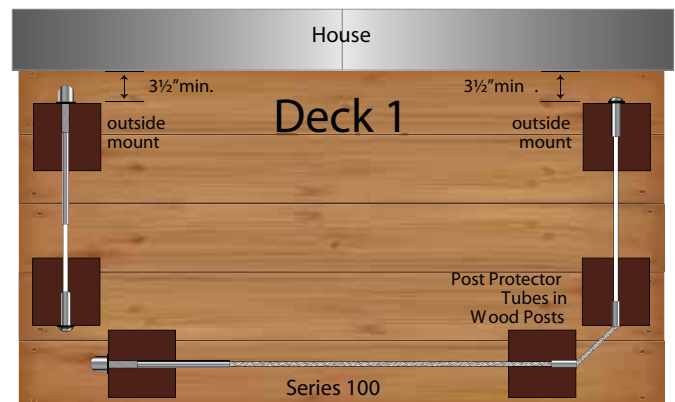
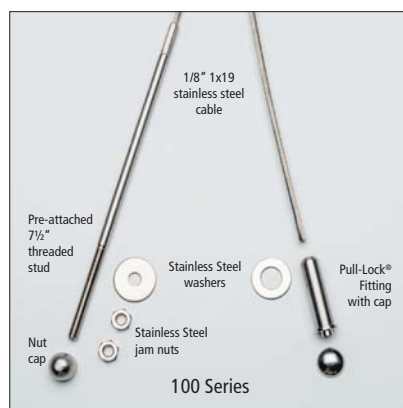
Wood Posts - Outside-of-Post to Outside-of-Post Mount

An outside-of-post to outside-of-post configuration is the only scenario in which the economical threaded stud kits may be used. The threaded stud kits are even more economical than the 200 series, but the threaded studs are a basic, functional fitting, not a hide-in-the-post solution. Two jam nuts and some metal thread (all covered by an end cap) will extend beyond the back of the post on one end. A Pull-Lock® fitting is installed through the other end.

(Takes longer to install than 224 Series cable kit and has less flexibility for applications)

For wood posts, the applicable kit is the 100 Series.

The tensioning device is a 7½" long threaded stud which installs on the back side of one end post, as shown in Deck 1.



For Post Protector Tubes, see Accessories and Equipment page.

Series 100 Kits

Cable Length	PART NO.
5'	10005
10'	10010
15'	10015
20'	10020
25'	10025
30'	10030
40'	10040
50'	10050

Cable Braces



Pre-Drilled Aluminum Cable Brace

3/4" x 3/4" tube, 42" long for cutting down to any size rail height. Holes pre-drilled at 3-1/8" on center, 13 holes total. For use between structural posts to keep cables code compliant on level runs. Use cable brace plugs to attach to top and bottom rail or deck.

Anodized:

Order **CB-42-AN-AL-13-P**

Black:

Order **CB-42-BL-AL-13-P**

Undrilled Aluminum Cable Brace for Stairs

3/4" x 3/4" tube, 42" long for cutting down to any size rail height. Comes undrilled so slots can be field-drilled to match cable array.

Anodized:

Order **CB-42-AN-AL-P**

Black:

Order **CB-42-BL-AL-P**



Cedar Rail with Cable

Cable brace must be used every 42" to avoid the cable from deflecting over 4." The cable brace is not a structural member of the rail.

Pre-Drilled Aluminum Cable Brace for Stairs

3/4" x 3/4" tube, 50" long for cutting down to any size rail height. Comes pre-drilled with 12 slotted and offset holes to match cable array.

Anodized:

Order **CB-50-AN-12-P**

Black:

Order **CB-50-BL-12-P**

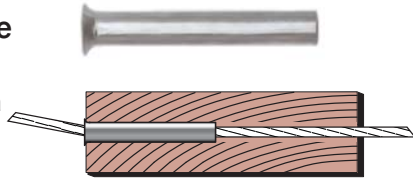


Tools and Essentials

Stainless Steel Post Protector Tube

The post protector tube is inserted into a wood post where the cable enters/exits the post at an angle to keep cable from biting into the wood.

Order **CS-TUBE6** For 1/8" and 3/16" dia. cable



Cable Release

Releases cable from Push-Lock® and Pull-Lock® type fittings before cables are tensioned. For 1/8" cable only.

Order **PL-KEY**



Ultra-tec Lag Eye and Extended Length Lag Eye

For attaching an Adjust-A-Body with Threaded Eye or Push-Lock Threaded Eye to a wood Post.

Order: **LE6** or **LE-6L** for Extended Length



Beveled Washers

Made of stainless steel for use on stairways or slopes where you need to drill your end post holes at an angle.

Order **two** of **BW356 Beveled Washer/Flat Washer per cable run**



Cable Cutter

For burr-free cutting of cable. For light-duty use to cut 1/8" diameter cable, order **C-7HIT**



ADI™ Cable Railing Basic Install Kit

Kit comes with necessary drill bits, tools, and a cut off wheel to properly install cable railing.

Order: **ADICRKIT**



Light Duty Hanger Bolt Driver

Use to install Adjust-A-Body® with Hanger Bolt tensioners. Makes driving hanger bolts fast and easy.

Order: **HB6N/R**



Heavy Duty Hanger Bolt Driver

1 pc. self-gripping design intended for multiple installations.

Order **HB6DRIVER/R**



Cable Gripping Pliers

Used to securely grip cable to avoid winding during installation.

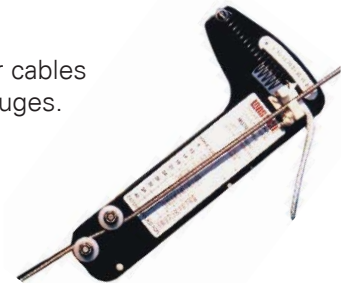
Order: **PLIERS**



Cable Tension Gauges

Check the tension on your cables with these easy-to-use gauges.

Order **PT-CR** for cable diameter of 1/8", 3/16"



Stainless Steel Cleaner and Protectant

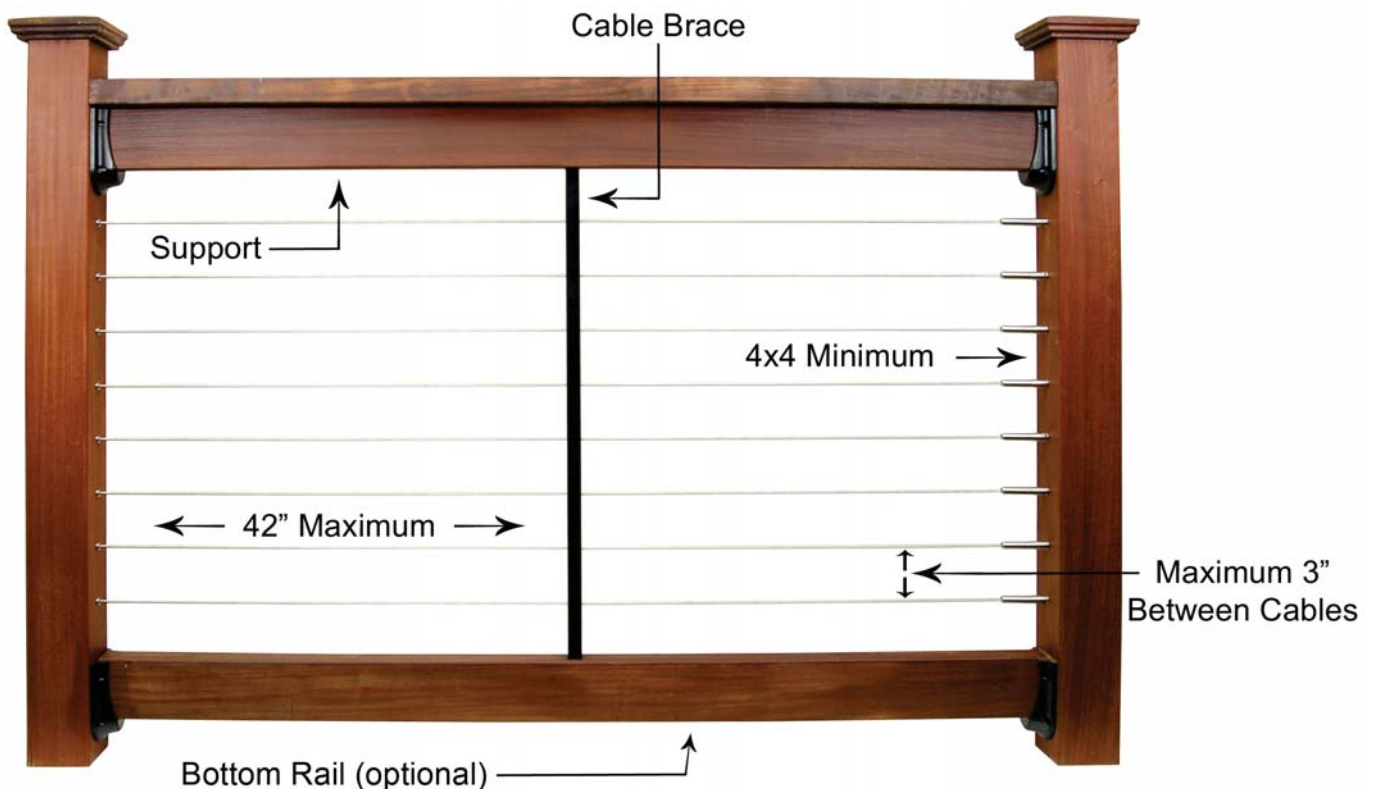
Dissolve minor corrosion, then leave a protective coating that lasts for months. Includes an 8-oz. spray-on rust and stain remover and a 4-oz. bottle of protectant.

Order **EZ Clean**



Reviewing the Cable Basics

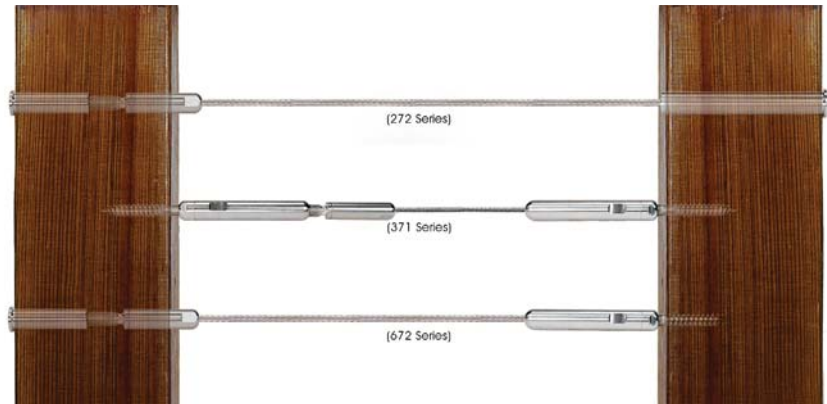
- Use minimum 4x4 wood end posts to properly support the cables when tensioned.
- Support the end posts with a horizontal top rail installed between the posts.
 - The bottom rail is optional providing the posts are securely anchored.
- Requires 3" spacing between cables, so to not exceed 4" when deflected.
- Cable brace must be used every 42" to avoid the cable from deflecting over 4"
 - The cable brace is not a structural member so you can use a variety of materials for this purpose. (i.e. Aluminum baluster, Wood 2X2, Flat bar, etc.)
- Tension cable runs from the outside-in, alternating between top and bottom runs.
- Cables are to be tensioned to 300 - 400lbs per run.
 - Cable should deflect $\frac{1}{4}$ " or less when pushed on in center of run.
- 36" Rail height will typically take 10 runs of cable, 42" rail will take 12 runs of cable
 - If no bottom rail is being used.
- Lag style cable fittings are required for cable when using sleeved posts.
- If two posts are used on a corner of the deck, the cable can run through the corner by making a 45 degree turn through the posts.
 - Single tensioner (most common) cable kits allow cable to pass through one corner.
 - Double tensioner cable kits allow cable to pass through two corners.



Cable Kits with Double Tensioners

For level runs:

- 272 Series (outside to outside)
3½" Invisiware® Receiver to
1½" Receiver with Push-Lock® Stud.
- 672 Series (inside to outside)
Adjust-a-Body® with Hanger Bolt to
1½" Receiver with Push-Lock® Stud.
- 371 Series (inside to inside)
Adjust-a-Body® with Hanger Bolt to
Push-Lock® Turnbuckle with
Hanger Bolt.



Cable Kits Using Two Tensioning Fittings

When going around two corners, or making multiple turns that equate to more than 90 Degrees, it is required to tension the cable from both ends. If the cable makes more than one 90 degree turn the friction and the angle will keep the cables from being able to be tensioned from a single tensioning end. These cable kits are not recommended for common installations, but provide a solutions for unique installations.

Wood Posts - Outside-of-Post to Outside-of-Post Mount

Cable Runs through Two Corners

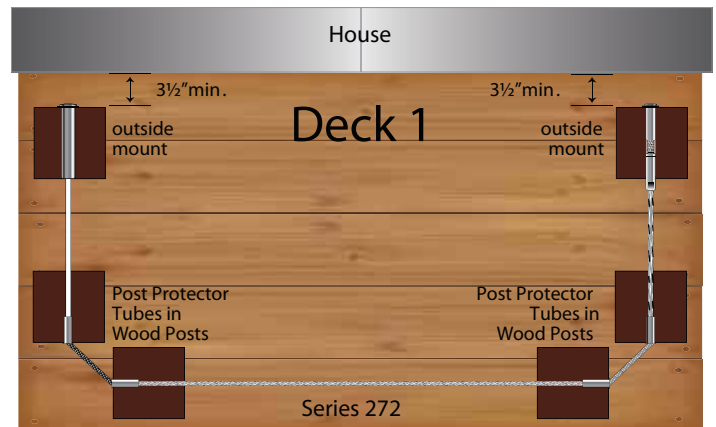
When going around two corners, it's necessary to tension the cable from both ends as shown in Deck 1.

Applicable kit is the 272 Series.

The tensioning devices are a 3½" long Invisiware® Receiver, which installs through the post on one end, and a Push-Lock® Stud on the other end, which is threaded into a 1½" long Receiver.



Cable Length	Series 272 Kits	
	1/8" cable PART NO.	3/16" cable PART NO.
30'	27230	27230-6
40'	27240	27240-6
50'	27250	27250-6
60'	27260	27260-6



Tools needed for 272 Series:

- 5/32 drill bit if 1/8" cable, 7/32 if 3/16"
- 29/64 drill bit for Receiver® and Pull-Lock® installation
- 3/16 Hex wrench for tensioning Receiver
- Cable cutting tool
- If using Post Protector Tubes, 1/4 drill bit
- If 272 Series, 3/8 wrench for Push-Lock® Stud

Wood Posts - Inside-of-Post to Outside-of-Post Mount

Cable Runs through Two Corners

When going around two corners, it's necessary to tension the cable from both ends as shown in Deck 2.

Applicable kit is the **672 series**. The tensioning devices are an Adjust-a-Body® with Hanger Bolt which lags into the wood post on one end, and a 1-1/2" long Receiver with Push-Lock® Stud on the other end.



Series 672 Kits

Cable Length	1/8" cable	3/16" cable
	PART NO.	PART NO.
30'	67230	67230-6
40'	67240	67240-6
50'	67250	67250-6
60'	67260	67260-6



For Post Protector Tubes, see Accessories and Equipment page.

Tools needed for 672 Series:

- 5/32 drill bit if 1/8" cable, 7/32 if 3/16"
- 29/64 drill bit for Receiver installation
- 3/16 Hex wrench for tensioning Receiver
- 9/32 drill bit for Push-Lock® Lag installation
- 1/4 drill bit for Adjust-a-Body® installation
- 1/4 wrench for turning Hanger Bolt
- 7/16 wrench to tension Adjust-a-Body®
- 3/8 wrench for Push-Lock® Stud
- Cable cutting tool

Wood Posts - Inside-of-Post to Inside-of-Post Mount

Cable Runs through Two Corners

When going around two corners, it's necessary to tension the cable from both ends as shown in Deck 3.

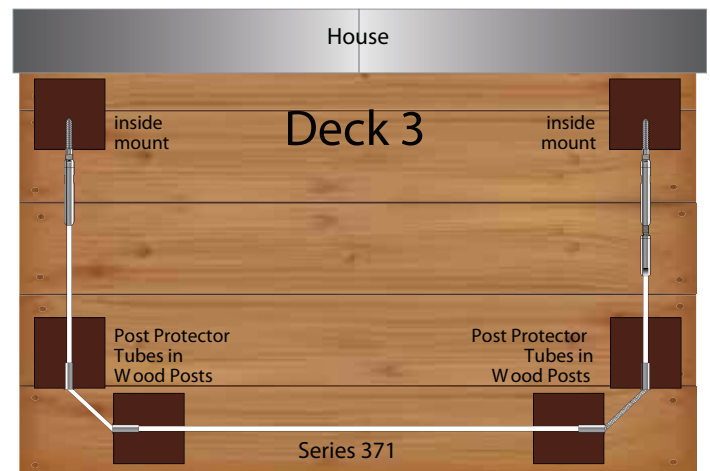
Applicable kit is the **371 Series**.

The tensioning devices are an Adjust-a-Body® with Hanger Bolt, which lags into the wood post on one end, and Push-Lock® Turnbuckle with Hanger Bolt on the other end.



Series 371 Kits

Cable Length	1/8" cable	3/16" cable
	PART NO.	PART NO.
30'	37130	37130-6
40'	37140	37140-6
50'	37150	37150-6
60'	37160	37160-6



For Post Protector Tubes, see Accessories and Equipment page.

Tools needed for 371 Series:


- 5/32 drill bit if 1/8" cable, 7/32 if 3/16" cable
- 3/16 Hex wrench for tensioning Receiver
- 1/4 drill bit for Push-Lock® Turnbuckle
- 1/4 wrench for turning Hanger Bolt
- 7/16 wrench for tensioning fitting
- 3/8 wrench for Push-Lock® Stud
- Cable cutting tool



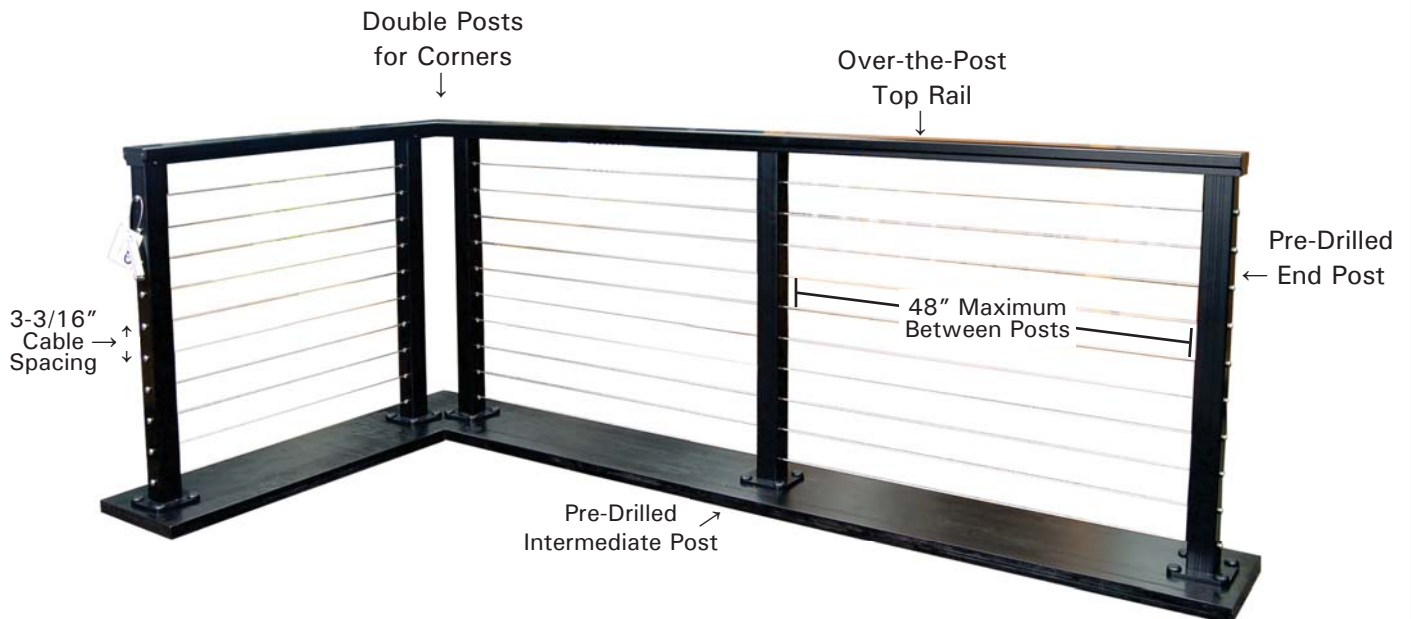
Aluminum Railing and Cable System



AS&D™ Product Features

- Low maintenance aircraft grade aluminum rail system
 - Light weight, strong, and durable
 - Sleek contemporary lines
 - Exterior or interior applications
- Stocked in Anodized and Black Baked Enamel finish (Bronze and White are Special Order)
 - Designed and Engineered for use with Cable
- Pre-drilled posts for simple and fast installation
 - Nationwide Code Approval
 - Made in USA 
 - 10 Year warranty

Framework You Will Need for AS&D™ Aluminum Rail and Cable System



Rail Overview

Manufactured in the USA using environmentally-sound aluminum, AS&D™ Aluminum Rail and Cable System has been designed, engineered and tested specifically for a cable application rail system. The aluminum framework and stainless steel cable allows for railings to be lightweight, while still retaining exceptional durability. Railings will not rust, rot, swell, warp, twist, split, or crack and require little to no user maintenance.

Rail Guidelines

To keep the cable from spreading beyond IBC code requirements, AS&D™ rail requires that the cable be supported with a post every 48" along its run. Cables are to be spaced at 3-3/16" spacing on center. Two posts must be used to create a 90 degree corner and/or a 45 degree turn. Cable can start and stop at the corner or it can pass through the corner. Top rail is required for all railing installations.

Posts

AS&D™ posts for level railings are all pre-drilled and ready for cable installation. Posts for stairs come undrilled to maximize installation flexibility, which allow the post to accommodate any stair application. All posts are available for surface mount or fascia mount and available for 36" and/or 42" rail heights.

Top Rails

There are 3 styles of top rail that AS&D™ railing utilizes:

Series 200 is a contemporary flat top rail most often used for level applications. Can be used for stairs with the addition of a secondary handrail system.

Series 100 has a rounded profile that qualifies as a graspable rail and is most commonly used for stairs.

Series 400 is a flat top rail that is designed to accept a wood or composite cap rail.

Available Colors: Anodized (Silver), Black, Bronze, and White

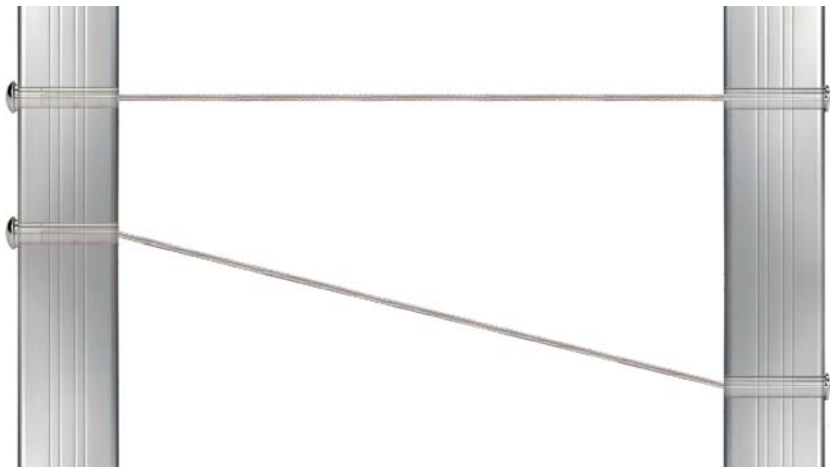
Kit Assemblies for AS&D™ Posts

For level runs:

224 Series (outside to outside)
2-3/8" Invisiware® Receiver
to Pull-Lock®.

For stairs, pitched runs:

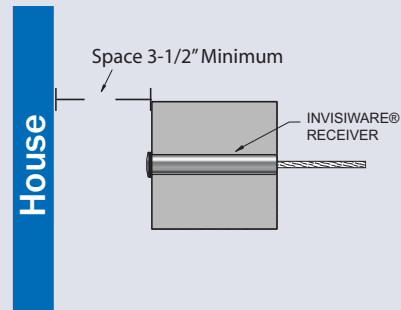
224 Series (outside to outside)
2-3/8" Invisiware® Receiver
to Pull-Lock®.



End Post and Corner Post Guidelines

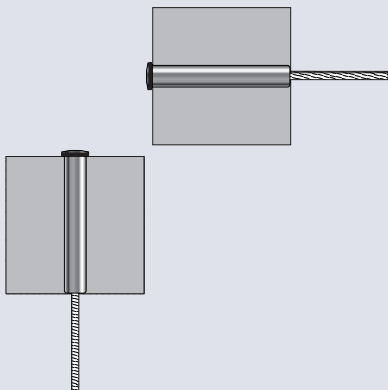
1. End Post against a Structure

Fittings that go through the post need at least 3-1/2" of space between the post and the structure to allow for cable to be installed and/or tensioned without issue.



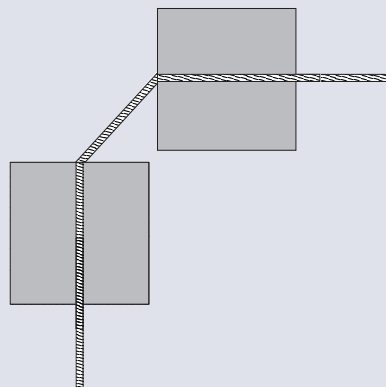
1. Start and Stop Cable Runs

Either cable fitting can be used on corners with two post. Cables are able to stay on same plane.



2. Continuous Cable Run Through a Single Corner

When taking cable railing through a corner, do not bend the cable past 45° at any time. When turning 90°, a 2-step turn using a double corner post configuration is required, as illustrated. AS&D™ railing requires two posts for corners.



AS&D™ Railing System Overview

Posts

- 2-3/8" x 2-3/8" square pre-drilled posts for cable
- Undrilled posts for Stair Application
- Cable spacing 3-3/16" on center
- Rail heights of 36" and 42"
- Post are required every 50" on center or less
- Level and stair applications
- Available in low maintenance popular finishes - Anodized (Silver), Black, Bronze and White.



Surface Mount Post

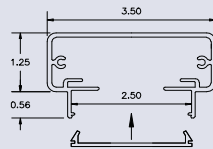


Fascia Mount Post

Top Rail Options

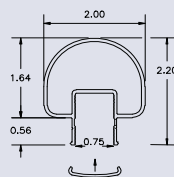
Series 200

3-1/2" x 1-7/8" x 8' Contemporary aluminum top rail. Join multiple rails together with splices to achieve any length required. Field trimmable with carbide blade. Includes bottom finishing plate for clean look. End plate sold separately.



Series 100

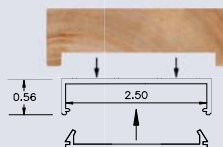
2" x 1-5/8" x 8' Aluminum top rail. Qualifies as continuous graspable handrail when used over the post. Field trimmable with carbide blade. Includes bottom finishing plate for clean look. End plate sold separately.



Use IPF Fitting to Mount to Post

Series 400

Series 400 aluminum rail cap for attaching wood/composite top rail. Field trimmable with carbide blade. Includes bottom finishing plate.



AS&D™ Post - Outside-of-Post to Outside-of-Post Mount

Straight Cable Runs and Cable Runs Through One Corner

Deck 1 has dedicated end posts for each run, and the posts are situated such that the back side of the posts are all accessible, meaning you can use an *outside-of-post to outside-of-post* configuration for all runs.

When taking cable railing through a corner, there are two options:

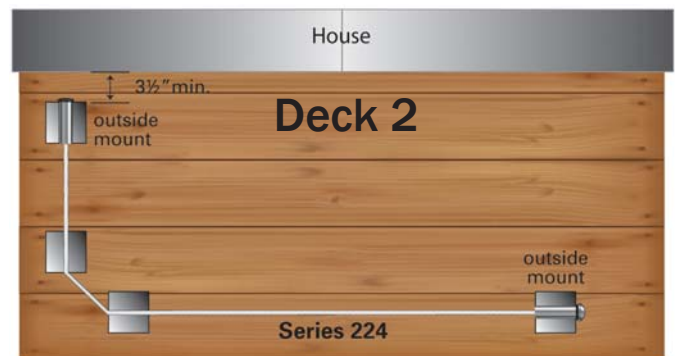
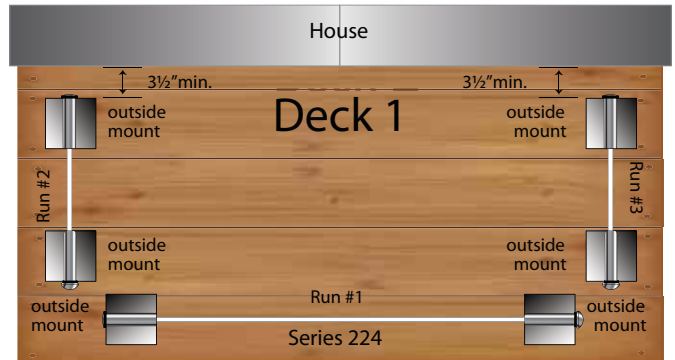
Option 1: Starting and Stopping cable kits at each corner as shown in **Deck 1**.

Option 2: Run cables continuously through a single corner as shown in **Deck 2**.

For 2-3/8" posts, applicable kit is the 224 Series.

The tensioning device is 2-3/8" long Receiver, which installs through the aluminum post on one end.

A Pull-Lock® fitting of the same length is installed through the other end.



Series 224 Kits

Cable Length	1/8" cable	3/16" cable
	PART NO.	PART NO.
5'	22405	22405-6
10'	22410	22410-6
15'	22415	22415-6
20'	22420	22420-6
25'	22425	22425-6
30'	22430	22430-6
40'	22440	22440-6
50'	22450	22450-6



Tools needed for 224 Series:

- 3/16 Hex wrench for tensioning Receiver
- Cable cutting tool and Cable gripping pliers

AS&D™ Posts for Stairs - Outside-of-Post to Outside-of-Post

Cable Runs on a Pitch

Due to many variables in stair applications, stair posts are undrilled to allow maximum flexibility and custom drill hole placement for cables. All stair posts require the addition of a surface mount base plate or fascia bracket for mounting. The holes in the end posts are to be drilled straight through with a 29/64" bit and any intermediate posts must be drilled with offset holes to accommodate to the angle of the stairs using a 3/16" bit.

Stair Options

Deck 1 - Stopping and Starting Cable.

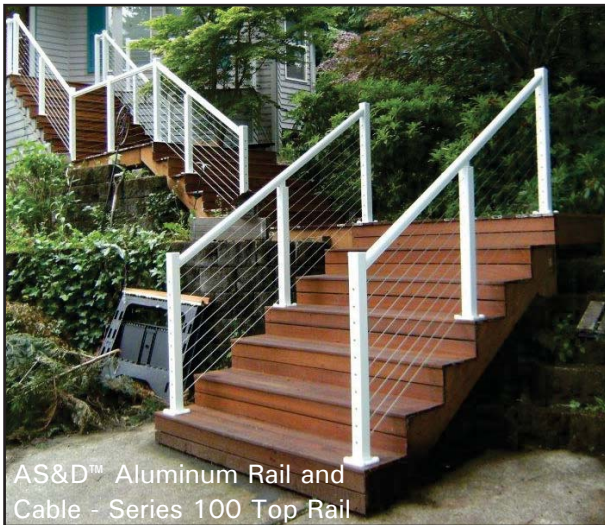
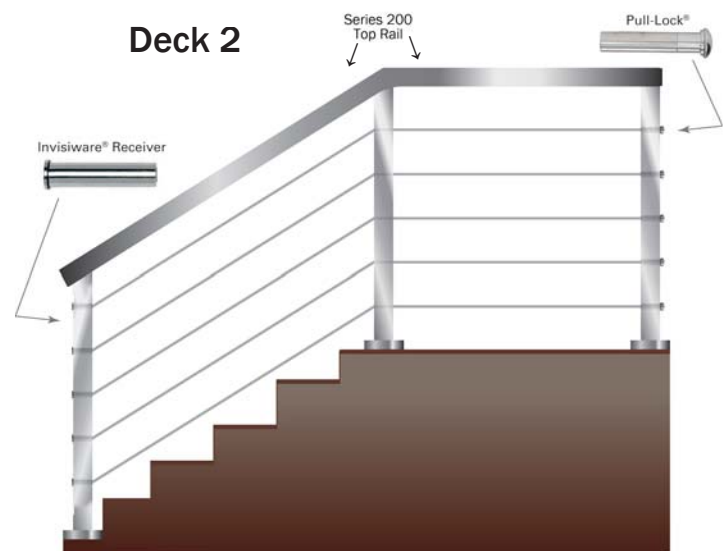
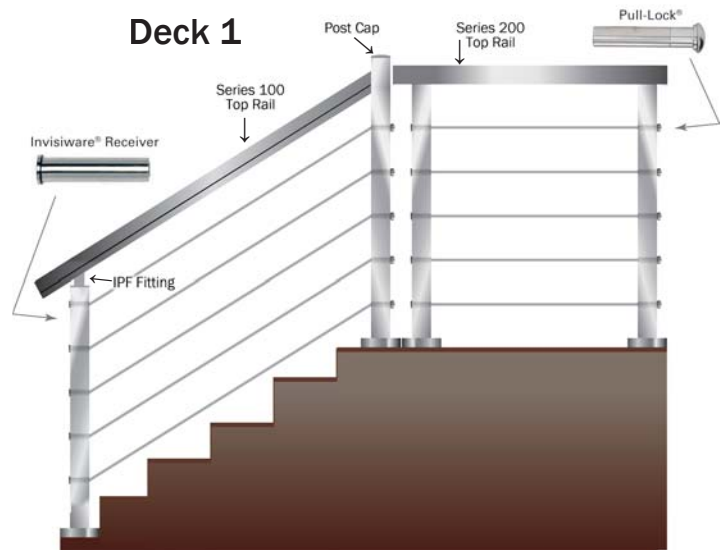
Cable Runs are broken into two sections, one for level and the other for stair. This allows for the Series 100 top rail to be used for the stairs, which doubles as a graspable handrail.

Deck 2 - Continuous cable from level to stair.

Cable runs through a single post at the top of the stairs without stopping. This can be achieved with either a Series 200 or Series 400 top rail. However, these top rails do not qualify as graspable rail and a secondary handrail may be required.

For 2-3/8" posts, applicable kit is the 224 Series.

The tensioning device is 2-3/8" long Receiver, which installs through the aluminum post on one end. A Pull-Lock® fitting of the same length is installed through the other end.



Series 224 Kits

Cable Length	1/8" cable	3/16" cable
	PART NO.	PART NO.
5'	22405	22405-6
10'	22410	22410-6
15'	22415	22415-6
20'	22420	22420-6
25'	22425	22425-6
30'	22430	22430-6
40'	22440	22440-6
50'	22450	22450-6

Tools needed for 224 Series on stairs:

- 5/32 drill bit if 1/8" cable, 7/32 if 3/16"
- 29/64 drill bit for Receiver and Pull-Lock® installation

- 3/16 Hex wrench for tensioning Receiver
- Cable cutting tool

Aluminum Sleeve or Composite Sleeve Applications Inside-of-Post to inside-of-Post Mount

Straight Cable Runs

Deck 1 has wood posts with aluminum sleeves. For sleeved posts, the recommended approach is inside to inside for the best finished look. Each run must be start and stop at corner posts.

Applicable kit are the 300 Series:

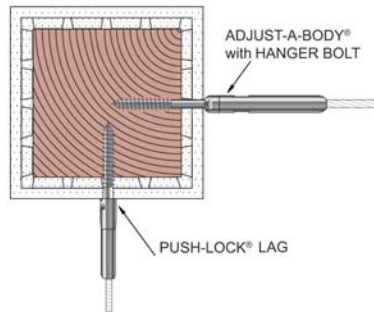
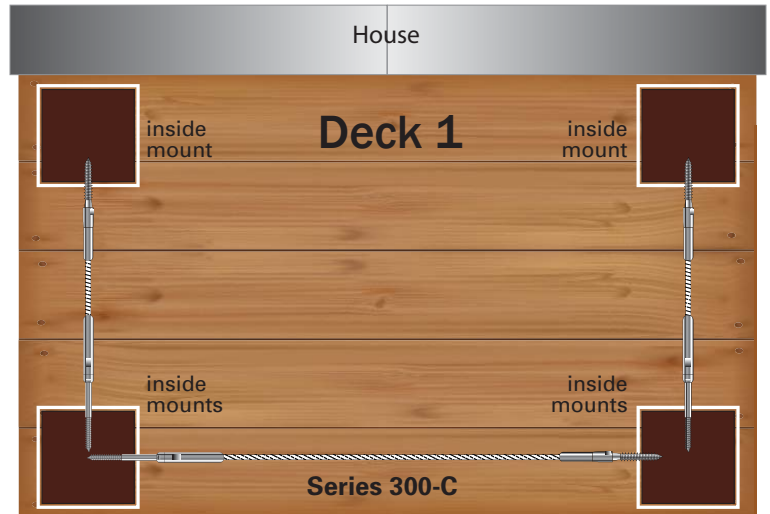
If outside diameter of the sleeve is 4½" or LESS

The tensioning device is an Adjust-a-Body® with Hanger Bolt, which lags into the wood post on one end. A Push-Lock® Lag is lagged into the other end.

Applicable kits are the 300-C Series:

If the outside diameter is GREATER than 4½"

The fittings are the same as in the 300 Series, with extended length hanger bolt and lag respectively.



Dekpro Prestige™ Textured Aluminum
4" Sleeves & aluminum top rail
over 4x4 wood post.



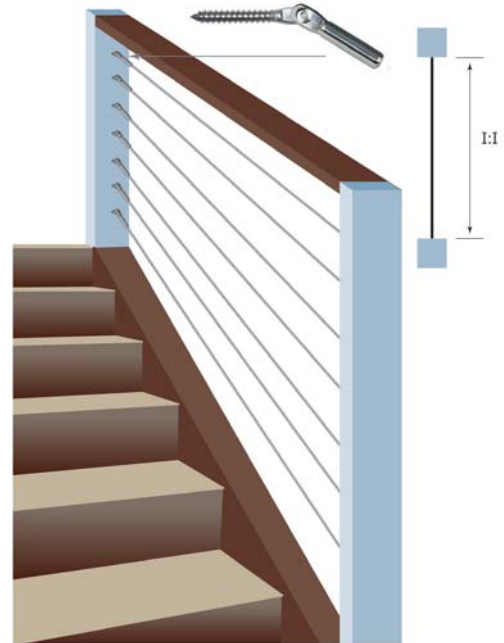
Sample: Solutions™ Aluminum
4" Sleeves & aluminum top rail
over 4x4 wood post.



Aluminum Sleeve or Composite Sleeve Applications for Stairs - Inside-of-Post to inside-of-Post Mount

Cable Runs on a Pitch

Top posts are often corner posts, which may require the stair run to connect to the *inside* of the post. The top and bottom of the cable run would be connected perpendicular to those posts, and only the intermediate posts would be drilled on the angle for the cable to run through.



Applicable kits are the 500-W Series:

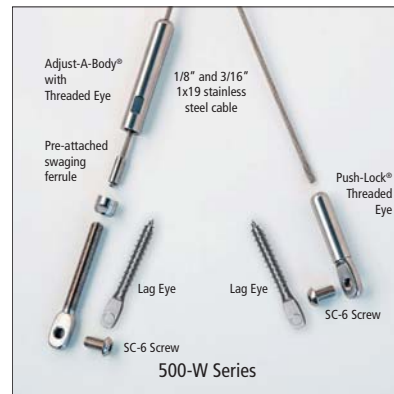
If outside diameter of the sleeve is 4½" or LESS

The tensioning device is an Adjust-a-Body® with Threaded Eye, which attaches via mounting screw to the lag eye. A Push-Lock® with Threaded Eye attaches the same way to the other end.

Applicable kits are the 500-C Series:

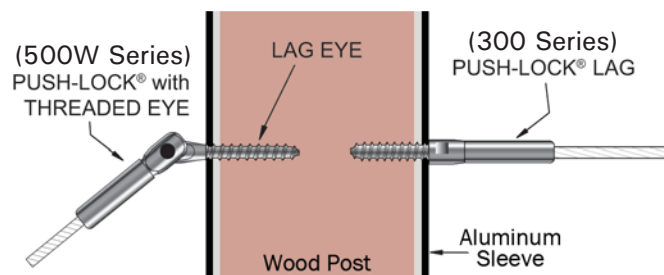
If outside diameter of the sleeve is GREATER than 4½"

The tensioning device is an Adjust-a-Body® with Threaded Eye, which attaches via mounting screw to the extended length lag eye. A Push-Lock® with Threaded Eye attaches the same way to the other end.



Shared Stair Post (Level to Stair)

A lag fitting will come into one side of the post and end the level run. Series 500W adjustable cable fitting is then used on the other side of the post for the stairs. This way the cable enters and leaves the post at the same plane for a consistent look.



Wood Post w/ Aluminum Sleeve

Tools needed for 500-W Series:

5/32 drill bit if 1/8" cable, 7/32 if 3/16"

9/32 drill bit for Lag Eye installation

7/16 wrench for tensioning Adjust-a-Body®

5/32 Hex wrench to tighten mounting screws

Cable cutting tool

If using Post Protector Tubes, 1/4 drill bit

See ADI™ Cable Rail Basic Install Kit - ADICRKIT

Concept of Installation is the same for both Aluminum Sleeved Posts and Composite Sleeved Posts

Providing Your Own Metal Rail System?

ADI™ Cable Railing by Ultra-tec® has options!

For level runs:

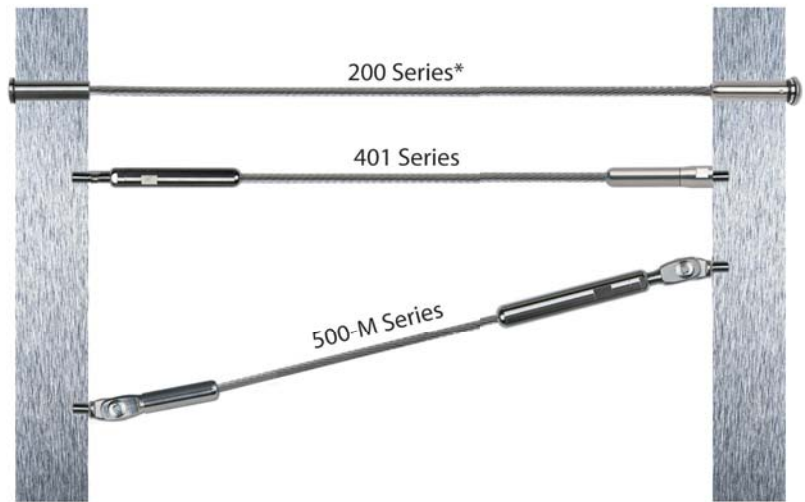
200 Series* (outside to outside)
Invisiware® Receiver to Pull-Lock®.

- * 212 series are for use with 1½" metal posts;
- * 232 are for use with 2" metal posts.
- * 224 are for use with 2-3/8" metal posts.
- * 252 are for use with 3" metal posts.

401 Series (inside to inside)
Adjust-a-Body® with Threaded Bolt to
Push-Lock® with Threaded Bolt.

For stairs, pitched runs:

500-M Series (inside to inside)
Push-Lock® with Threaded Eye to
Adjust-a-Body® with Threaded Eye.
Threaded tabs on both ends.



Please contact ADI™ for cable kits to use with your own metal post

Custom Metal Rail w/ Cable



Warranty: Stainless steel hardware and cable are covered by a limited warranty for a period of ten (10) years from the date of receipt to be free from defects due to defective materials and workmanship.

For complete warranty details, please visit <http://www.absolutedist.com/images/Warranty.pdf>

Idea Gallery



Cedar Rail w/ Cable



**Redwood Rail w/ Cable using
Intermediate Cable Braces**



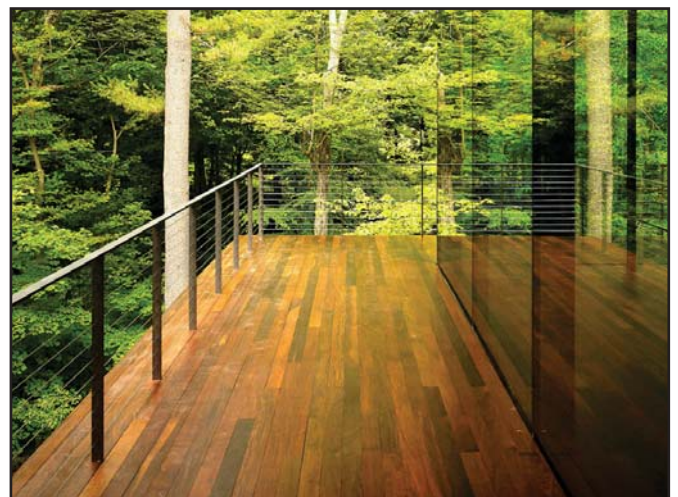
Composite Sleeves w/ Cable



**AS&D™ Surface Mount Aluminum Rail
and Cable - Series 200 Top rail**



**AS&D™ Fascia Mount Aluminum Rail
and Cable - Series 200 Top rail**



Custom Metal Post w/ Cable

Get A Project Quote From Your Dealer

Send ADI™ a Drawing and We'll Do the Take-Off

Email: Quotes@absolutedist.com

or

Fax: 800-203-4495

Please Include The Following:

Make a bird's eye drawing of your project. Include railing lengths, end and corner post locations, stairs and any angles/turns your railing takes. Please include the following:

- Dealer Name, Phone Number and a Contact.
- What size post?
- What material (wood/composite sleeve)?
- If composite sleeve, what is the outside diameter when installed?
- What is the height of the railing?
- Are you using a bottom rail?
- Are you using single posts at corners or a double post configuration?
- Do you have 3-1/2" of space behind end posts to allow for installation of Receivers and Pull-Locks®?
- What diameter cable are you using? (1/8" typically for residential or 3/16" for commercial)?
- Note: 1/8" cable available for immediate shipment. 3/16" cable - Allow 2-3 week lead time.

Warranty Information

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This warranty does not cover materials which have been abused, neglected or used in any manner other than for pedestrian railings nor for any damage, failure of corrosion resulting from environmental conditions, improper installation, vandalism, insurrection, war or acts of nature.

The company's obligations are limited to the replacement or refund of the net purchase price of the materials found to be defective and does not cover any other related cost for the disassembly of the defective materials nor the installation costs of the replacement material.

In making a claim the material shall be delivered to ADI™ with a written notice of the defect and evidence that the condition or product failure is covered by this warranty.

Cable Railing Deck Planning Guide

STEP 1

POST MATERIAL TYPE :

Wood Composite Sleeved
 Post Diameter _____ Sleeve Diameter _____

STEP 2

RAIL HEIGHT :

36" Height 42" Height Other - _____

STEP 3

POST CONFIGURATIONS :

Limtied Access or Obstructed Post Corner Posts
 Under 3" Over 3" Single Post Double Post

STEP 4

STAIRS :

Yes No Diagonal Length - _____

STEP 5

RAILS:

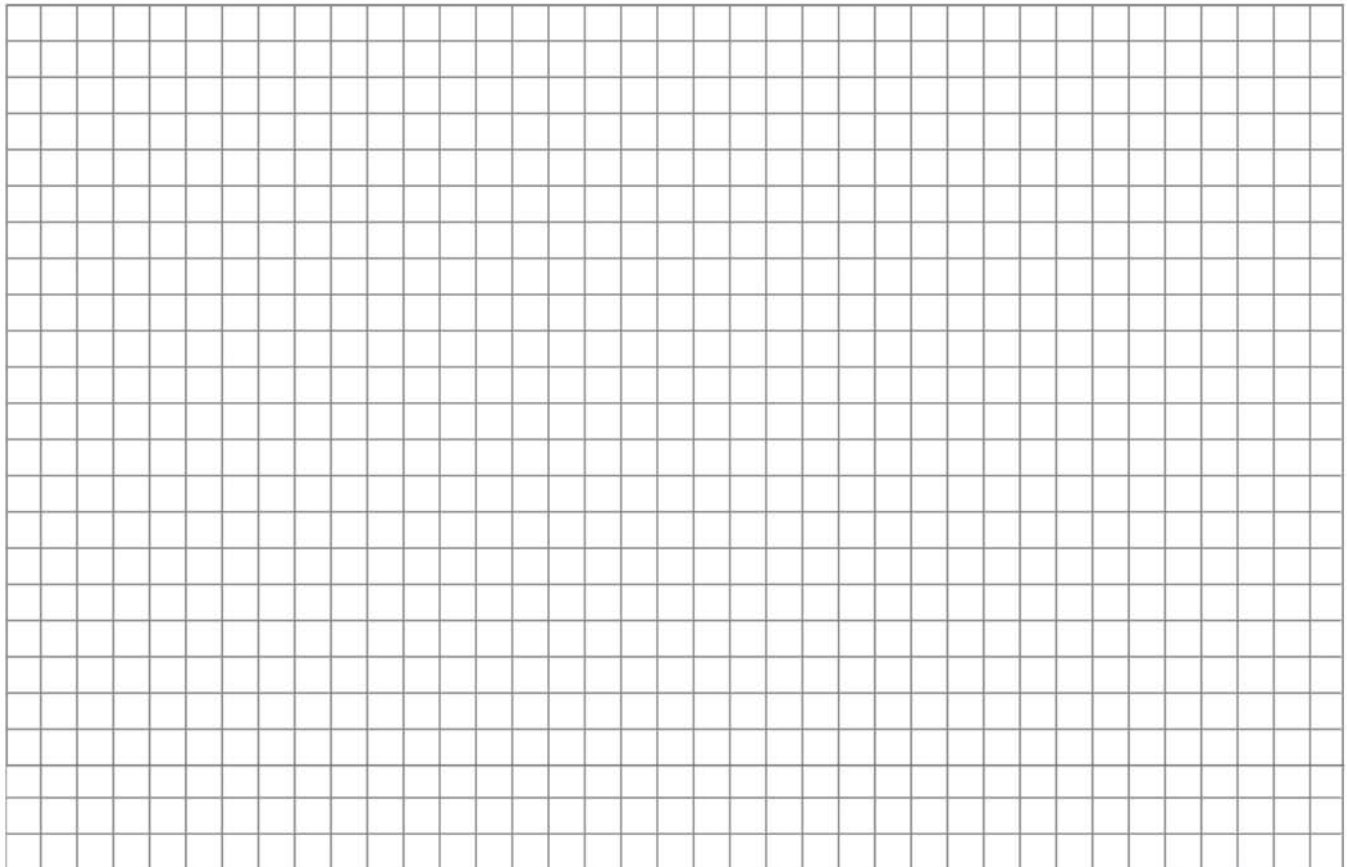
Top Rail Bottom Rail Diameter of Rail _____
 Yes (Required) Yes No

STEP 6

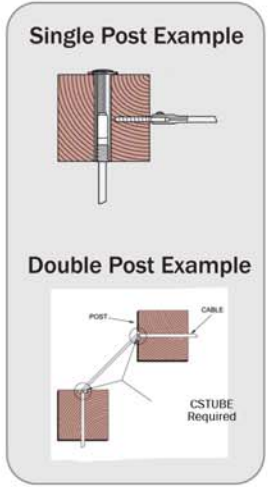
USE GRID BELOW TO DRAW DECK OR PORCH AREA:

Reference sketch of deck with posts and rail sections.

Note: Cable will be spaced with 3-1/8" centers. Cables must be supported at 42" or less to avoid deflection (supports not provided).



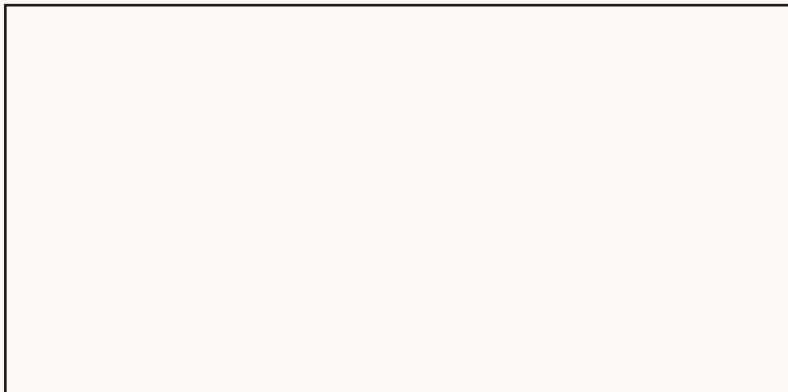
Contact: _____
 Phone: _____
 Email: _____
 Dealer: _____
 Contact: _____
 Phone: _____
 Email: _____



Ultra-tec[®]

CABLE RAILING SYSTEMS

Available Thru:



Marketed and Distributed by:

