

Retractors


Cable Retraction System for Cable Cubby® Enclosures




Extron® Electronics
INTERFACING, SWITCHING AND CONTROL

Safety Instructions


Safety Instructions • English


WARNING: This symbol, , when used on the product, is intended to alert the user of the presence of uninsulated dangerous voltage within the product's enclosure that may present a risk of electric shock.

ATTENTION: This symbol, , when used on the product, is intended to alert the user of important operating and maintenance (servicing) instructions in the literature provided with the equipment.

For information on safety guidelines, regulatory compliances, EMI/EMF compatibility, accessibility, and related topics, see the Extron Safety and Regulatory Compliance Guide, part number 68-290-01, on the Extron website, www.extron.com.


Instructions de sécurité • Français


AVERTISSEMENT: Ce pictogramme, , lorsqu'il est utilisé sur le produit, signale à l'utilisateur la présence à l'intérieur du boîtier du produit d'une tension électrique dangereuse susceptible de provoquer un choc électrique.

ATTENTION: Ce pictogramme, , lorsqu'il est utilisé sur le produit, signale à l'utilisateur des instructions d'utilisation ou de maintenance importantes qui se trouvent dans la documentation fournie avec le matériel.

Pour en savoir plus sur les règles de sécurité, la conformité à la réglementation, la compatibilité EMI/EMF, l'accessibilité, et autres sujets connexes, lisez les informations de sécurité et de conformité Extron, réf. 68-290-01, sur le site Extron, www.extron.fr.


Sicherheitsanweisungen • Deutsch


WARNUNG: Dieses Symbol , auf dem Produkt soll den Benutzer darauf aufmerksam machen, dass im Inneren des Gehäuses dieses Produktes gefährliche Spannungen herrschen, die nicht isoliert sind und die einen elektrischen Schlag verursachen können.

VORSICHT: Dieses Symbol , auf dem Produkt soll dem Benutzer in der im Lieferumfang enthaltenen Dokumentation besonders wichtige Hinweise zur Bedienung und Wartung (Instandhaltung) geben.

Weitere Informationen über die Sicherheitsrichtlinien, Produkthandhabung, EMI/EMF-Kompatibilität, Zugänglichkeit und verwandte Themen finden Sie in den Extron-Richtlinien für Sicherheit und Handhabung (Artikelnummer 68-290-01) auf der Extron-Website, www.extron.de.


Instrucciones de seguridad • Español


ADVERTENCIA: Este símbolo, , cuando se utiliza en el producto, avisa al usuario de la presencia de voltaje peligroso sin aislar dentro del producto, lo que puede representar un riesgo de descarga eléctrica.

ATENCIÓN: Este símbolo, , cuando se utiliza en el producto, avisa al usuario de la presencia de importantes instrucciones de uso y mantenimiento recogidas en la documentación proporcionada con el equipo.

Para obtener información sobre directrices de seguridad, cumplimiento de normativas, compatibilidad electromagnética, accesibilidad y temas relacionados, consulte la Guía de cumplimiento de normativas y seguridad de Extron, referencia 68-290-01, en el sitio Web de Extron, www.extron.es.


Chinese Simplified (简体中文)


警告:  产品上的这个标志意在警告用户该产品机壳内有暴露的危险电压, 有触电危险。

注意:  产品上的这个标志意在提示用户设备随附的用户手册中有重要的操作和维护(维修)说明。

关于我们产品的安全指南、遵循的规范、EMI/EMF 的兼容性、无障碍使用的特性等相关内容, 敬请访问 Extron 网站 www.extron.cn, 参见 Extron 安全规范指南, 产品编号 68-290-01。


Chinese Traditional (繁體中文)


警告:  若產品上使用此符號, 是為了提醒使用者, 產品機殼內存在著可能會導致觸電之風險的未絕緣危險電壓。

注意:  若產品上使用此符號, 是為了提醒使用者。

有關安全性指導方針、法規遵守、EMI/EMF 相容性、存取範圍和相關主題的詳細資訊, 請瀏覽 Extron 網站: www.extron.com, 然後參閱《Extron 安全性與法規遵守手冊》, 準則編號 68-290-01。


Japanese


警告: この記号  が製品上に表示されている場合は、筐体内に絶縁されていない高電圧が流れ、感電の危険があることを示しています。

注意: この記号  が製品上に表示されている場合は、本機の取扱説明書に記載されている重要な操作と保守(整備)の指示についてユーザーの注意を喚起するものです。

安全上のご注意、法規遵守、EMI/EMF適合性、その他の関連項目については、エクストロンのウェブサイトwww.extron.jpより『Extron Safety and Regulatory Compliance Guide』(P/N 68-290-01)をご覧ください。

Korean

경고: 이 기호  가 제품에 사용될 경우, 제품의 인클로저 내에 있는 접지되지 않은 위험한 전류로 인해 사용자가 감전될 위험이 있음을 경고합니다.

주의: 이 기호  가 제품에 사용될 경우, 장비와 함께 제공된 책자에 나와 있는 주요 운영 및 유지보수(정비) 지침을 경고합니다.

안전 가이드라인, 규제 준수, EMI/EMF 호환성, 접근성, 그리고 관련 항목에 대한 자세한 내용은 Extron 웹 사이트(www.extron.com)의 Extron 안전 및 규제 준수 안내서, 68-290-01 조항을 참조하십시오.

Copyright

© 2013 Extron Electronics. All rights reserved.

Trademarks

All trademarks mentioned in this guide are the properties of their respective owners.

The following registered trademarks^(®), registered service marks^(SM), and trademarks^(TM) are the property of RGB Systems, Inc. or Extron Electronics:

Registered Trademarks ^(®)
AVTrac, Cable Cubby, CrossPoint, eBUS, EDID Manager, EDID Minder, Extron, Flat Field,GlobalViewer, Hideaway, Inline, IP Intercom, IP Link, Key Minder, LockIt, MediaLink, PoleVault, PowerCage, PURE3, Quantum, SoundField, System Integrator, TouchLink, V-Lock, VersaTools, VN-Matrix, VoiceLift, WallVault, WindoWall
Registered Service Mark ^(SM) : S3 Service Support Solutions
Trademarks ^(TM)
AAP, AFL (Accu-Rate Frame Lock), ADSP (Advanced Digital Sync Processing), AIS (Advanced Instruction Set), Auto-Image, CDRS (Class D Ripple Suppression), DDSP (Digital Display Sync Processing), DMI (Dynamic Motion Interpolation), Driver Configurator, DSP Configurator, DSVP (Digital Sync Validation Processing), FastBite, FOXBOX, IP Intercom HelpDesk, MAAP, MicroDigital, ProDSP, QS-FPC (QuickSwitch Front Panel Controller), Scope-Trigger, SIS, Simple Instruction Set, Skew-Free, SpeedMount, SpeedNav, SpeedSwitch, Triple-Action Switching, XTP, XTP Systems, XTRA, ZipCaddy, ZipClip

Conventions Used in this Guide

Notifications

The following notifications are used in this guide:

DANGER: A danger indicates a situation that **will** result in death or severe injury.

WARNING: A warning indicates a situation that has the **potential** to result in death or severe injury.

CAUTION: A caution indicates a situation that **may** result in minor injury.

ATTENTION: Attention indicates a situation that may damage or destroy the product or associated equipment.

NOTE: A note draws attention to important information.

TIP: A tip provides a suggestion to make working with the application easier.

Software Commands

Commands are written in the fonts shown here:

```
^ARMerge Scene,,Op1 scene 1,1 ^B 51 ^W ^C  
[ 01 ] R 0004 00300 00400 00800 00600 [ 02 ] 35 [ 17 ] [ 03 ]
```

```
Esc X1 * X17 * X20 * X23 * X21 CE ←
```

NOTE: For commands and examples of computer or device responses mentioned in this guide, the character “Ø” is used for the number zero and “O” is the capital letter “o.”

Computer responses and directory paths that do not have variables are written in the font shown here:

```
Reply from 208.132.180.48: bytes=32 times=2ms TTL=32  
C:\Program Files\Extron
```

Variables are written in slanted form as shown here:

```
ping xxx.xxx.xxx.xxx -t  
SOH R Data STX Command ETB ETX
```

Selectable items, such as menu names, menu options, buttons, tabs, and field names are written in the font shown here:

From the **File** menu, select **New**.
Click the **OK** button.

Specifications Availability

Product specifications are available on the Extron website, www.extron.com.

Contents

Introduction.....	1
About this User Guide	1
About the Cable Retraction System	1
Features	1

Before Getting Started	3
Cable Retraction System Overview	3
Planning	4
Determine Under-table Clearances and Connections	5
CC 300, CC 600, CC 800 Enclosure Clearances	6
TLP 350CV, TLP 710CV, TLE 350, TLE 710 Enclosure Clearances	7
All Installations (Except Drop-in)	8
Prepare the Cable Cubby Enclosure	9
All Installations	9
Retrofit Installations.....	9
Prepare the Retractors	10
Horizontal or Angular Mounting:.....	10
Angular Mounting:	10

Installation.....	11
Cable Cubby 200	12
CC 200 Bracket and Retractor Mounting.....	13
CC 300, CC 600, CC 800, TLE, TLP Installation	14
Horizontal Bracket Mounting	15
Locking Screw (Optional)	17
Alternative Solutions	18
Drop-in Installations	18
Laptop Power.....	19
Connect the Cables.....	20
Verify Cable Release Operation.....	20

Operation.....	21
Extend a Cable	21
Retract a Cable	22

Maintenance and Adjustments	23
Pulley System Adjustment	23
To Adjust the Pulley System:.....	23
Removing and Replacing the System	25
To Remove the System:.....	25
To Replace the System:	26
Expand the Cable Retraction System	27
Add a Cable Retraction System.....	28

Reference Information	29
Cable Retraction System Part Numbers	29
Optional Accessories	29

Introduction

- [About this User Guide](#)
- [About the Cable Retraction System](#)
- [Features](#)

About this User Guide

This guide contains information to install, adjust, and operate Extron Electronics Cable Retraction System for Cable Cubby® Enclosures, and the Extended Length Cable Retraction System for Cable Cubby® Enclosures.

In this guide, the terms “system”, or “retraction system” are used to refer to the Cable Retraction System for Cable Cubby Enclosures and the Extended Length Cable Retraction System for Cable Cubby® Enclosures which includes up to three individual retractors. The term “retractor” refers to an individual retractor in the system, and the term “enclosure” refers to a Cable Cubby furniture-mountable enclosure. The term “XL” refers to the XL series. Where differences in preparation, installation, operation, or maintenance may occur, they are called out.

About the Cable Retraction System

The Cable Retraction System for Cable Cubby Enclosures is a cable retracting device installed into, but not limited to, Extron Electronics Cable Cubby products. The cable retraction system can be mounted into all current Cable Cubby products.

The cable retraction system allows extended cables to be retracted back into the Cable Cubby enclosure for storage without force or gravity. It also prevents cables from tangling underneath the table as commonly seen with traditional gravity-fed systems. The retractor is a compact multi-pulley assembly that provides a smooth consistent return motion with the push of a button.

Each retractor comes pre-loaded with Extron tested and approved cable, optimized for the specific cable diameter and flexibility. The standard retractor allows up to three feet of cable to be extended from the top of the enclosure and provides up to six feet of pigtail for connection of devices under the table. The XL series allows up to five feet of cable extension and provides up to four feet of pigtail for under-table connections.

The Cable Retraction System is available in cable types to fit all applications. See www.extron.com for current models.

Features

- **Compatible with most Cable Cubby enclosures** — The retraction system is easily integrated with Cable Cubby 300, 600, and 800 series enclosures, the TLE Series enclosures, and Cable Cubby TouchLink™ Touchpanels (TLP 350CV and TLP 710CV only). An adapter is available for installation into the Cable Cubby 200 enclosure.
- **Cables extend up to 3 feet (90 cm) (XL series extend up to 5 feet)** — Available 6 feet (1.8 m) pigtail on standard retractors and 4 feet (1.2 m) pigtail on XL series retractors for connection to under-table electronics or floor boxes.

- **Flexible installation alternatives** — Retractor can be installed under a table or other work surface in either a vertical or horizontal position.
- **DC Laptop Power** — Refer to the retraction system DC power compatibility list on the website for laptop compatibility. Always use the power supply recommended by the laptop manufacturer.
- **Filler Modules (optional)** — For mounting fewer than three retractors on each side (fewer than two for the Cable Cubby 200).
- **CC 200 Bracket** — For Cable Cubby 200 enclosures allows mounting up to two retractors total.

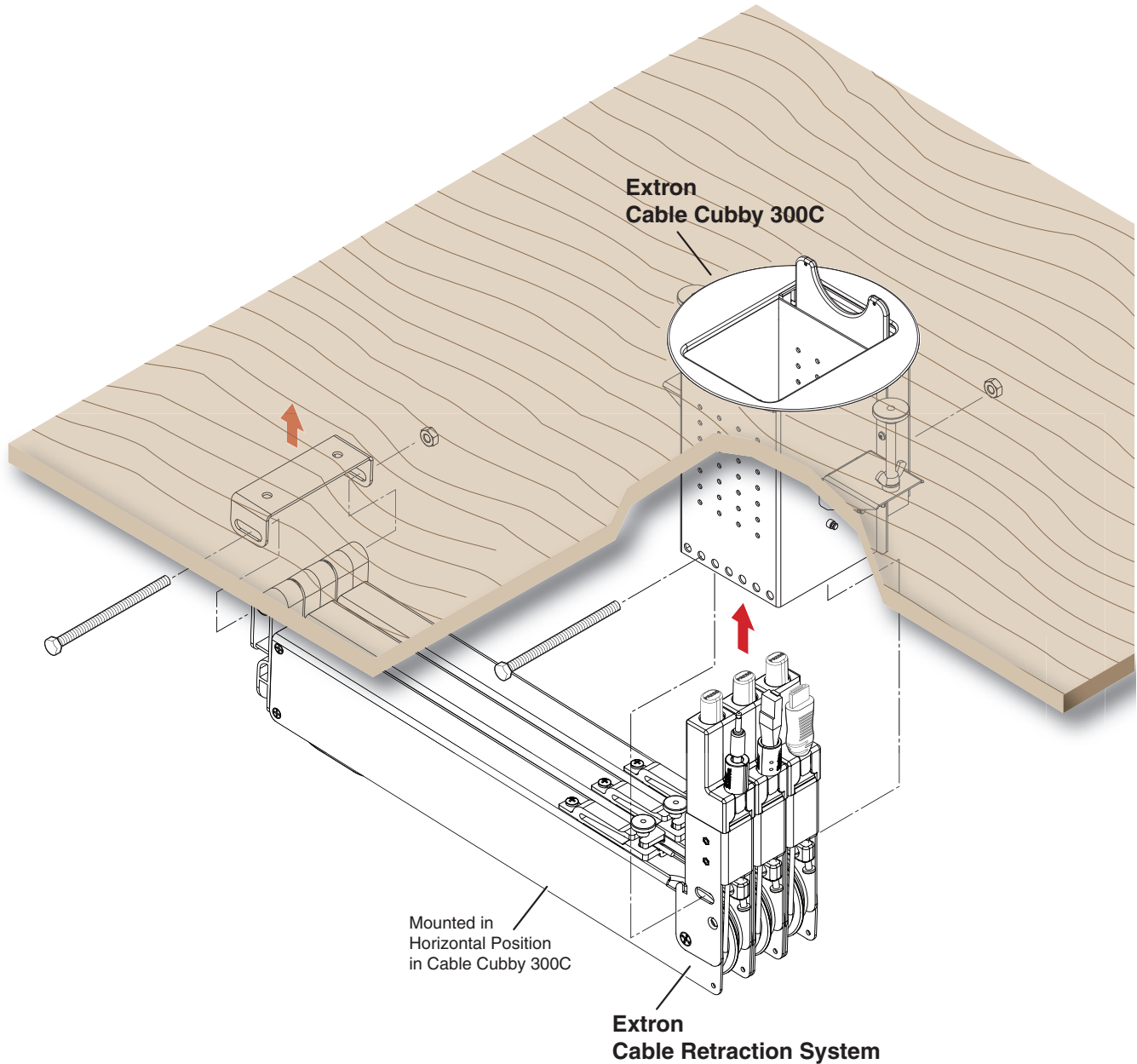


Figure 1. Cable Retraction System

Before Getting Started

This section provides an overview of the retractor installation and suggestions for planning an installation.

- [Cable Retraction System Overview](#)
- [Planning](#)
- [Prepare the Cable Cubby Enclosure](#)
- [Prepare the Retractors](#)

Cable Retraction System Overview

Before beginning an installation, familiarize yourself with the system and the installation to determine if additional parts or accessories are required.

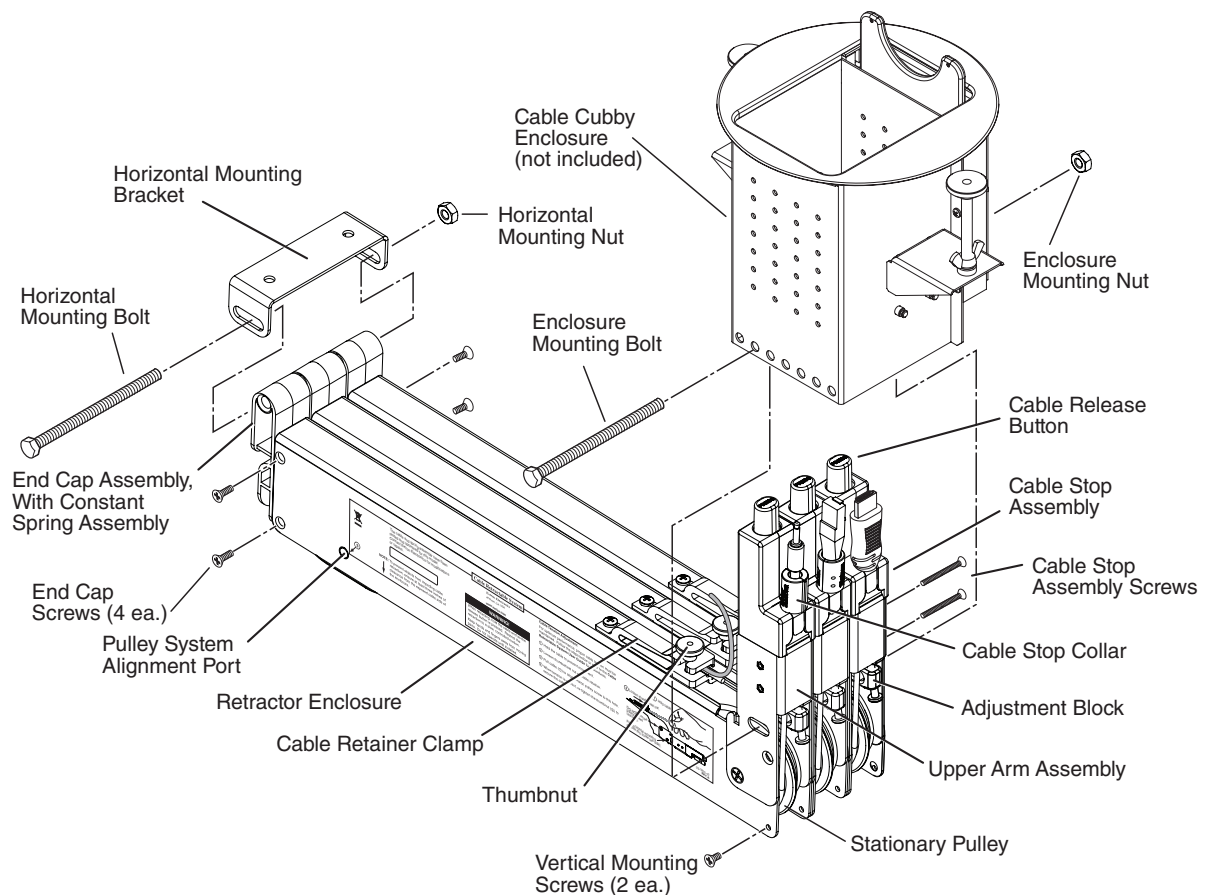


Figure 2. Retraction System Components

Planning

The cable retraction system can be mounted horizontally or vertically depending upon under-table clearance and accessibility.

Horizontal mounting is recommended to provide maximum legroom and to protect the retractors against accidental damage.

Vertical mounting is used where insufficient under-table space exists for horizontal mounting or where under-table access is limited.

Angular mounting (XL models only) is used where insufficient under-table space exists for horizontal mounting and tabletop to floor clearance prevents vertical mounting. The XL enclosure has additional mounting holes that enable mounting at an angle between horizontal and vertical.

- For horizontal mounting, a mounting bracket kit, part number **70-678-00**, is required (see **Optional Accessories** on page 29).
- Filler modules, part number **70-678-08**, may be required to occupy unused retractor space (see **Optional Accessories** on page 29).
- For Cable Cubby 200 installation, obtain the CC 200 bracket kit (see **Optional Accessories** on page 29).
- For DC Power retractors, refer to the list on the website for laptop compatibility. Always use a power supply recommended by the laptop manufacturer.

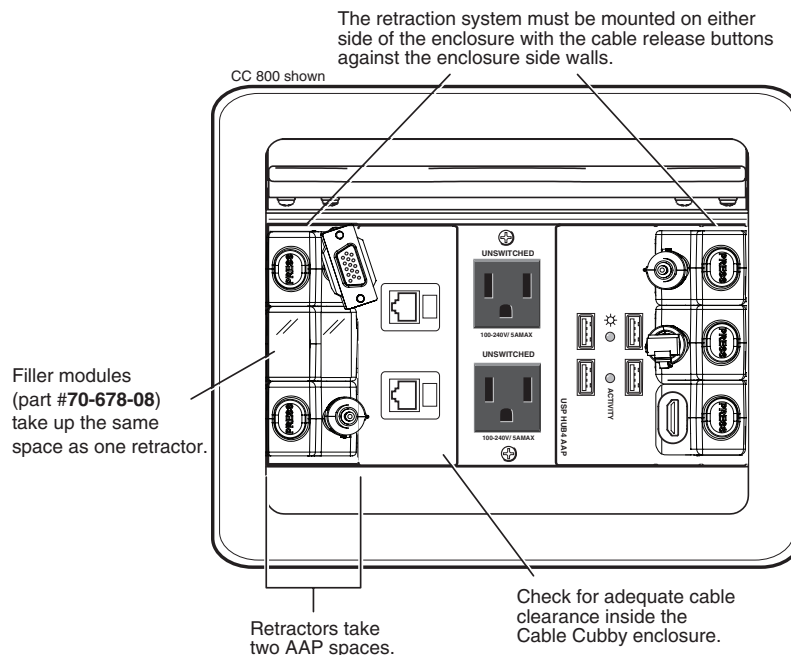
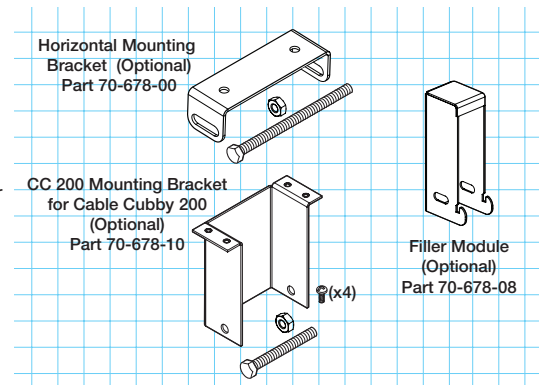


Figure 3. Retraction System Enclosure Locations

NOTE: When AAP modules are relocated or removed to provide space for the retraction system, associated AAP brackets may require reconfiguration or replacement. Before starting an installation determine if replacement AAP brackets will be needed. Replacement brackets can be ordered from the Extron website.

A *Cable Cubby Series Installation Guide* with details of the AAP bracket requirements, along with the horizontal mounting bracket, filler module, CC 200 mounting bracket kit, AAP brackets, and a laptop compatibility list are available at www.extron.com.

CAUTION:

- Do not operate a retractor until it is installed.
- Keep hands away from moving parts.

Determine Under-table Clearances and Connections

For all retractable system installations be certain there is adequate under-table space and the retractor pigtail can reach under-table devices. The following diagrams show the under-table clearances required for installation and operation of the retractor system mounted in a Cable Cubby, TouchLink, or TLE series enclosure.

NOTES:

- To prevent objects from impeding cable retraction, ensure at least 3 inches of clearance from the exposed cable side of the retractor enclosure.
- Excess cabling may cause clearance issues. Use zip ties to secure under-table cabling to prevent accidental contact or entanglement with users.

If there is limited under-table access after the Cable Cubby enclosure is mounted, the retraction system can be installed before the enclosure is mounted (see [Alternative Solutions](#) on page 18).

For CC 200 installations, see [Cable Cubby 200](#) on page 12.

Pigtails

To make connections to devices under the table, standard retractors have 6 feet (1.8 m) and XL retractors have 4 feet (1.2 m) of pigtail from the exit of the cable retainer as shown below. Depending on the retractor mounting and the location of the devices, you may require patch cables to extend the reach of the pigtail.

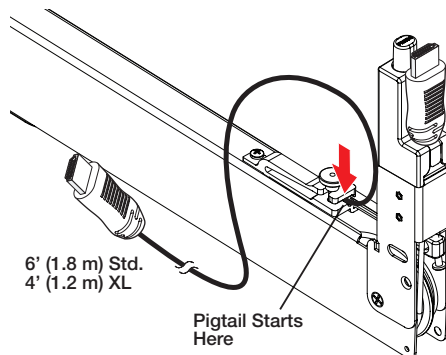


Figure 4. Pigtail Length

If you need to connect to devices further than the pigtails allow, contact your Extron representative or go to www.extron.com for a full line of patch cables.

In vertical installations, the pigtail begins 9.5 inches (24.1 cm) below the table top in CC 200/300/600/800 models for both standard and XL models, and 10.5 inches (26.7 cm) below the table top for TLP 350CV/710CV and TLE 350/710 enclosures (see [figure 5](#) on page 6 and [figure 6](#) on page 7).

For new Installations:

Choose the optimal mounting location for the Cable Cubby enclosure. The final location may require some adjustment depending upon under-table clearances required for the retraction system. Once the location has been determined, follow the instructions provided with the enclosure for mounting and installing a power module and AAPs.

For retrofit installations:

For most retrofit installations, the Cable Cubby enclosure does not require removal. Disconnect all power to the Cable Cubby before retraction system installation.

CC 300, CC 600, CC 800 Enclosure Clearances

The following diagrams show the clearance dimensions required for mounting a retractor system in a CC 300, CC 600, or CC 800 enclosure.

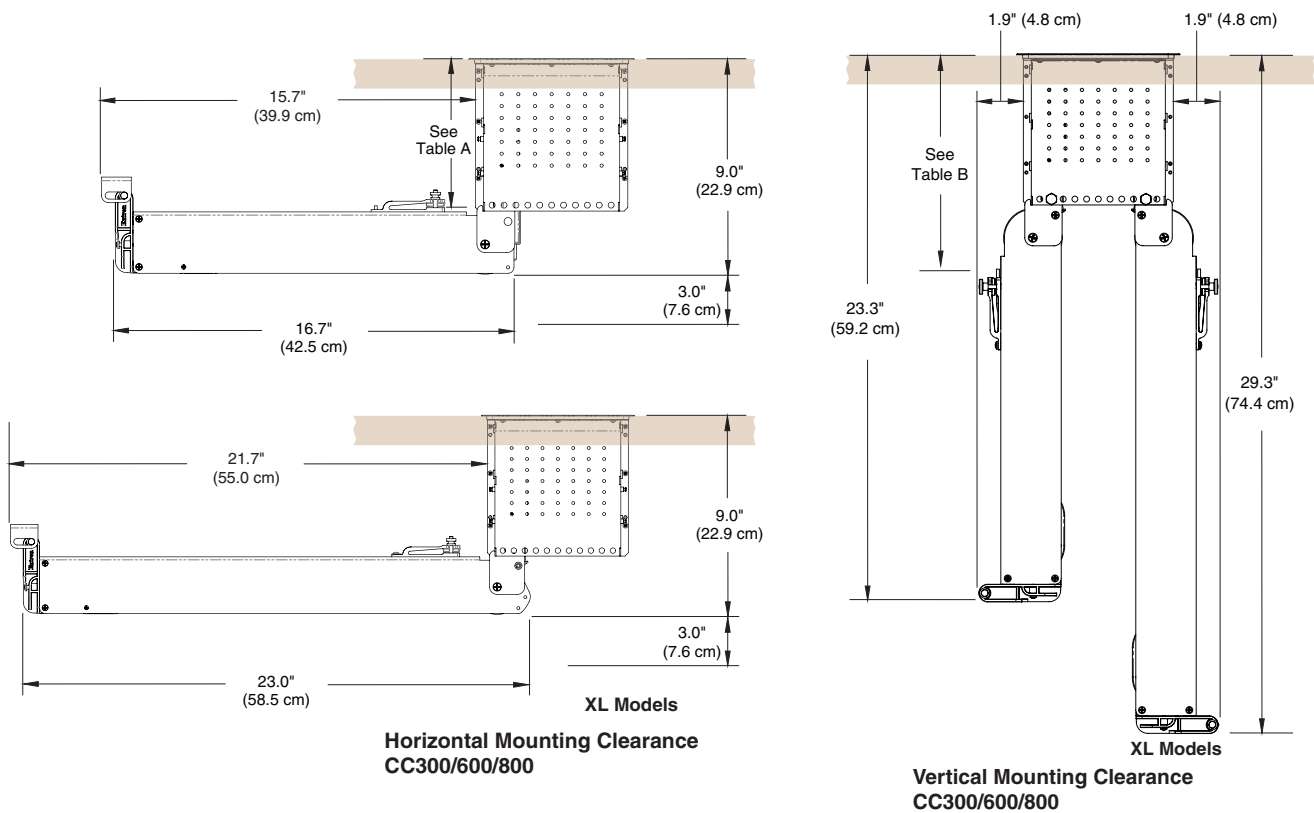


Figure 5. Vertical and Horizontal Clearance Requirements (CC 800 shown)

Enclosure Model	Dimension
CC 200	6.2 inches (15.8 cm)
CC 300/600/800	6.4 inches (16.3 cm)

Table A. Vertical Dimension from Table Top To Pigtail (Horizontal Mounting)

Enclosure Model	Dimension
CC 200	9.5 inches (24.1 cm)
CC 300/600/800	9.5 inches (24.1 cm)

Table B. Vertical Dimension from Table Top To Pigtail (Vertical Mounting)

TLP 350CV, TLP 710CV, TLE 350, TLE 710 Enclosure Clearances

The following diagrams show the clearance dimensions required for mounting a retractor system in a TouchLink (TLP 350CV and TLP 710CV only) or the TLE series enclosures.

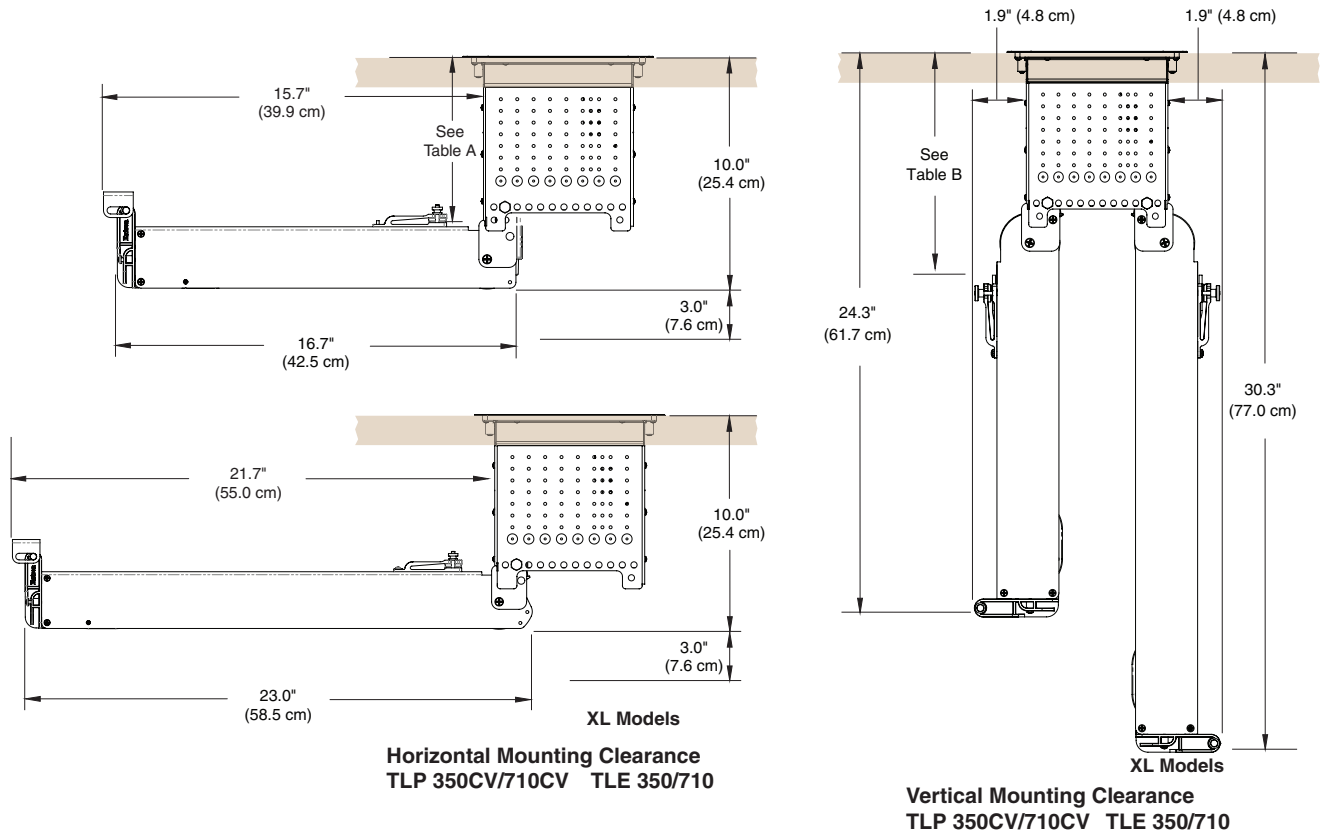


Figure 6. Vertical and Horizontal Clearance Requirements, TLP 350CV, TLP 710CV, TLE 350, and TLE 710

Retractor installation into the TLP and TLE enclosures is identical to the standard Cable Cubby enclosures. The enclosures are one inch longer than the CC 300/600/800 enclosures, but otherwise the dimensions are the same.

NOTE: Angular mounting requires an additional inch of floor clearance compared to the Cable Cubby enclosures.

Enclosure Model	Dimension
TLP/TLE	7.4 inches (18.8 cm)

Table A. Vertical Dimension from Table Top To Pigtail (Horizontal Mounting)

Enclosure Model	Dimension
TLP/TLE	10.5 inches (29.2 cm)

Table B. Vertical Dimension from Table Top To Pigtail (Vertical Mounting)

All Installations (Except Drop-in)

Horizontal Mounting: Be certain the horizontal mounting bracket can be fastened under the table or on a table support without bending the pulley system or forcing it from perpendicular with the enclosure (see figure 7, “Top View”).

Vertical Mounting: Ensure the retraction system will hang freely without touching the floor and is not obstructed by anything under the table (see [CC 300](#), [CC 600](#), [CC 800 Enclosure Clearances](#) on page 6 and [TLP 350CV](#), [TLP 710CV](#), [TLE 350](#), [TLE 710 Enclosure Clearances](#) on page 7).

Angular Mounting (XL models only): For installations where the tabletop is less than 30 inches from the floor, the XL retractor system is too long for vertical mounting and there may not be adequate under-table clearance for horizontal mounting. An additional mounting hole has been provided for these installations that allow the retractor system to install at an angle providing extra floor clearance (see figure 7, right).

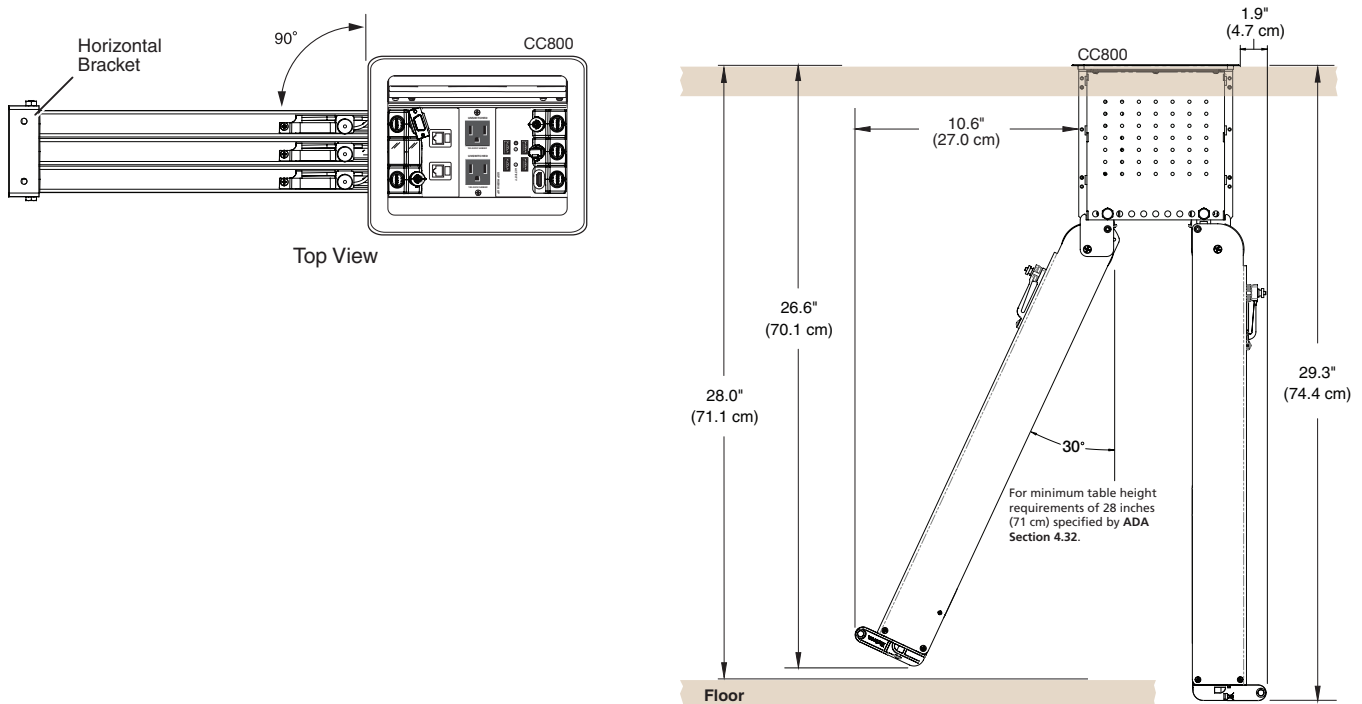


Figure 7. Horizontal Bracket (Top View) and XL Models Vertical Clearance

Prepare the Cable Cubby Enclosure

DANGER: SEVERE ELECTRICAL SHOCK. Remove all power from the Cable Cubby enclosure before beginning a retraction system installation.

All Installations

By now you should be certain the retraction system has adequate under-table clearance for installation and that proper legroom will be provided to avoid accidental contact with the system. You should have the required accessories for mounting the retraction system along with the necessary AAPs and AAP brackets to reconfigure the enclosure.

The retraction system requires two adjacent AAP spaces and must be installed on one side of the enclosure or the other with the cable release buttons against the enclosure side walls (see figure 8). Filler modules, when used, take up the same space as one retractor. Where the retraction system is installed in the enclosure is based on under-table clearance, the mounting orientation of the retractors, and operation preferences.

Install or reconfigure the power module and AAP modules and brackets before beginning the installation of the retraction system.

Retrofit Installations

Prepare the AAP spaces for the retraction system ensuring sufficient under-table clearance for the retraction system.

Relocate, remove, or replace existing AAPs and reconfigure associated AAP brackets to make room for the retraction system.

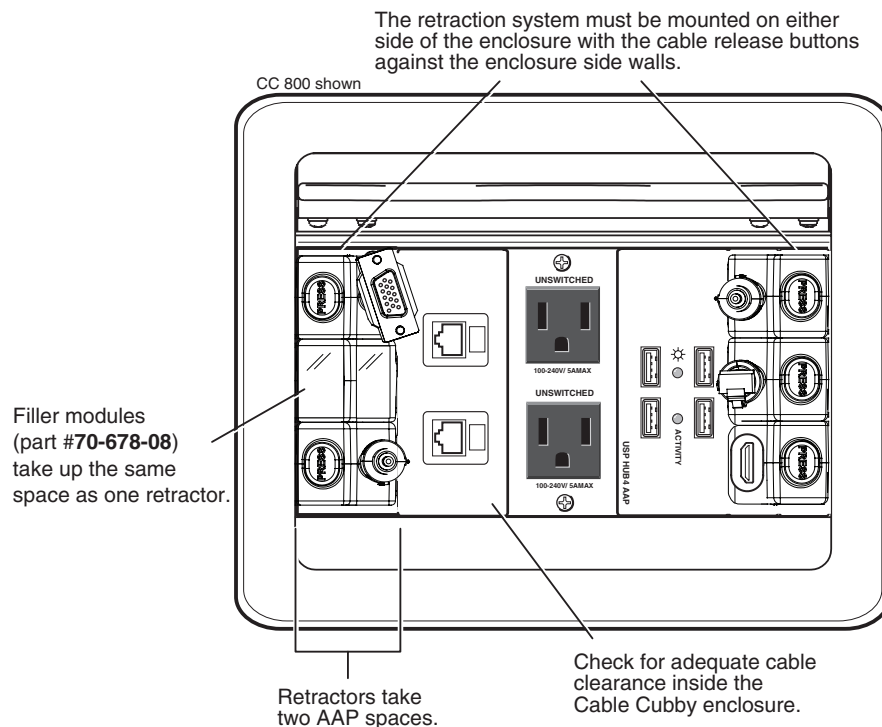


Figure 8. Retraction System AAP locations

Prepare the Retractors

Each retractor is delivered ready to mount vertically. No further modifications are required. See [CC 300, CC 600, CC 800, TLE, TLP Installation](#) on page 14 for vertical installation details.

Horizontal or Angular Mounting:

To mount the retractors horizontally or at an angle, remove the two enclosure screws from the retractor (see figure 9).

For horizontal mounting proceed to the **“Installation”** section beginning on page 11.

For angular mounting, see below.

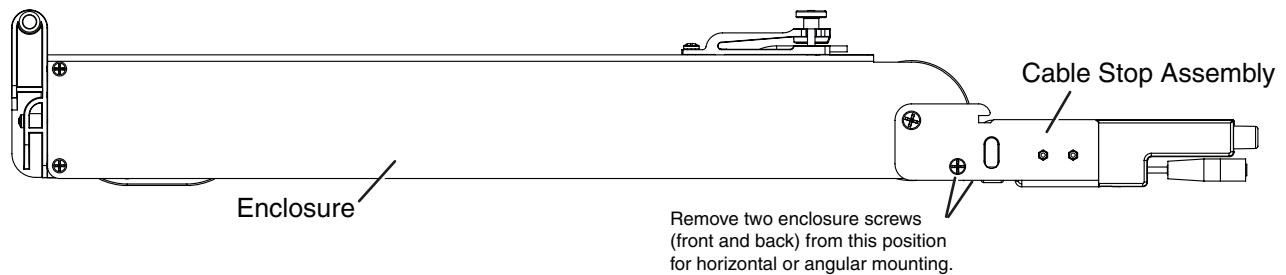


Figure 9. Remove Enclosure Screws (Horizontal or Angular Mounting Only)

Angular Mounting:

1. To prepare an XL retractor for angular mounting move the cable stop assembly upward as shown until the mounting hole is visible.

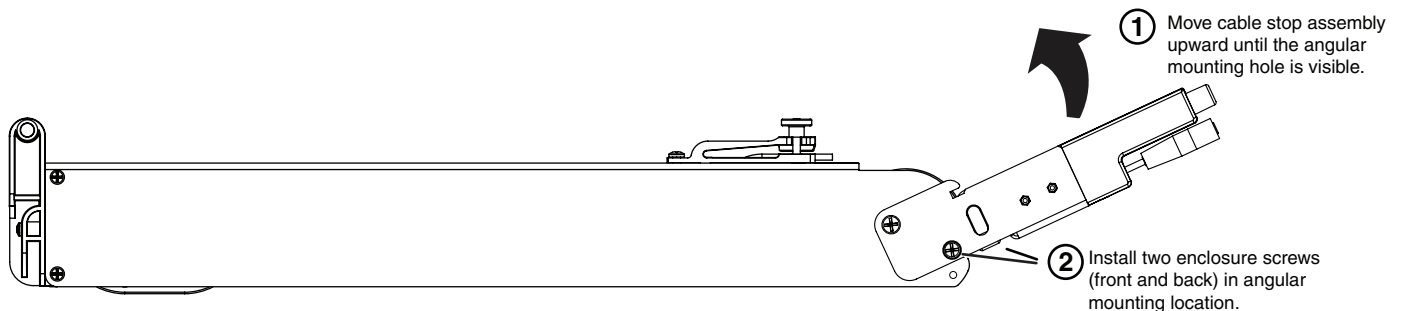


Figure 10. Install Angular Mounting Enclosure Screws

2. Reinstall the two screws removed in the preparation above.

NOTE: For Cable Cubby 200 installations, mount the retractor onto the CC 200 mounting bracket before installing in the enclosure (see [CC 200 Bracket and Retractor Mounting](#) on page 13).

Installation

This section provides details of the retractor system installation, cable connection, and verification of operation.

- [Cable Cubby 200](#)
- [CC 300, CC 600, CC 800, TLE, TLP Installation](#)
- [Horizontal Bracket Mounting](#)
- [Locking Screw \(Optional\)](#)
- [Alternative Solutions](#)
- [Laptop Power](#)
- [Connect the Cables](#)
- [Verify Cable Release Operation](#)

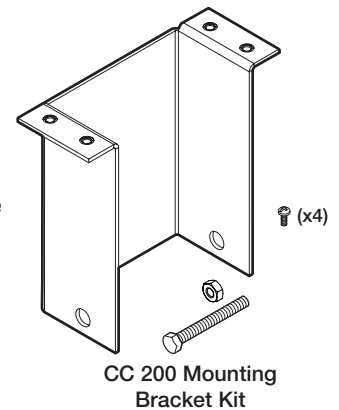
By now you should have determined there is adequate under-table clearance, have all the required accessories for installation, the enclosure should be prepared, and the retractor system properly configured.

Cable Cubby 200

The CC 200 Mounting Bracket, part number **70-678-10**, allows one or two retractors (standard or XL) to be installed in a Cable Cubby 200 enclosure. The bracket kit adapts an AAP opening for retraction system mounting similar to other Cable Cubby enclosures.

Before installing the adapter, be certain there is adequate space under the table for the retraction system with the attached bracket.

NOTE: To prevent objects from impeding cable retraction, ensure at least 3 inches of clearance from the exposed cable side of the retractor enclosure.



Determine the retractor mounting orientation: horizontal, vertical, or angular (see [Planning](#) on page 4).

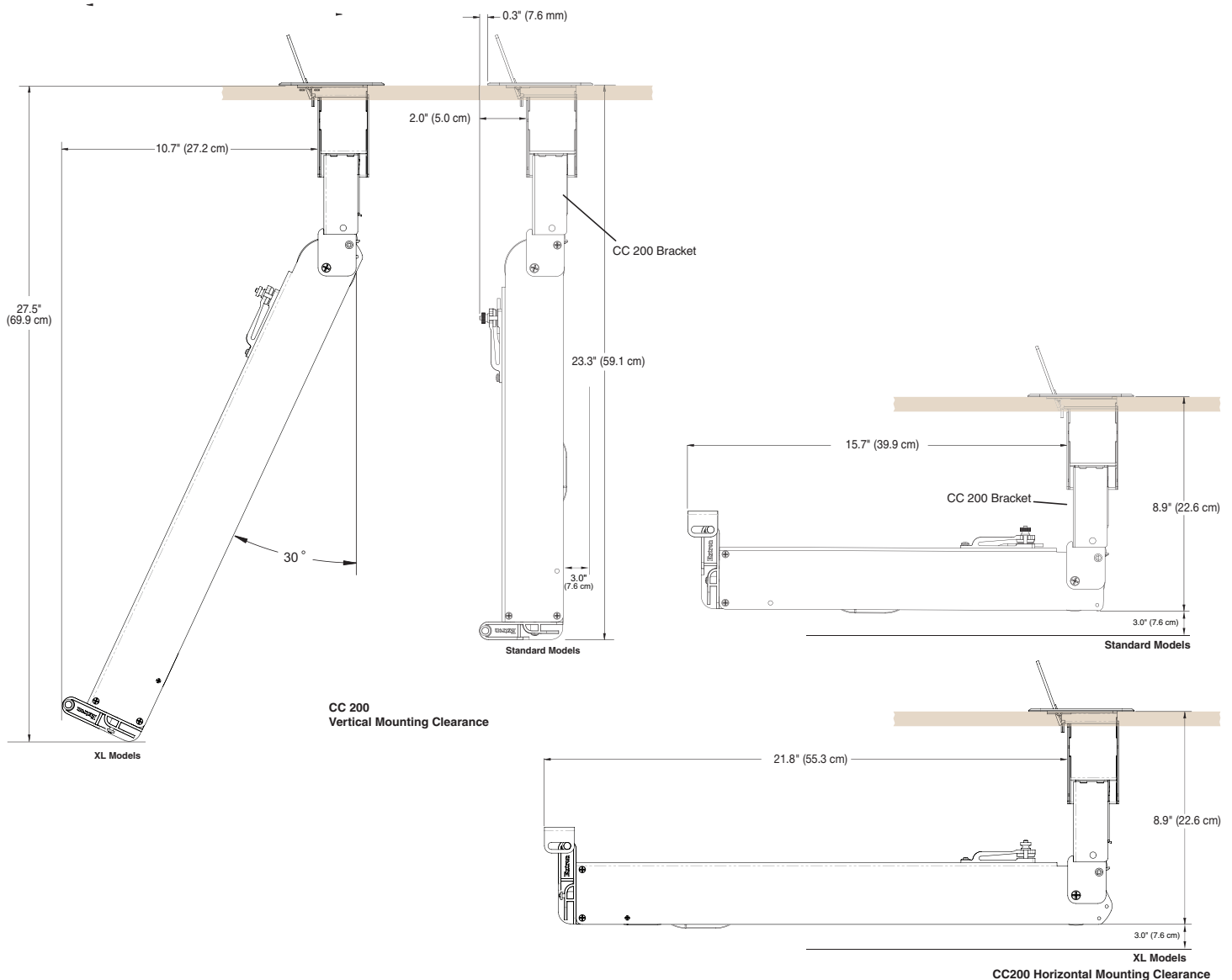


Figure 11. CC 200 mounting dimensions

CC 200 Bracket and Retractor Mounting

1. Using the supplied mounting bolt (1/4-20 x 3 inch), mount the CC 200 bracket to the retractor as shown.

NOTE: If only one retractor is mounted, use a filler module (part number **70-678-08**) in place of the second retractor.

Once the retractor is mounted to the bracket, the assembly may be installed.

2. The cable stops and connectors may be too large to fit through the AAP opening at the same time as the retractor. Pull a short amount of cable out of the retractor and push it through the AAP opening prior to installing the bracket and retractor assembly.

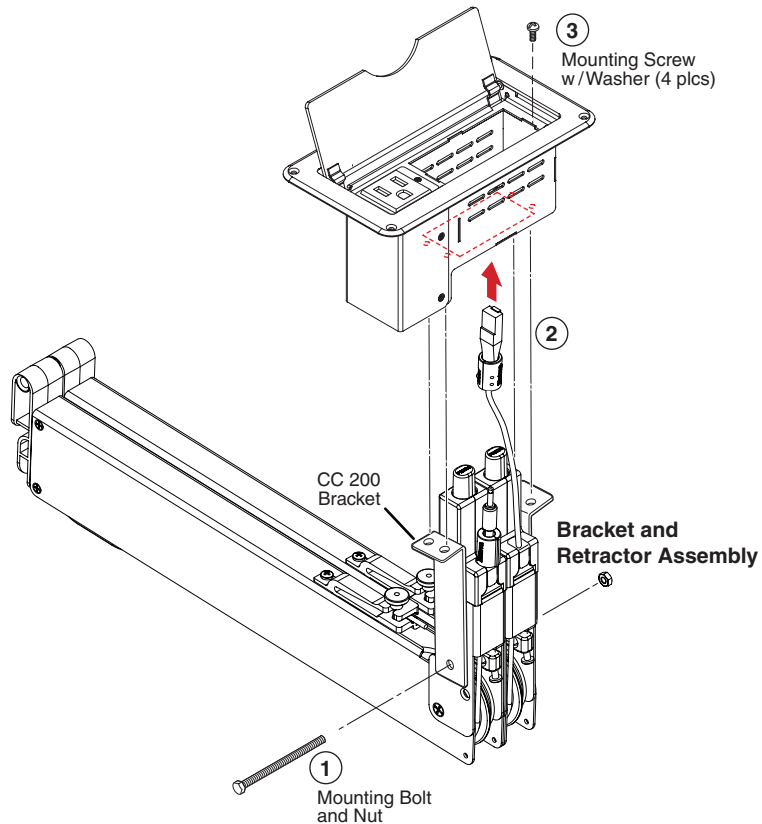


Figure 12. Install the Bracket and Retractor Assembly

3. Press the bracket and retractor assembly against the bottom of the enclosure, lining up the bracket holes with the AAP mounting holes on the enclosure. Fasten from the top using the four supplied screws.
4. See **Locking Screw (Optional)** on page 17 for final installation instructions.

CC 300, CC 600, CC 800, TLE, TLP Installation

The enclosure must be installed and properly configured before beginning the retraction system installation.

1. With the cable release buttons against the enclosure wall, install the retraction system by pushing the system up and into the enclosure (see figure 13).
2. With the retraction system against the sidewall, press the mounting bolt through the second hole from the edge of the Cable Cubby enclosure, through the retraction system, then out the other side of the enclosure.
3. Thread the nut on the bolt and tighten.

ATTENTION: Do not overtighten the enclosure mounting bolt. It only needs to be snug. Overtightening could deform the retractor housing and cause misalignment of the pulley wheels resulting in malfunction.

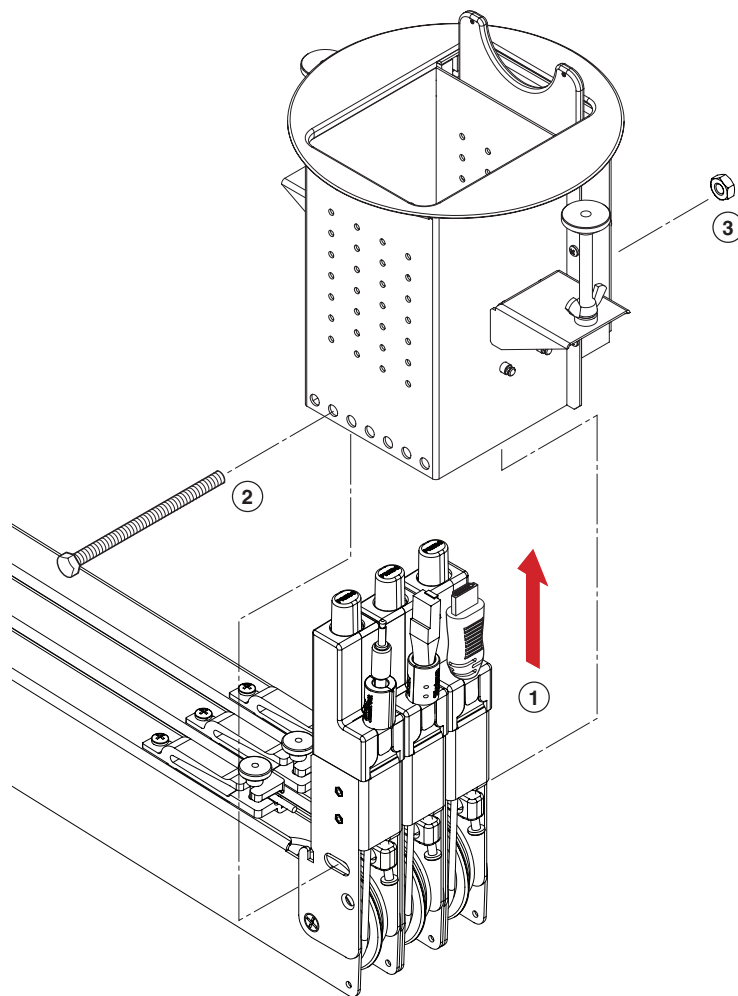


Figure 13. Retraction System Installation

4. Connect the retraction system cables and other AAP cables (if installed).
5. If horizontally mounting the retractors, proceed to **Horizontal Bracket Mounting** on page 15.

For vertical and angular mounting, see **Locking Screw (Optional)** on page 17 for final installation details.

Horizontal Bracket Mounting

For horizontal mounting, the horizontal mounting bracket (part number **70-678-00**) must be used. The slotted holes in the mounting bracket allow for tolerance in placing the bracket.

To ensure accurate bracket location, follow these procedures:

1. Attach the horizontal mounting bracket to the retractor end caps using the provided bolt and nut.

TIP: Hand tighten the nut only enough to keep the bracket from easily moving. The bolt and nut will be removed later.

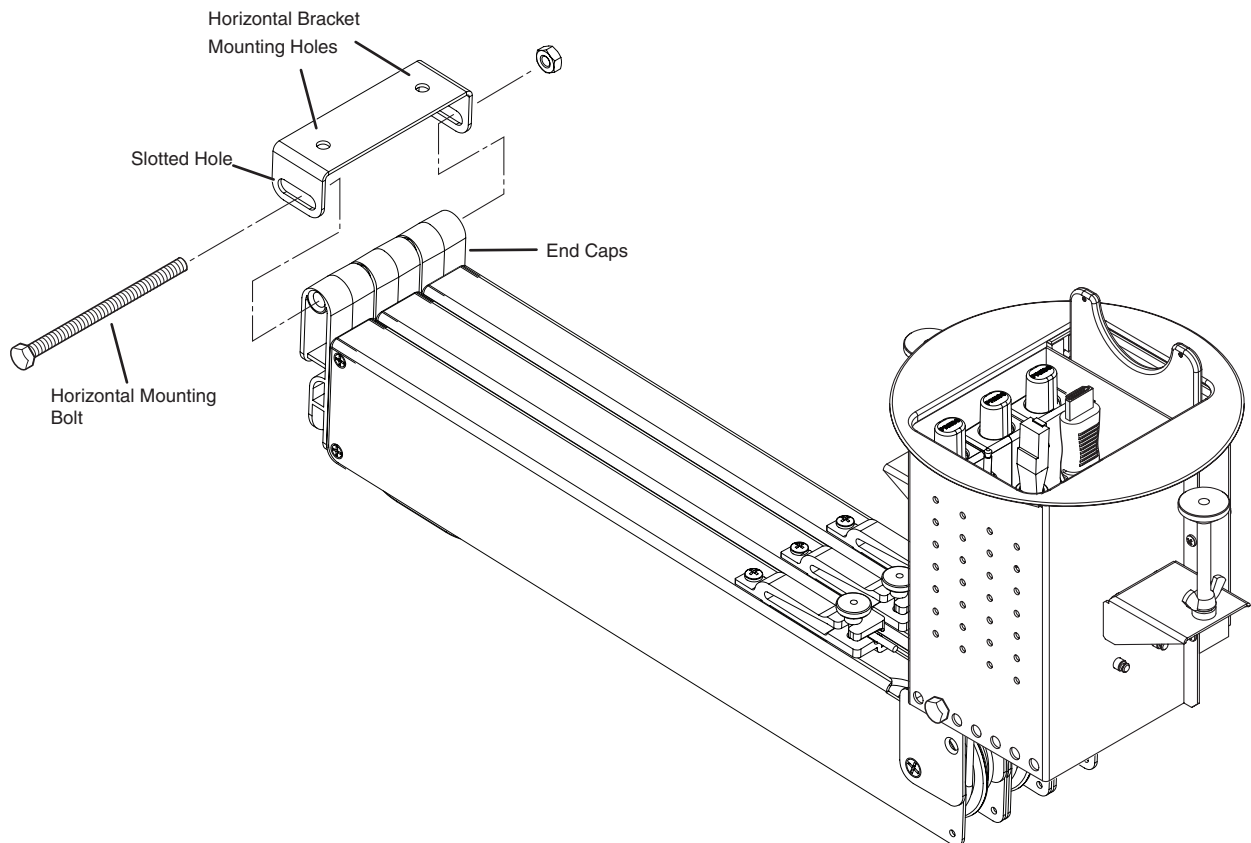


Figure 14. Attach Horizontal Bracket to End Caps

2. Raise the retraction system with attached bracket to the desired mounting location.

NOTE: Be certain the system is perpendicular to the enclosure to prevent binding of the pulley system.

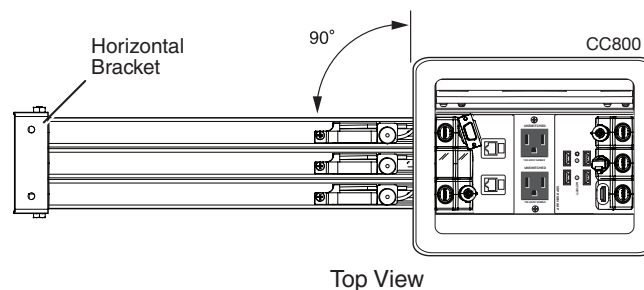


Figure 15. Align Retraction System Perpendicular to Cable Cubby Enclosure

3. Ensure the bracket is flush with the surface and trace a line around the bracket perimeter.

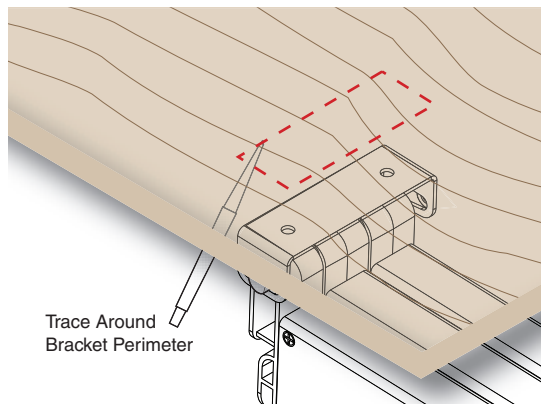


Figure 16. Mark Bracket Location

4. Lower the assembly and remove the horizontal bracket from the retractors.
5. Position the bracket inside the lines drawn in step 3 and fasten with the supplied screws.

ATTENTION: Ensure the supplied screws do not pierce through the top of the table. If necessary, use appropriate screws based on the table material and thickness.

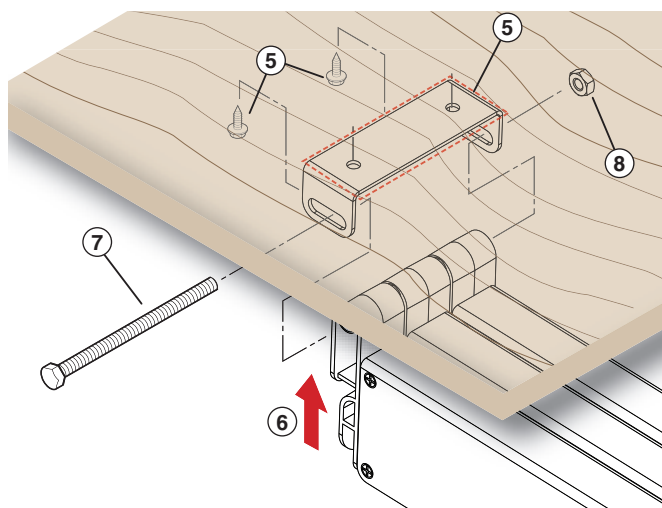


Figure 17. Position Bracket and Mount

6. Raise the retractor system up into the installed bracket.
7. Run the bolt through the bracket and end caps.
8. Secure the bolt with the nut supplied in step 1.

ATTENTION: Do not overtighten the horizontal mounting nut. It only needs to be snug. Overtightening could deform the end caps and cause misalignment of the system resulting in poor cable extension and retraction.

Locking Screw (Optional)

If the retraction system is mounted next to an unused location in the Cable Cubby enclosure, a locking screw is provided to prevent the retractors from rotating on their mounting bolt during operation.

If needed, tighten the locking screws to prevent movement of the retractor. There is one locking screw for each retractor.

NOTE: Do not overtighten. The locking screw only needs to be snug.

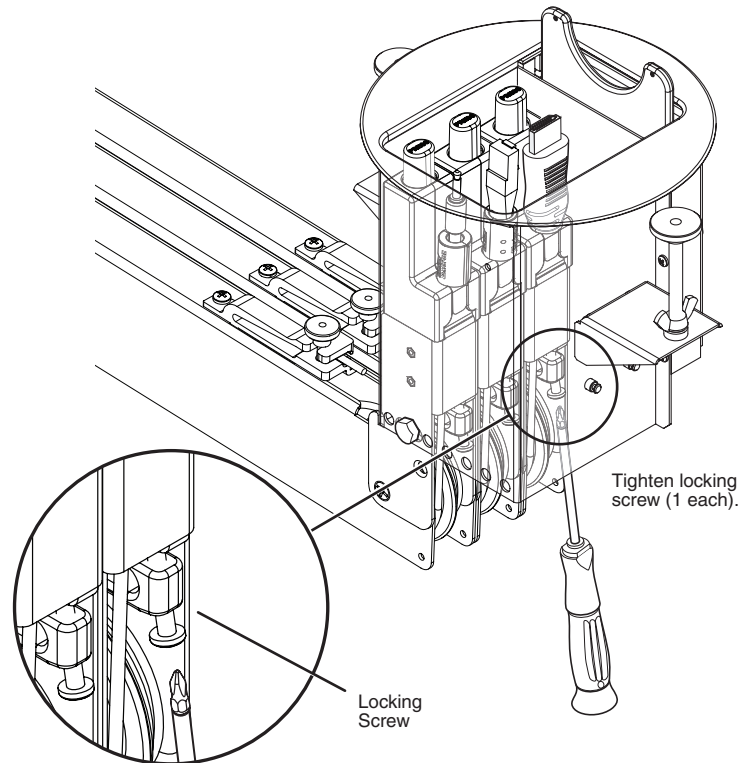


Figure 18. Locking Screws

Alternative Solutions

Drop-in Installations

For installations with limited under-table access, the retractors must be installed before dropping the enclosure into the table. All drop-in installations must be mounted vertically or using angular mounting.

1. For **retrofit installations**, remove the Cable Cubby enclosure from the furniture.

For **new installations** follow the Cable Cubby enclosure preparation instructions but do not mount the enclosure.

2. Install the retraction system in the enclosure following the installation instructions (see **CC 300, CC 600, CC 800, TLE, TLP Installation** on page 14) and locking screw instructions (see **Locking Screw (Optional)** on page 17).

NOTE: Connect all cables before lowering the enclosure into the cutout.

3. Once the retraction system is installed, lower the enclosure and retraction system into the cutout ensuring that kinking or bending of the cables is prevented. If the bottom of the retractors will not be accessible, connect the pigtails before lowering the system.
4. After the enclosure has been dropped into the opening, lift it just enough to allow the two screw clamps to be installed.

NOTE: In drop-in type installations, it is not possible to adjust the screw clamps for an exact fit and will take some trial and error to adjust it for the tightest fit.

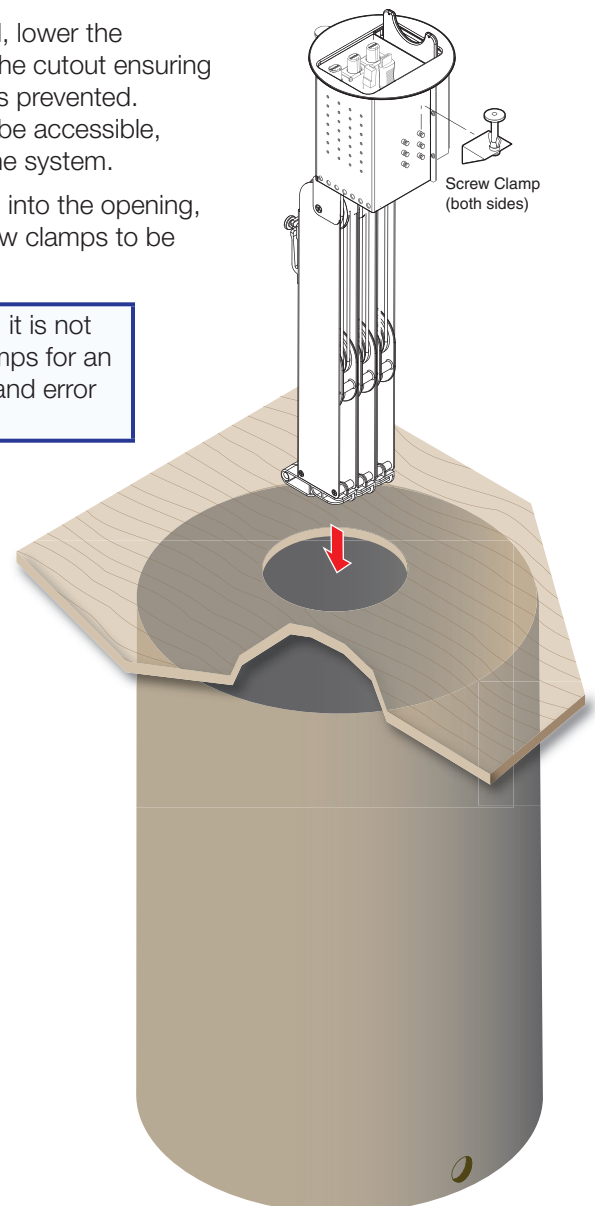


Figure 19. Drop-in Installation

Laptop Power

The DC power retractor provides a connection for a laptop on the tabletop to a compatible laptop power supply (not supplied) under the furniture. Installation of the retractor is identical to other retractors.

The cable has a female connector under the furniture (②) for connection to a laptop power supply (①), and male connector on the topside (③) of the table for connection to a compatible laptop.

ATTENTION:

- Use only the power supply recommended by the manufacturer of the laptop.
- The cable connectors may not be compatible with all models of Dell and HP laptop computers and power supplies. See www.extron.com for a current compatibility list.

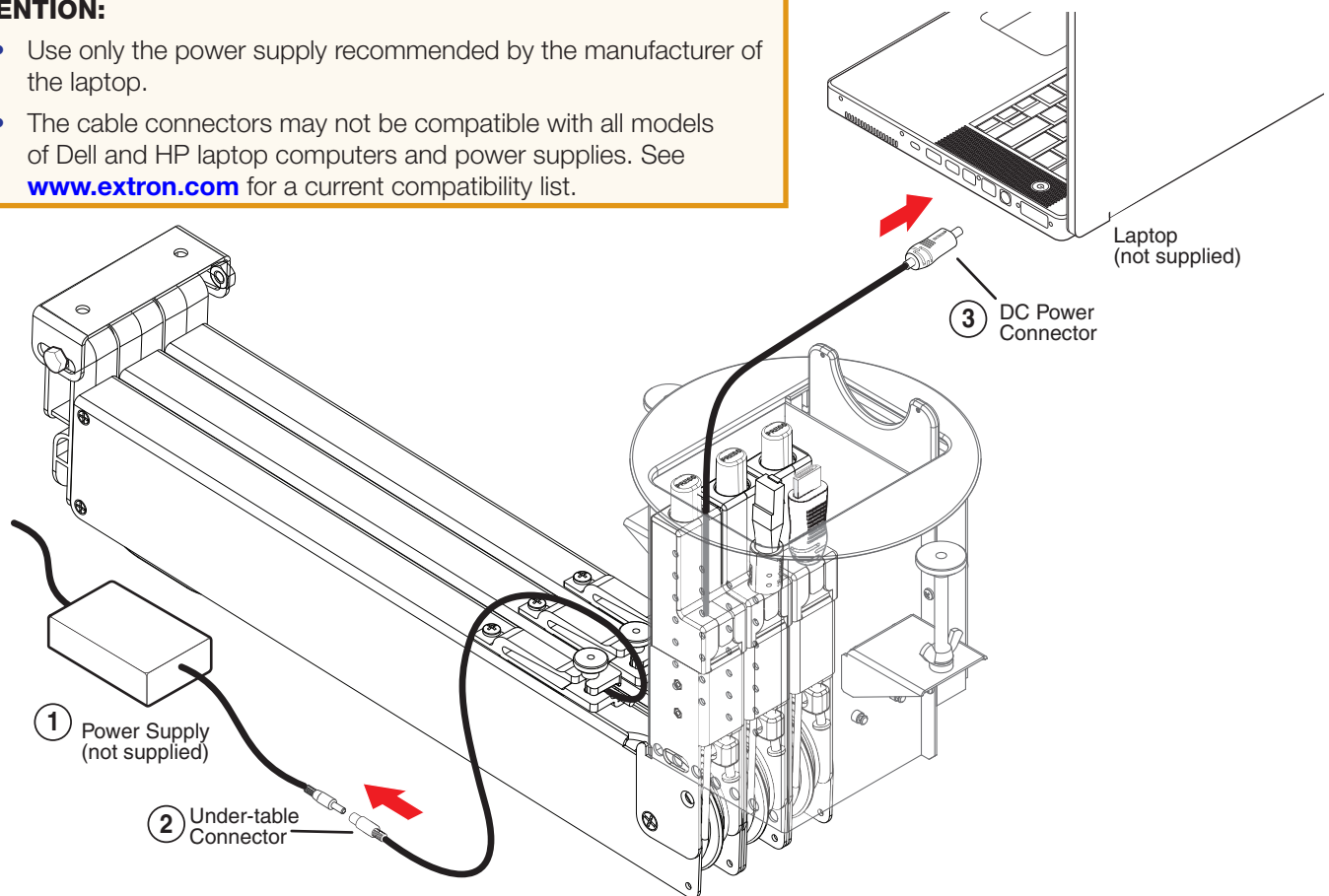


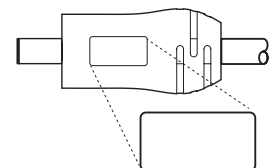
Figure 20. DC Power Retractor Connection

Under-furniture space for the retractor and power must be available for the OEM laptop power supply. The power supply module should be safely located and supply leads should be dressed to avoid entanglements and accidental contact.

The power supply (①) must be compatible with both the laptop power requirements and the female connector (②) on the under-table end of the retractor cable.

The DC power connector (③) must be compatible with the laptop power connection.

Three labels (Dell, HP, and blank-printable) are provided for the topside connector to identify the laptop it is compatible with. Affix the appropriate label as shown at right.



Connect the Cables

Connect the under-enclosure cables to the proper device.

If additional cable length is needed use Extron cable as required.

Excess cabling may cause clearance issues. Use wire ties to secure under-table cabling to prevent accidental contact or entanglement with users.

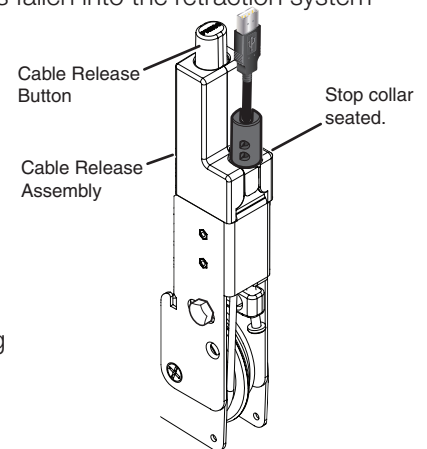
Verify Cable Release Operation

After installation, check the operation of the cable release assembly. Pull a length of cable from the system. The cable release button stops the cable from retracting back into the system when pulling ceases.

Make certain the cable pulls freely without jerking or requiring excessive force. If it does, check under the enclosure to determine if something has fallen into the retraction system to cause tangling of the cable or is jamming the pulley system. Also be certain the cable is properly routed around the pulleys (see figure 22 on page 20).

Release the cable. Hold the connector and press the release button. When retracting, hold the cable end as the release button is pressed. Restrict the cable retraction to a slow, controlled motion.

Ensure the cable retracts completely into the system. The stop collar (or connector if there is no stop collar) will rest on the seat of the cable stop assembly, stopping cable travel. If it does not, proceed to [Pulley System Adjustment](#) on page 23.



Operation

This section provides details of the retractor system operation.

- [Extend a Cable](#)
- [Retract a Cable](#)

Once installed, the retractors are ready for operation.

CAUTION:

- Do not operate a retractor until it is installed.
- When retracting, hold the cable with one hand and press the release button with the other.
- Retraction should be a slow, controlled motion.
- Keep hands away from moving parts.

Extend a Cable

To connect a cable, grip it by the connector and pull enough cable from the retractor to connect to the device. There is no need to press the cable release button when extending a cable. When you stop pulling the cable, the cable release assembly will fix the length automatically.

Retract a Cable

1. Disconnect the cable from the device and with one hand hold it firmly by the connector to keep the cable taught.
2. With your other hand, press and hold the cable release button.

CAUTION: Use one hand to control the cable as it retracts. A cable allowed to retract too quickly and without control can cause possible injury to the user or damage the furniture surface, Cable Cubby, and nearby items.

3. With one hand pressing the release button, continue to hold the cable with the other hand and allow it to slowly be pulled back into the retractor.
4. When the stop collar (or connector if the cable does not have a stop collar) is seated against the cable release assembly, release the cable and button.

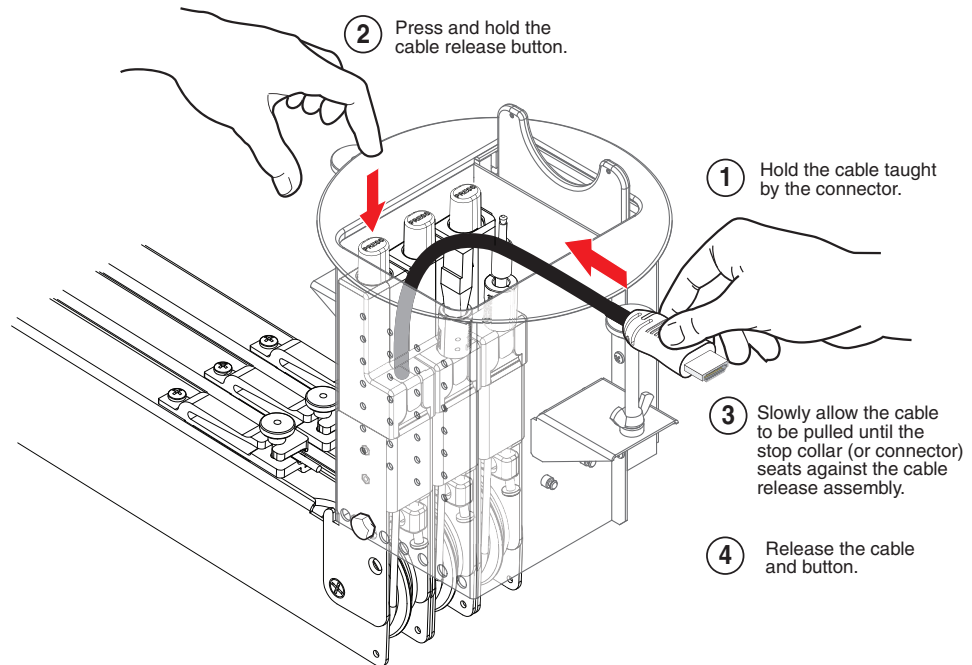


Figure 21. Cable Retraction

Maintenance and Adjustments

- **Pulley System Adjustment**
- **Removing and Replacing the System**
- **Expand the Cable Retraction System**
- **Add a Cable Retraction System**

ATTENTION:

- Each Extron retractor model is designed with custom-made cable and a unique matching spring that work together to maintain cable signal integrity and preserve consistent cable retraction pull force over the life of the product. Alterations to the retractor will cause premature failure of the retractor system and cables.
- Modifications to the Retractor System are prohibited and will void the Extron warranty for this product. Consult your Sales representative for more information.

Pulley System Adjustment

The tension on the cable that provides constant force during cable extension and retraction is maintained by proper adjustment of the pulley system. Too little tension and the cable will have slack or may slip out of the pulley tracks, and will not retract properly.

To Adjust the Pulley System:

1. Before beginning pulley system adjustments, ensure the cable routing around the pulley system is correct (see below) and the cable is completely retracted into the enclosure.

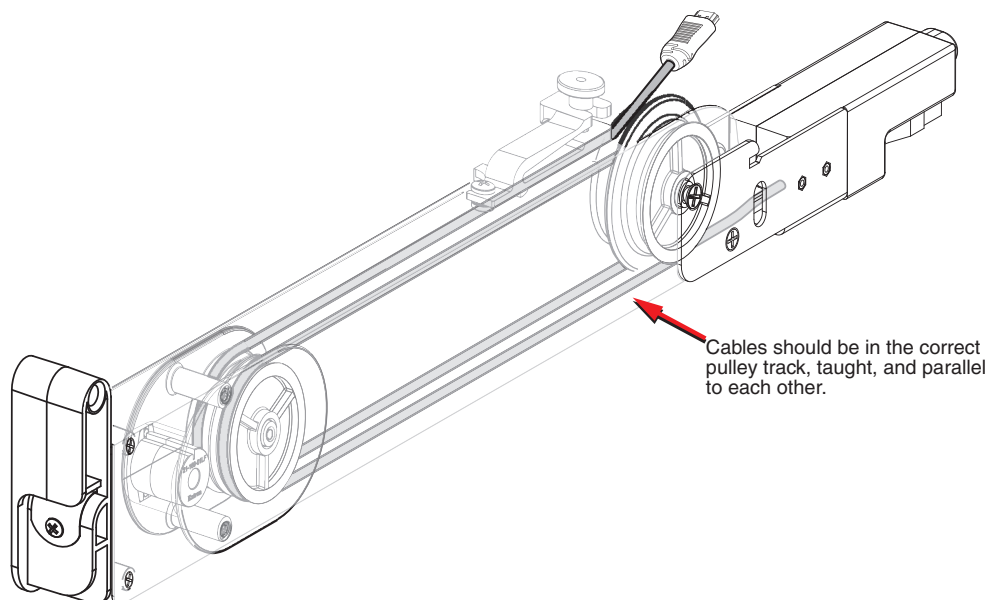


Figure 22. Cable Routing

2. Hold the cable to prevent movement.

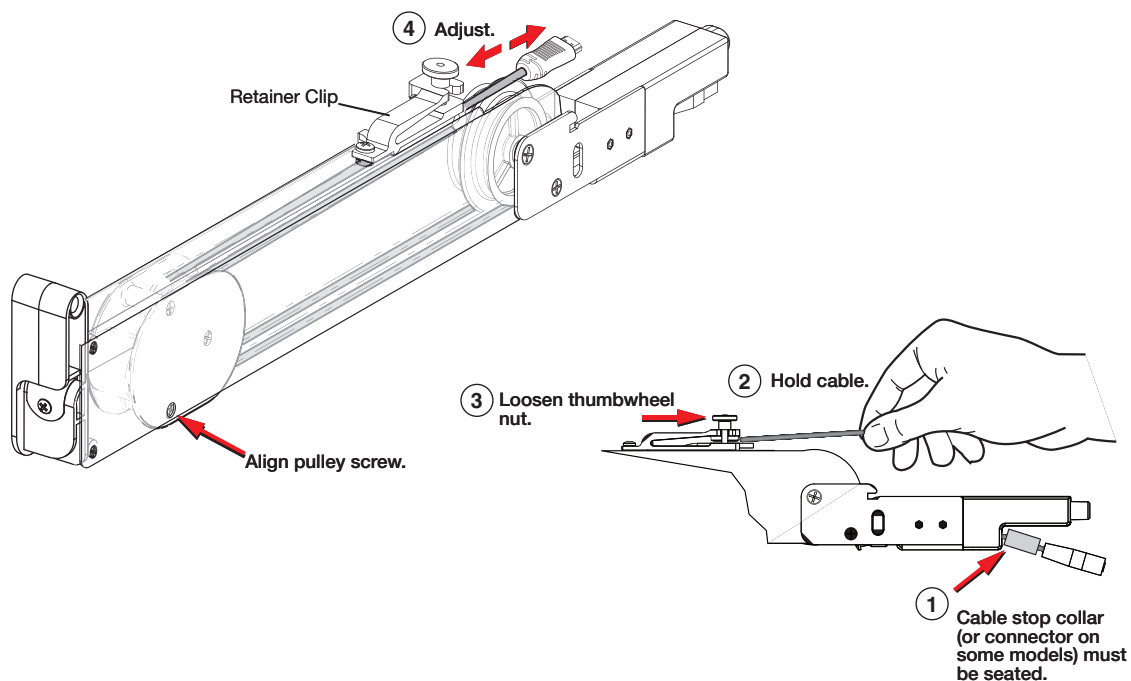


Figure 23. Pulley System Adjustment

3. Loosen the thumbwheel nut on the retainer clip until the cable can be moved. Do not allow it complete freedom of movement.
4. Adjust the cable to align the bottom pulley screw with the alignment hole on the enclosure (designated ③ on the product label in figure 24).

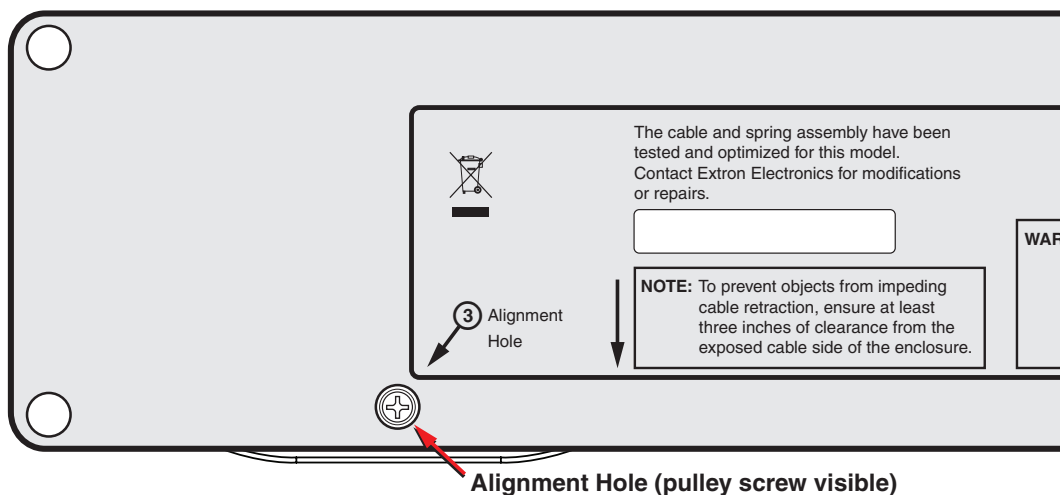


Figure 24. Product Label on Retractor

5. Hand tighten the thumbwheel nut on the retainer clip to secure the cable.

Removing and Replacing the System

To Remove the System:

DANGER: Ensure that AC power is disconnected before servicing the system.

1. Remove both ends of all retractor cables from connected devices.

NOTE: Drop-in installations require removal of the enclosure and retraction system at the same time.

2. If necessary, loosen the locking screw on all retractors. If the system is mounted vertically, proceed to step 6.

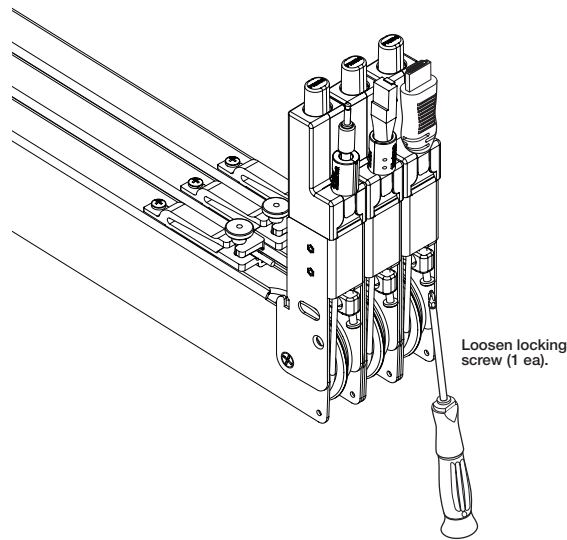


Figure 25. Loosen Locking Screws

3. Hold or otherwise support the cable retraction system near the horizontal bracket.
4. Remove the nut and slide the bolt from the horizontal mounting bracket.

CAUTION: All cable retractors attached to the horizontal mounting bracket will drop when the bolt is removed.

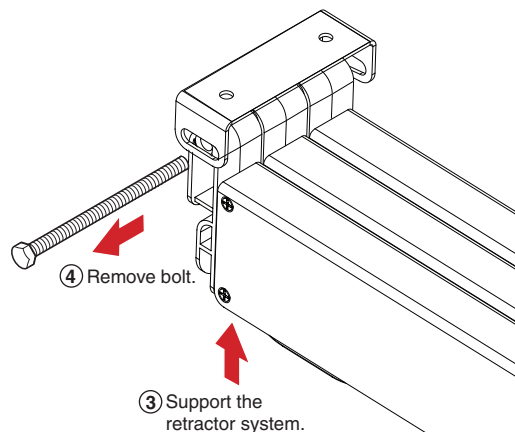


Figure 26. Remove Horizontal Mounting Bolt

5. Slowly lower the system and allow it to hang vertically. If the system was mounted vertically, it is already in this position.
6. Make certain the retractors are supported so they will not drop unexpectedly.

CAUTION: All retractors attached to the enclosure mounting bolt will drop when the enclosure mounting bolt is removed.

7. Remove the enclosure mounting bolt. The retraction system is now detached from the Cable Cubby.

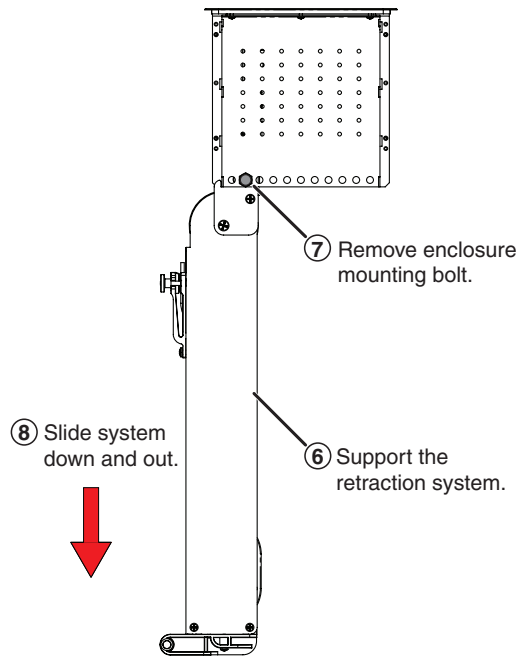


Figure 27. Removing the Cable Retraction System

8. Slide the system down and out to remove it from the Cable Cubby.

To Replace the System:

Reverse the previous steps making certain the system is correctly oriented to the Cable Cubby enclosure.

Expand the Cable Retraction System

Up to three retractors on each side, six total, (two total for the Cable Cubby 200), can be mounted in a retraction system installation. If fewer than the maximum are installed and additional retractors are desired, remove the filler module and replace it with the new retractor (see [Removing and Replacing the System](#) on page 25).

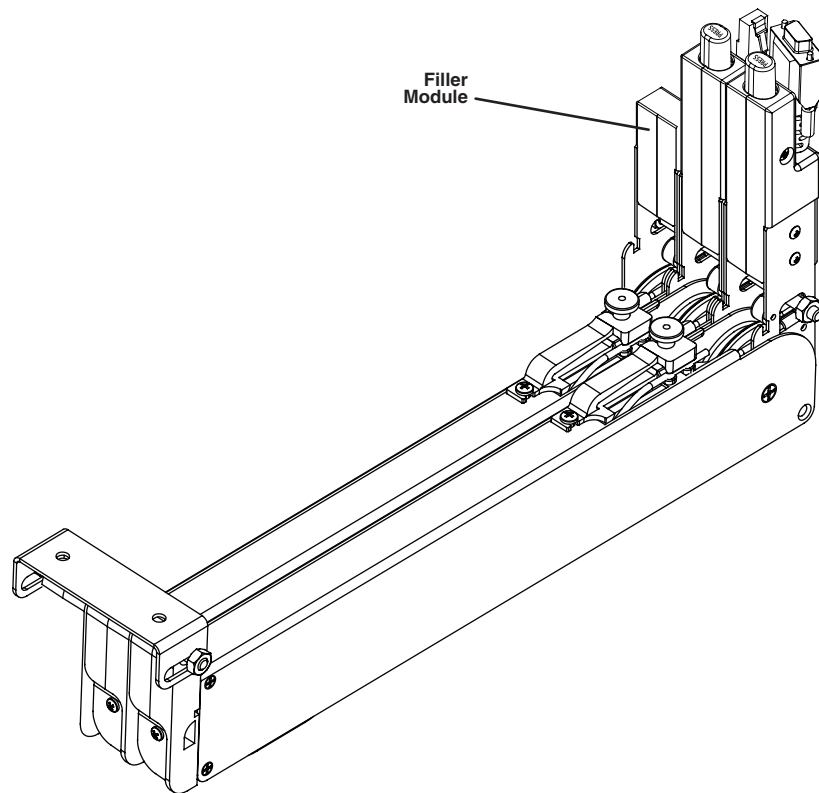


Figure 28. Two Retractors in Cable Cubby Enclosure

Add a Cable Retraction System

Depending upon the Cable Cubby enclosure, an additional retraction system with up to three more retractors may be installed. As in the initial retraction system installation, existing AAPs and their brackets may need to be relocated, removed, or replaced to allow room for the additional system. The additional system does not have to mount the same as the first, but proper under-table clearance for both systems, as well as clearances from each other must be considered.

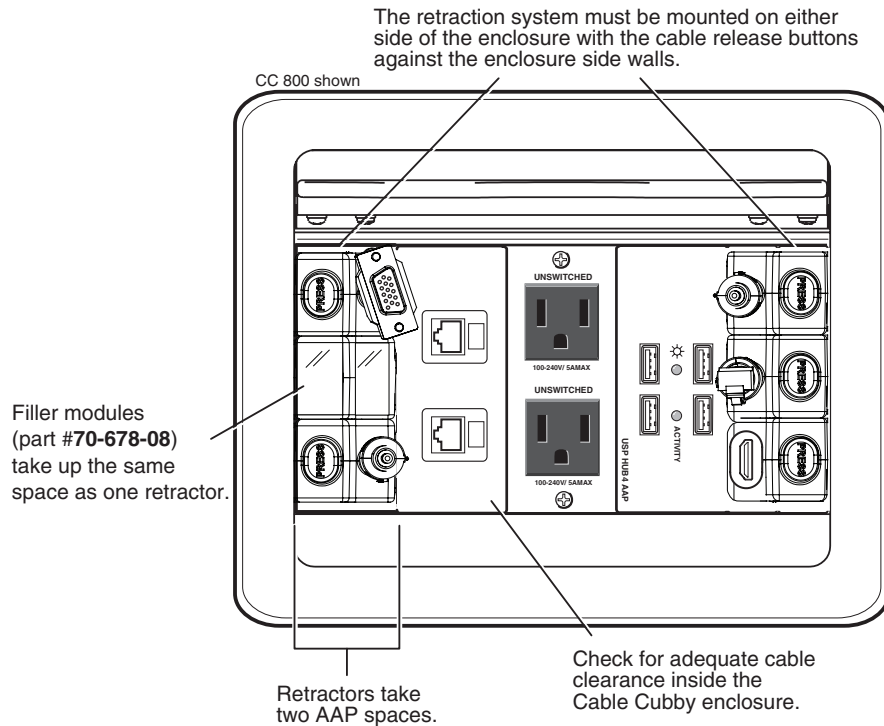


Figure 29. Add a Retraction System

No matter which mounting method used, adequate space must be available inside the Cable Cubby enclosures for the additional cables.

As shown in a typical horizontal mounting installation in figure 30, the second retraction system will extend the opposite direction as the first.

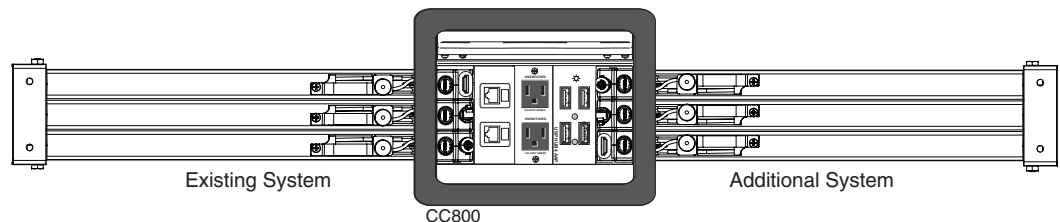


Figure 30. Two Retraction Systems (Horizontal Mount)

Reference Information

- [Cable Retraction System Part Numbers](#)
- [Optional Accessories](#)

Cable Retraction System Part Numbers

Retractors are available in versions to support most AV and data signal types including VGA, Network, PC Audio, USB, DisplayPort, HDMI, and others. Each standard retractor provides cable that extends up to 3 feet (90 cm) from the enclosure. A 6 foot (1.8 m) pigtail is provided on the input side of the retractor for connection to under-table electronics, floor boxes, or an Extron AVTrac® floor mounted raceway system.

XL retractors extend up to 5 feet (152 cm) from the enclosure and provide a 4 foot (1.2 m) pigtail.

See the website at www.extron.com for the complete line of the Cable Retraction System for Cable Cubby® Enclosures and Extended Length Cable Retraction System for Cable Cubby® Enclosures.

Optional Accessories

Cable Retraction System, All Systems	Part number
Retractor Mounting Kit for Horizontal Mounting	70-678-00
Retractor Filler Module	70-678-08
Cable Cubby 200 Mounting Bracket Kit	70-678-10

Extron Warranty

Extron Electronics warrants this product against defects in materials and workmanship for a period of three years from the date of purchase. In the event of malfunction during the warranty period attributable directly to faulty workmanship and/or materials, Extron Electronics will, at its option, repair or replace said products or components, to whatever extent it shall deem necessary to restore said product to proper operating condition, provided that it is returned within the warranty period, with proof of purchase and description of malfunction to:

**USA, Canada, South America,
and Central America:**

Extron Electronics
1230 South Lewis Street
Anaheim, CA 92805
U.S.A.

Japan:

Extron Electronics, Japan
Kyodo Building, 16 Ichibancho
Chiyoda-ku, Tokyo 102-0082
Japan

Europe and Africa:

Extron Europe
Hanzeboulevard 10
3825 PH Amersfoort
The Netherlands

China:

Extron China
686 Ronghua Road
Songjiang District
Shanghai 201611
China

Asia:

Extron Asia Pte Ltd
135 Joo Seng Road, #04-01
PM Industrial Bldg.
Singapore 368363
Singapore

Middle East:

Extron Middle East
Dubai Airport Free Zone
F12, PO Box 293666
United Arab Emirates, Dubai

This Limited Warranty does not apply if the fault has been caused by misuse, improper handling care, electrical or mechanical abuse, abnormal operating conditions, or if modifications were made to the product that were not authorized by Extron.

NOTE: If a product is defective, please call Extron and ask for an Application Engineer to receive an RA (Return Authorization) number. This will begin the repair process.

USA: 714.491.1500 or 800.633.9876
Asia: 65.6383.4400

Europe: 31.33.453.4040
Japan: 81.3.3511.7655

Units must be returned insured, with shipping charges prepaid. If not insured, you assume the risk of loss or damage during shipment. Returned units must include the serial number and a description of the problem, as well as the name of the person to contact in case there are any questions.

Extron Electronics makes no further warranties either expressed or implied with respect to the product and its quality, performance, merchantability, or fitness for any particular use. In no event will Extron Electronics be liable for direct, indirect, or consequential damages resulting from any defect in this product even if Extron Electronics has been advised of such damage.

Please note that laws vary from state to state and country to country, and that some provisions of this warranty may not apply to you.

Extron Headquarters	Extron Europe	Extron Asia	Extron Japan	Extron China	Extron Middle East	Extron Korea	Extron India
+1.800.633.9876 (Inside USA/Canada Only) Extron USA - West +1.714.491.1500 +1.714.491.1517 FAX	+800.3987.6673 (Inside Europe Only) +31.33.453.4040 +31.33.453.4050 FAX	800.3987.6673 (Inside Asia Only) +65.6383.4400 +65.6383.4664 FAX	+81.3.3511.7655 +81.3.3511.7656 FAX	+4000. 398766 (Inside China Only) +86.21.3760.1568 +86.21.3760.1566 FAX	+971.4.299.1800 +971.4.299.1880 FAX	+82.2.3444.1571 +82.2.3444.1575 FAX	1800.3070.3777 (Inside India Only) +91.80.3055.3777 +91.80.3055.3737 FAX