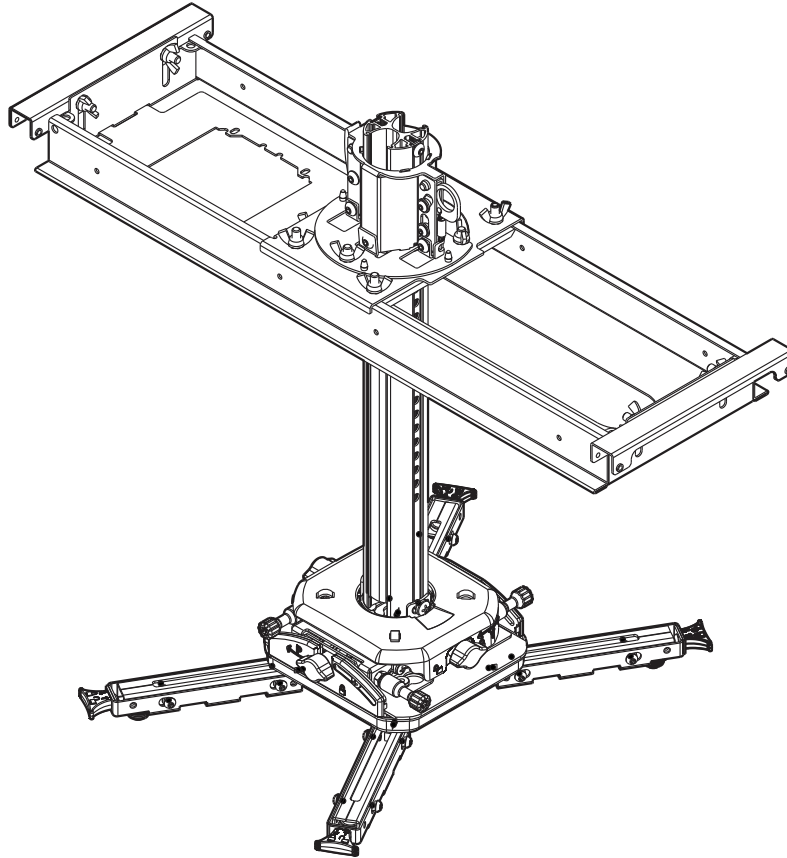

INSTALLATION INSTRUCTIONS



Universal Interface Suspended Ceiling Projector System

DISCLAIMER

Milestone AV Technologies and its affiliated corporations and subsidiaries (collectively "Milestone"), intend to make this manual accurate and complete. However, Milestone makes no claim that the information contained herein covers all details, conditions or variations, nor does it provide for every possible contingency in connection with the installation or use of this product. The information contained in this document is subject to change without notice or obligation of any kind. Milestone makes no representation of warranty, expressed or implied, regarding the information contained herein. Milestone assumes no responsibility for accuracy, completeness or sufficiency of the information contained in this document.

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DEFINITIONS

MOUNTING SYSTEM: A MOUNTING SYSTEM is the primary Chief product to which an accessory and/or component is attached.

ACCESSORY: AN ACCESSORY is the secondary Chief product which is attached to a primary Chief product, and may have a component attached or setting on it.

COMPONENT: A COMPONENT is an audiovisual item designed to be attached or resting on an accessory or mounting system such as a video camera, CPU, screen, display, projector, etc.



WARNING: A WARNING alerts you to the possibility of serious injury or death if you do not follow the instructions.



CAUTION: A CAUTION alerts you to the possibility of damage or destruction of equipment if you do not follow the corresponding instructions.



IMPORTANT SAFETY INSTRUCTIONS



WARNING: Failure to read, thoroughly understand, and follow all instructions can result in serious personal injury, damage to equipment, or voiding of factory warranty! It is the installer's responsibility to make sure the mounting system is properly assembled and installed using the instructions provided.



WARNING: Failure to provide adequate structural strength for this mounting system can result in serious personal injury or damage to equipment! It is the installer's responsibility to make sure the structure to which this mounting system is attached can support five times the combined weight of all equipment. Reinforce the structure as required before installing the mounting system.



WARNING: Exceeding the weight capacity can result in serious personal injury or damage to equipment! It is the installer's responsibility to make sure the combined weight of all components attached to the SYSAU does not exceed 35 lbs (15.9 kg).



WARNING: Use this mounting system only for its intended use as described in these instructions. Do not use attachments not recommended by the manufacturer.



WARNING: Never operate this mounting system if it is damaged. Return the mounting system to a service center for examination and repair.



WARNING: Do not use this product outdoors.

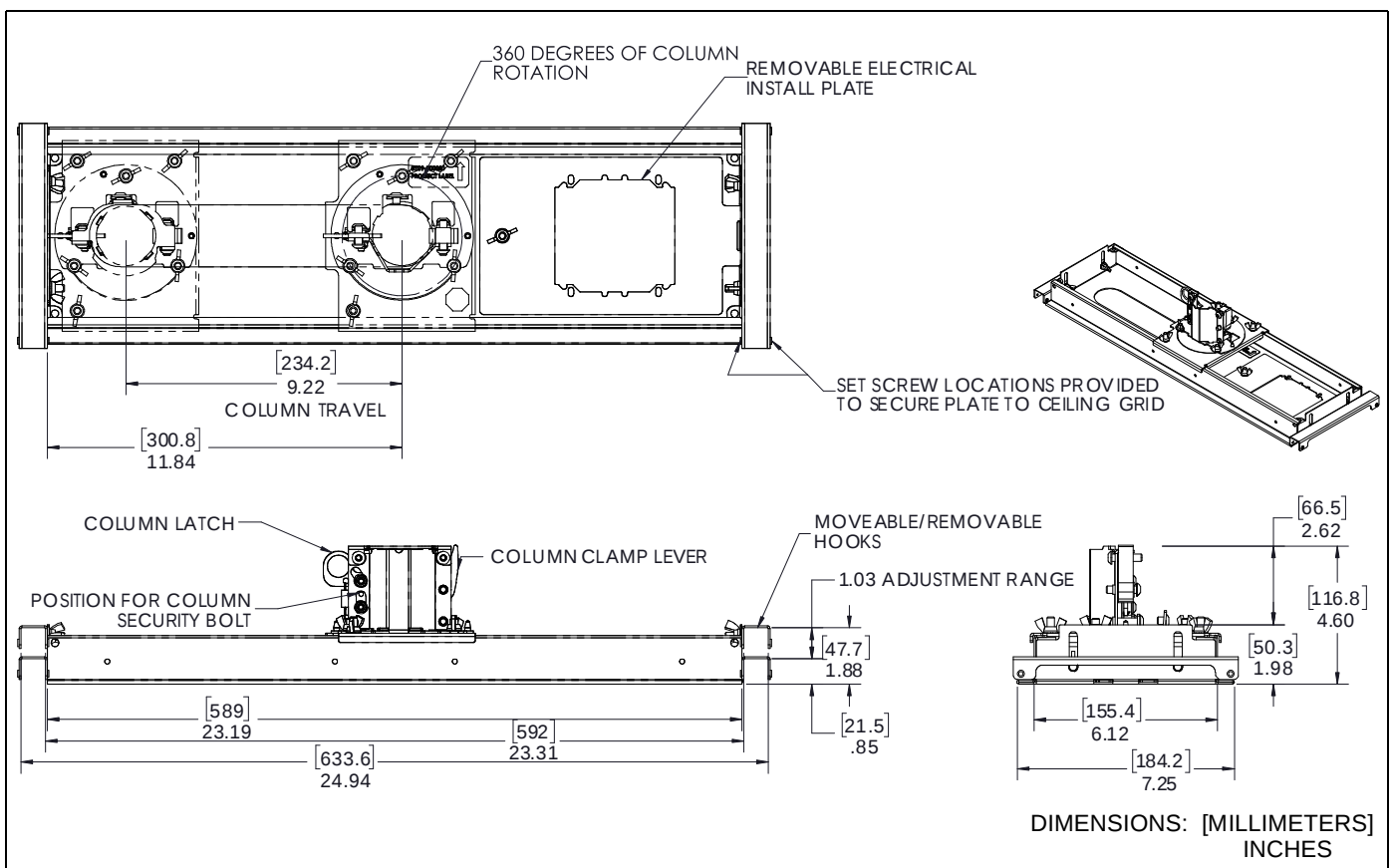
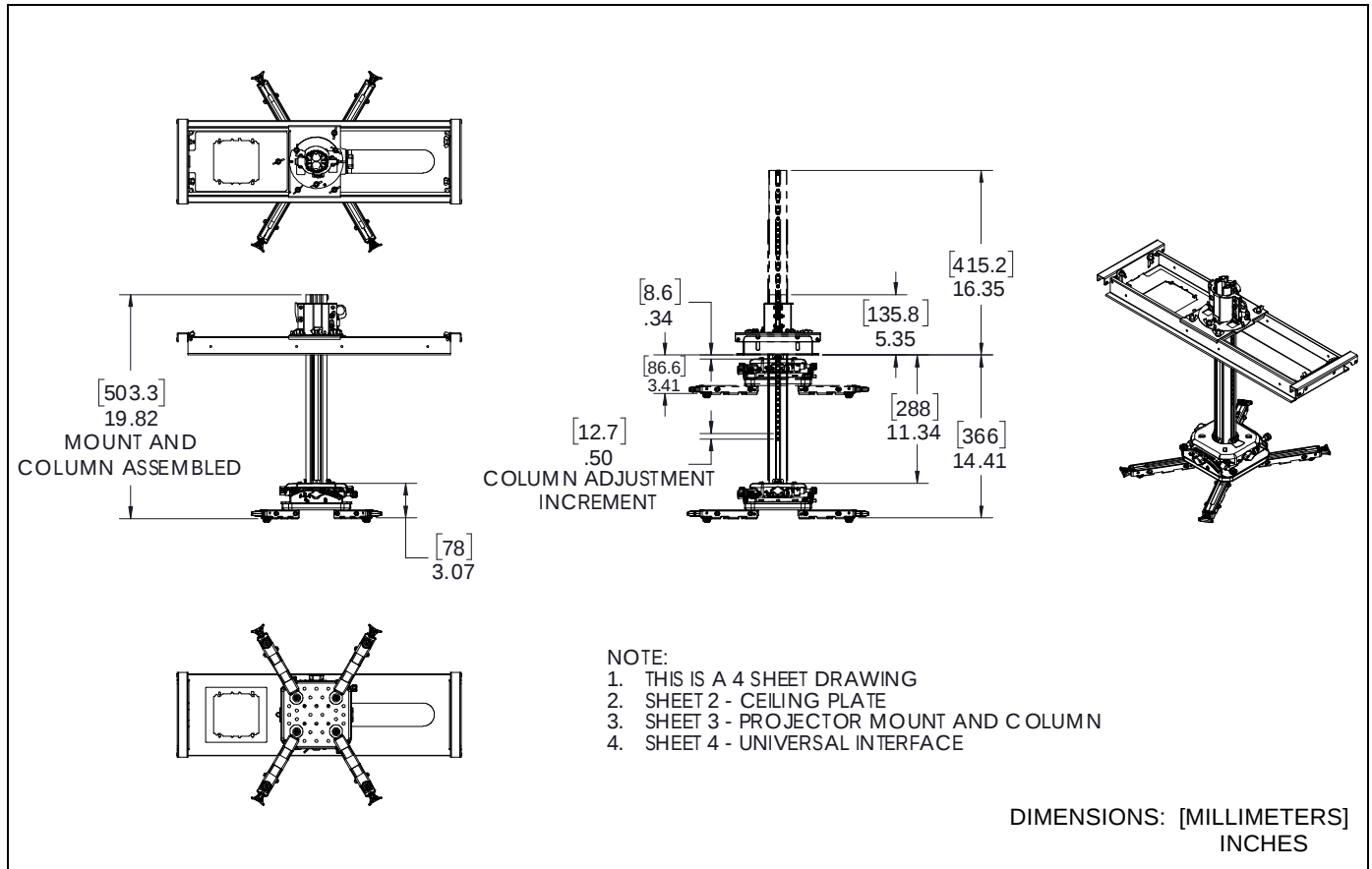
IMPORTANT ! : The SYSAU has been designed to be mounted above or flush with a suspended ceiling secured by a WireVice system.

IMPORTANT ! : The SYSAU has been designed to support a single electrical receptacle, a double electrical receptacle or both.

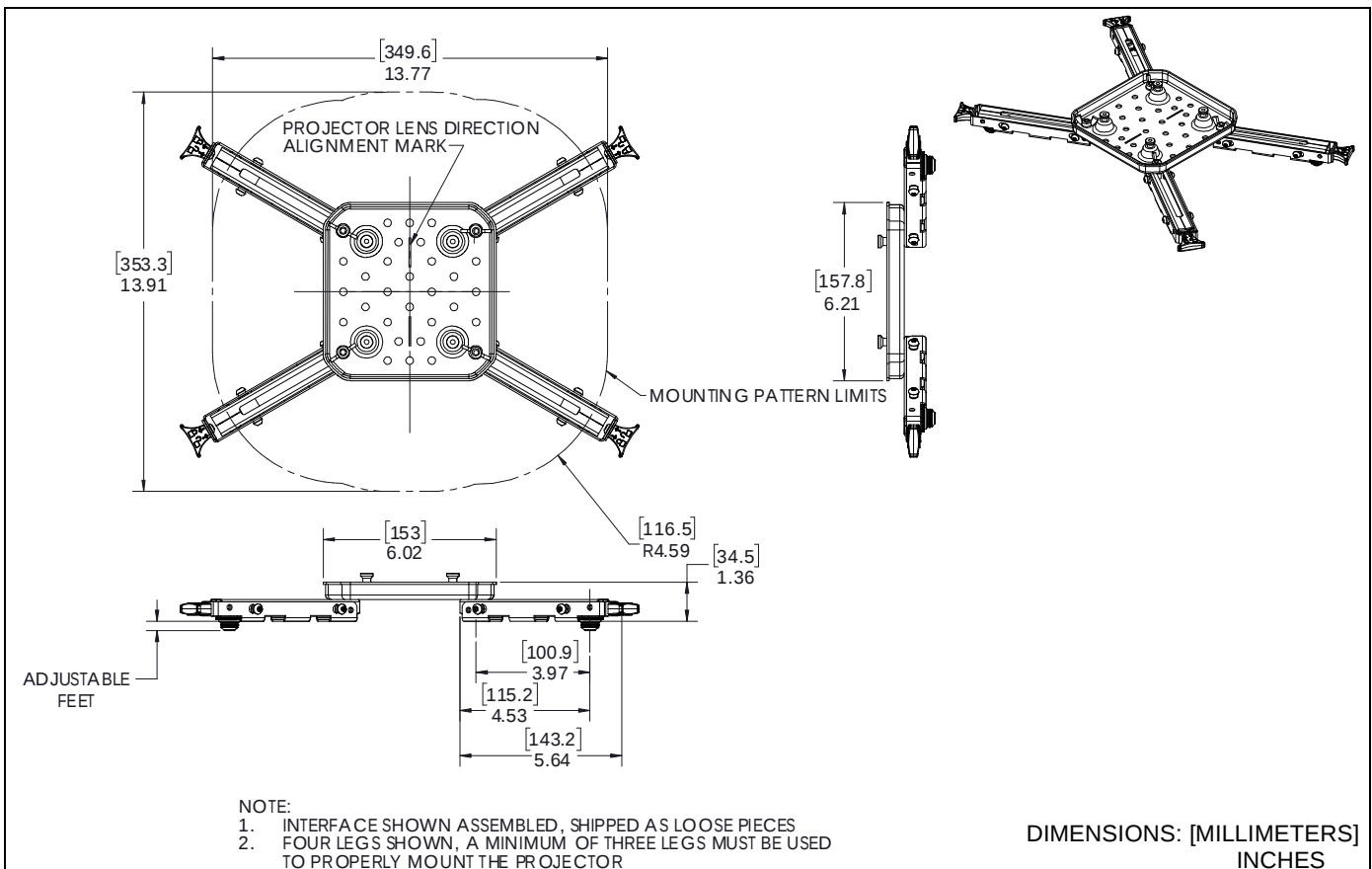
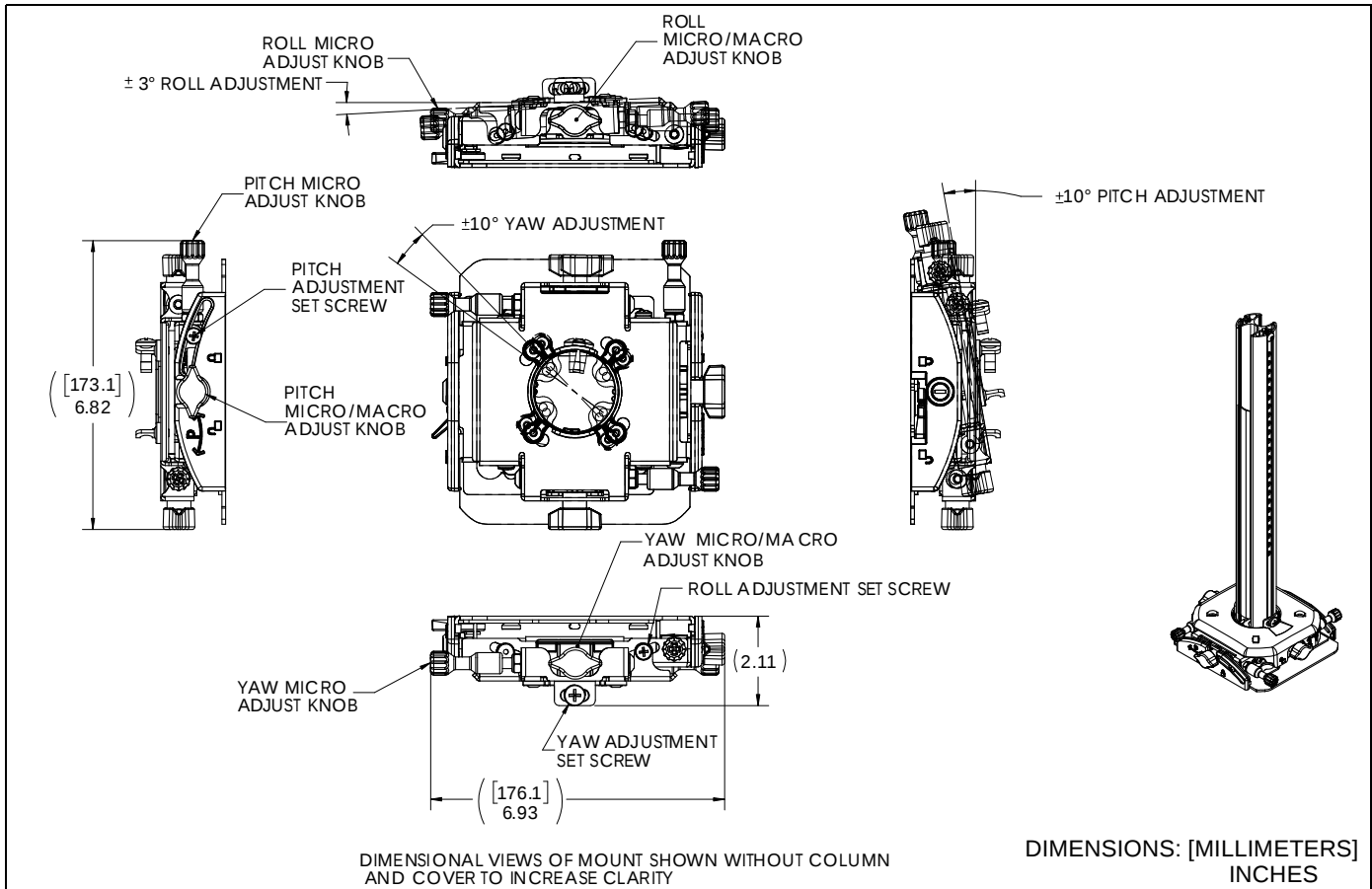
NOTE: It is the installer's responsibility to ensure that the enclosure is bonded to the ground in the switch box, in accordance with the National Electric Code, ANSI/NFPA 70 or Canadian Electrical Code, CSA C22.1.

--SAVE THESE INSTRUCTIONS--

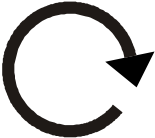
DIMENSIONS



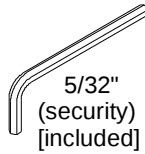
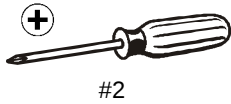
DIMENSIONS - continued



LEGEND

	Tighten Fastener Apretar elemento de fijación Befestigungsteil festziehen Apertar fixador Serrare il fissaggio Bevestiging vastdraaien Serrez les fixations		Pencil Mark Marcar con lápiz Stiftmarkierung Marcar com lápis Segno a matita Potloodmerkteken Marquage au crayon
	Loosen Fastener Aflojar elemento de fijación Befestigungsteil lösen Desapertar fixador Allentare il fissaggio Bevestiging losdraaien Desserrez les fixations		Drill Hole Perforar Bohrloch Fazer furo Praticare un foro Gat boren Percez un trou
	Phillips Screwdriver Destornillador Phillips Kreuzschlitzschraubendreher Chave de fendas Phillips Cacciavite a stella Kruiskopschroevendraaier Tournevis à pointe cruciforme		Adjust Ajustar Einstellen Ajustar Regolare Afstellen Ajuster
	Open-Ended Wrench Llave de boca Gabelschlüssel Chave de bocas Chiave a punte aperte Steeksleutel Clé à fourche		Remove Quitar Entfernen Remover Rimuovere Verwijderen Retirez
	By Hand A mano Von Hand Com a mão A mano Met de hand À la main		Optional Opcional Optional Opcional Opzionale Optie En option
	Hex-Head Wrench Llave de cabeza hexagonal Sechskantschlüssel Chave de cabeça sextavada Chiave esagonale Zeskantsleutel Clé à tête hexagonale		Security Wrench Llave de seguridad Sicherheitsschlüssel Chave de segurança Chiave di sicurezza Veiligheidssleutel Clé de sécurité

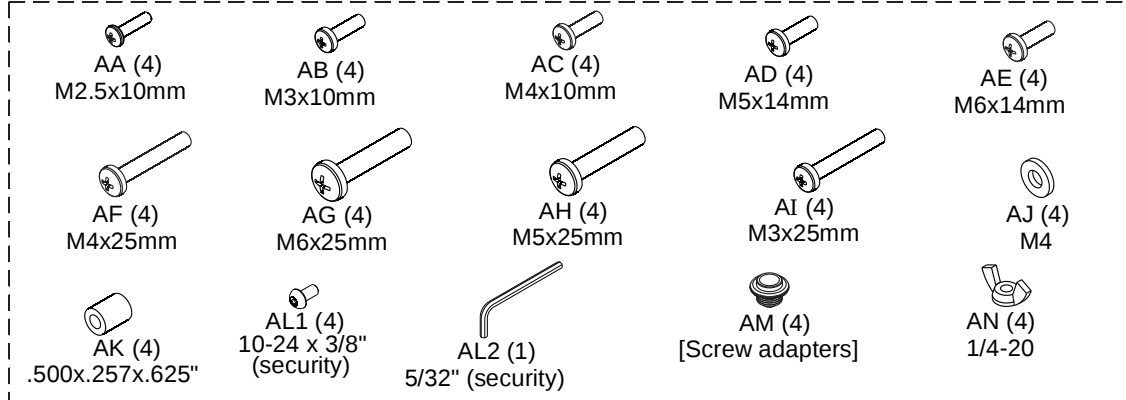
TOOLS REQUIRED FOR INSTALLATION



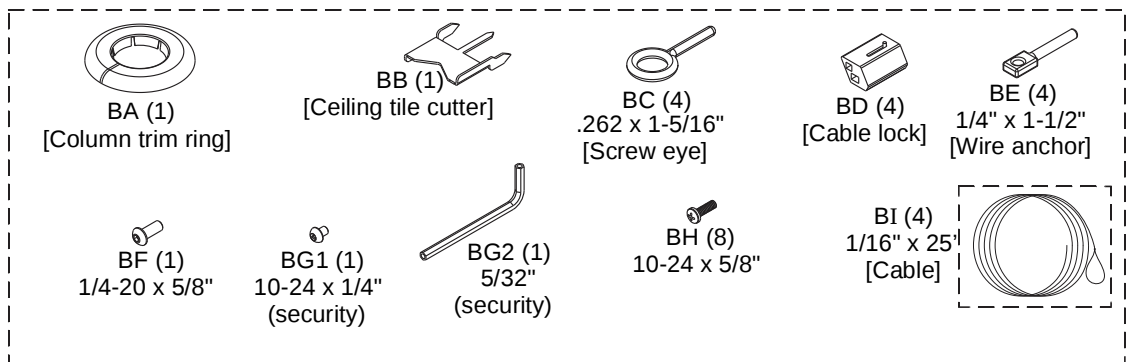
PARTS



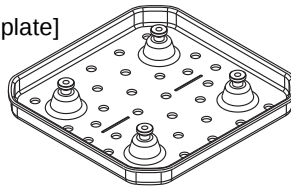
(A) Hardware Bag 9900-002214 [Hardware bag markings match second letter of hardware]



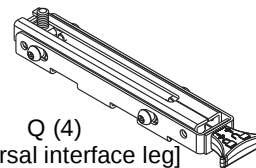
(B) Hardware Bag 9900-002225 [Hardware bag markings match second letter of hardware]



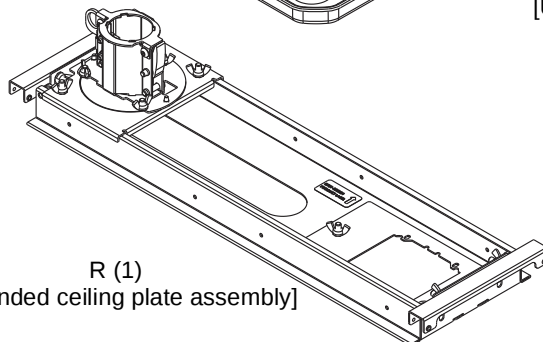
P (1)
[Universal interface plate]



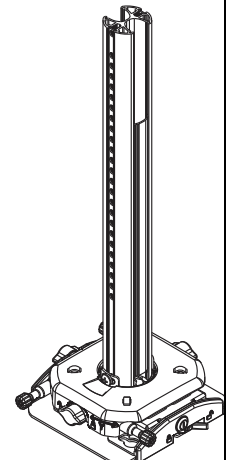
Q (4)
[Universal interface leg]



R (1)
[Suspended ceiling plate assembly]



S (1)
[Projector mount and column]



ASSEMBLY AND INSTALLATION

Attach Universal Interface to Projector



WARNING: Exceeding the weight capacity can result in serious personal injury or damage to equipment! It is the installer's responsibility to make sure the combined weight of all components attached to the SYSAU does not exceed 35 lbs (15.9 kg).



CAUTION: USING SCREWS OF IMPROPER SIZE MAY DAMAGE PROJECTOR. Properly sized screws will easily and completely thread into projector threaded inserts.

1. Determine proper size screw to fit the threaded inserts in projector. Test Phillips screws (AA-AE) provided until one fits the projector holes.
2. Insert screws through M4 flat washers (AJ), if required, screw adapters (AM) with height-adjustable nuts and into projector threaded inserts. (See Figure 1)

IMPORTANT ! : At least three or, if possible, four interface legs **MUST** be used to attach projector to universal interface plate.

NOTE: Only use washers (AJ) if using AA or AB screws to attach screw adapters (AM) to projector.

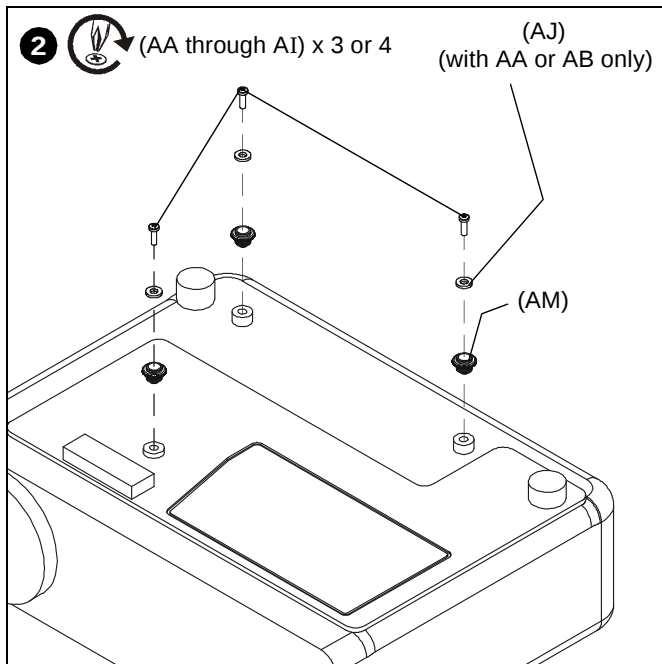


Figure 1

3. Adjust height-adjustable nuts (on screw adapters [AM]) to desired level. (See Figure 2)

NOTE: Height-adjustable nuts should be adjusted as low as possible while still allowing interface legs (Q) to clear elevated surfaces on the projector. (See Figure 2) Adjust height-adjustable nuts to the same level on all adapter screws to ensure a level mount.

IMPORTANT ! : The longer screws (AF through AI) and spacers (AK) may be used if there is interference between interface legs and any part of the projector, and if more height is required to clear elevated surfaces of the projector.

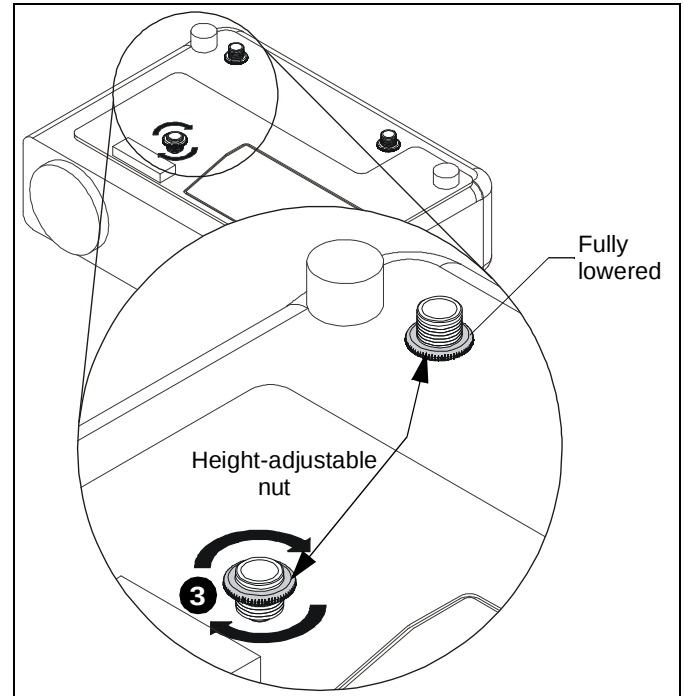


Figure 2

NOTE: Make sure interface legs (Q) are in the **UNLOCKED** position. (See Figure 3)

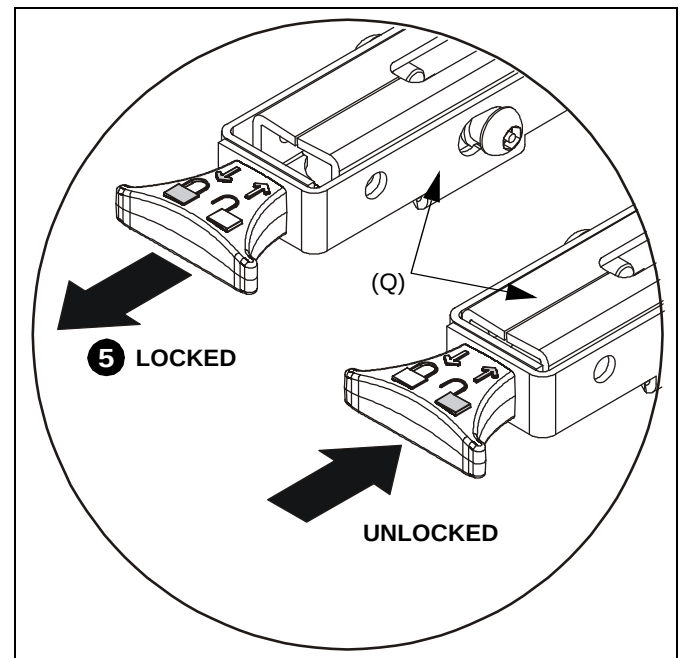


Figure 3

4. Place interface legs (Q) over screw adapters (AM). (See Figure 4)

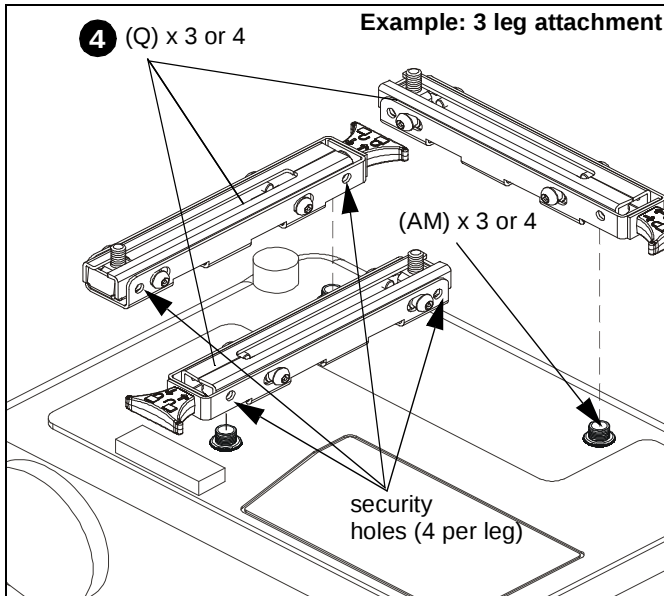


Figure 4

5. Ensure that interface leg is firmly seated over screw adapter, and pull out end of interface leg to lock in place over screw adapter. (See Figure 3)
6. Repeat Step 5 for remaining legs.
7. If projector security is required, fasten one 10-24 x 3/8" security button head screw (AL1) through one of the four security holes in EACH leg using the 5/32" security hex key (AL2). (See Figure 4)



WARNING: BE SURE THAT UNIVERSAL INTERFACE LEGS ARE LOCKED OVER SCREW ADAPTERS. Projector may fall from the mount causing serious injury or death if legs are not securely locked over screw adapters!

8. Maneuver interface legs (Q) and slide mounting screws in top of interface legs so that mounting screws are properly located to mount universal interface plate (P) over projector's center of gravity via attachment to interface legs. (See Figure 5)
9. Secure interface plate to interface legs by installing 1/4-20" wing nuts (AN) to screws on interface legs. (See Figure 5)

NOTE: The following example is one possible scenario based on one example projector hole pattern. Specific connection points vary dependent on projector hole pattern. Multiple scenarios may be used for each specific hole pattern as long as the weight of the projector is centered and balanced after mounting.

IMPORTANT ! : At least three or, if possible, four interface legs **MUST** be used to attach projector to universal interface plate.

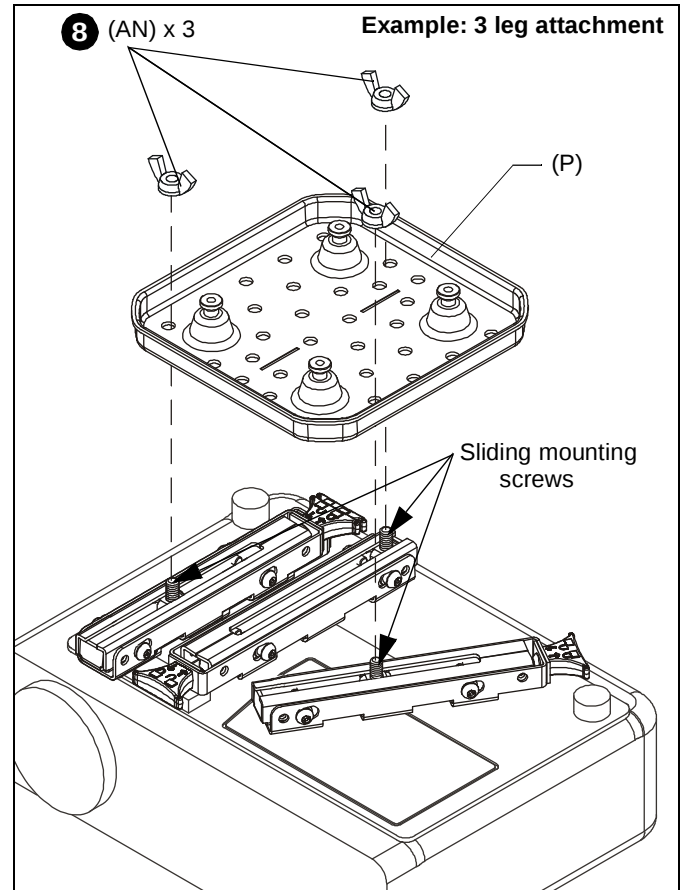


Figure 5

INSTALLING THE SUSPENDED CEILING PLATE

NOTE: The SYSAU has been designed to be mounted above or flush with a suspended ceiling secured by a WireVice system. The method used may be determined by the existing ceiling system.

1. Remove outlet plate from suspended ceiling plate assembly (R) if electrical outlet will be installed (See Figure 6), and install UL Listed Raco 256, 232 or equivalent UL Listed electrical box (not included) to SYSAU outlet plate following instructions included with electrical box.

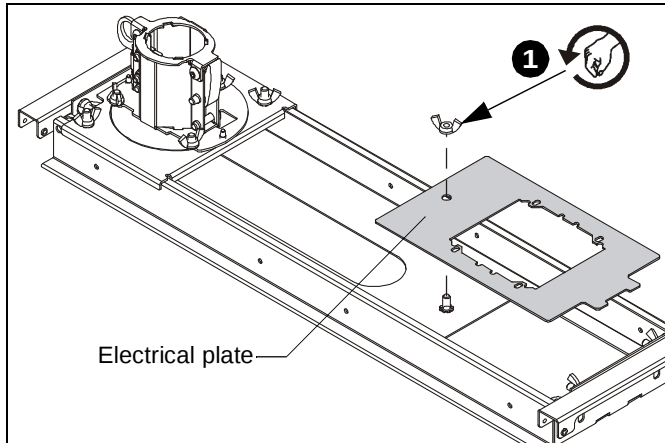


Figure 6

2. Determine exact location of column. Mark location on lower (finished) side of ceiling tile. (See Figure 7)
 - **Flush with Suspended Ceiling**
Mark location on ceiling tile framework.
 - **Install on Top of Existing Ceiling Tile**
Mark location on lower (finished) side of ceiling tile.

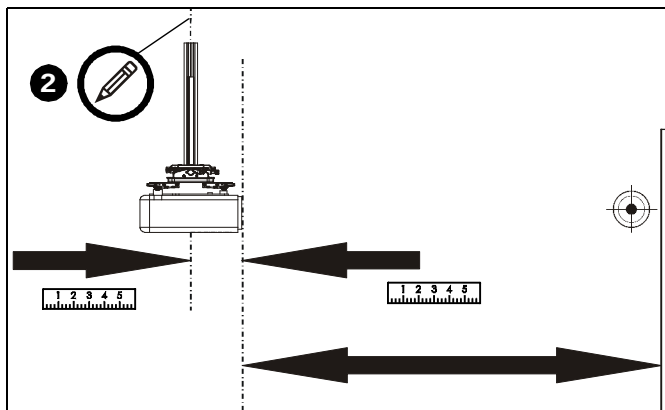


Figure 7

Be sure to consider the following items when determining column location:

- Dimensional offset of display/projector relative to column (due to mount and/or interface).
 - For Projectors: Any recommended dimensions of projector relative to target. (See installation instructions included with the projector.)
3. Remove affected ceiling tile and any adjacent tiles required for access.

4. **Installing on Top of Existing Ceiling Tile only:** Press center tip of ceiling tile cutter (BB) into *finished* side of ceiling tile at marked location. Cut extension column hole through tile using back and forth motion.
5. **Installing on Top of Existing Ceiling Tile only:** Reinstall ceiling tile with extension column hole. Ensure tile is oriented for proper location of hole.
6. **Installing on Top of Existing Ceiling Tile only:** Install suspended ceiling plate assembly (R) on top of ceiling tile so that end brackets engage primary (1-1/2" (38mm) high) rails of ceiling framework. (See Figure 8)

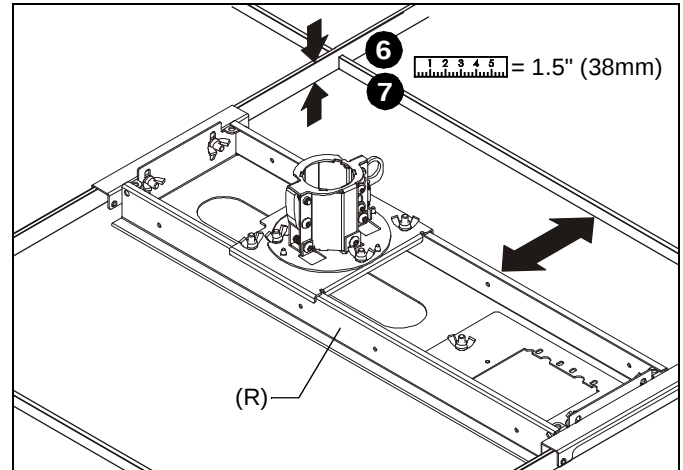


Figure 8

7. **Flush with Suspended Ceiling only:** Install suspended ceiling plate assembly (R) on top of ceiling framework rails so that end brackets engage primary (1-1/2" (38mm) high) rails of ceiling framework. (See Figure 8)
8. Loosen two wing nuts at each end of ceiling plate assembly. (See Figure 9)
9. Raise or lower adjustable bracket, as necessary, at each end of the ceiling plate assembly.
10. Tighten wing nuts on adjustable bracket at each end of the ceiling plate assembly. (See Figure 9)

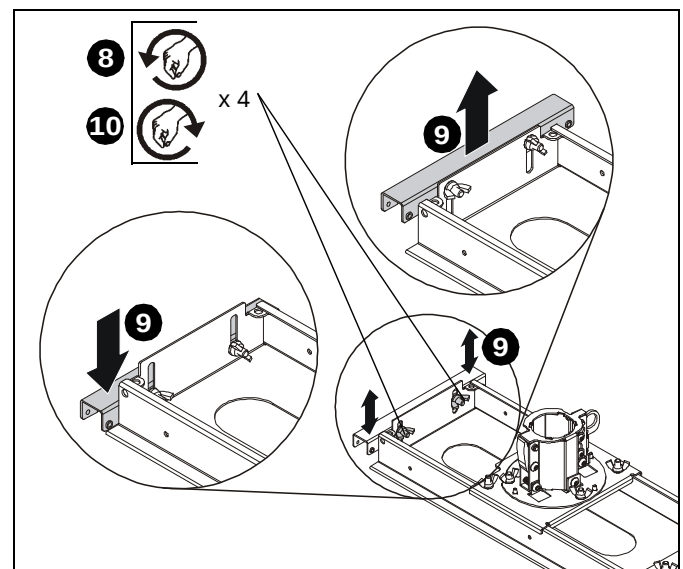


Figure 9

11. Loosen three wing nuts in upper side of ceiling plate assembly (R) to adjust the lateral shift of the column support. (See Figure 10)
12. Position column support (as required) to center support over ceiling tile hole. (See Figure 10)
13. Tighten wing nuts to prevent further movement of column support. (See Figure 10)

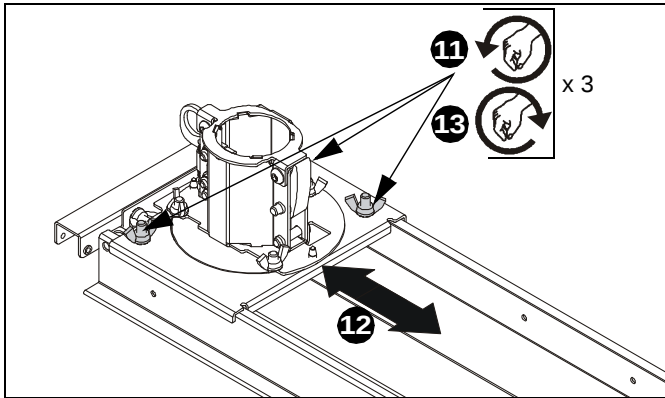


Figure 10

14. **OPTIONAL -- Installing on Top of Existing Ceiling Tile only:** Mark location of electrical cutout on ceiling tile with pencil.
15. Examine ceiling structure (concrete or wood) above ceiling plate assembly (R) to identify four support cable anchor locations. Each location should be approximately 15° outboard of support holes in ceiling plate assembly (R). (See Figure 11)
16. Mark locations with pencil.

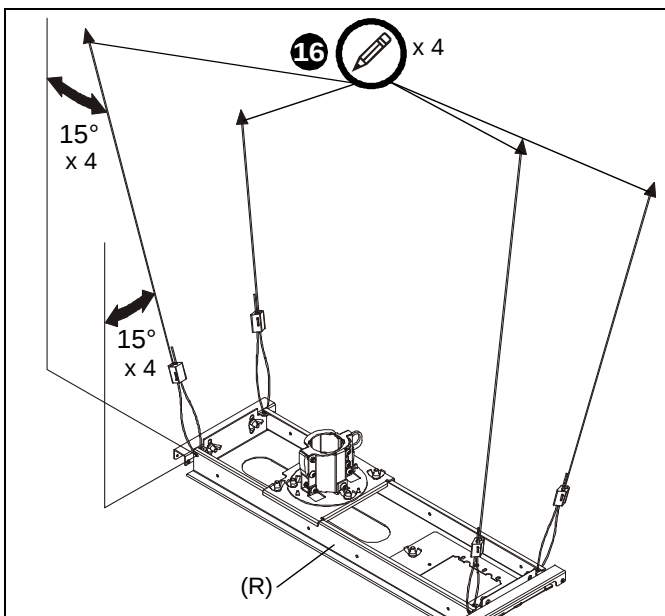


Figure 11

17. Remove ceiling plate assembly (R) and ceiling tile.
- OPTIONAL:** Cut electrical box opening in ceiling tile at marked location.

Installing Support Cable



WARNING: Failure to provide adequate structural strength for this component can result in serious personal injury or damage to equipment! It is the installer's responsibility to make sure the structure to which this component is attached can support five times the combined weight of all equipment. Reinforce the structure as required before installing the component.

Solid Concrete Ceiling Structure



WARNING: Anchors must be installed into structurally sound solid concrete with a minimum thickness of 4" (101.6mm) or greater. Installation into hollow concrete block, mortar, or concrete that exhibits cracking, spalling, or other defects may result in failure of anchor and serious personal injury or damage to equipment!

1. Drill 1/4" diameter x 1-1/2" deep hole at each marked cable anchor support location (See Figure 12). Ensure hole is at least 2-1/2" from nearest concrete edge. Remove debris from hole.

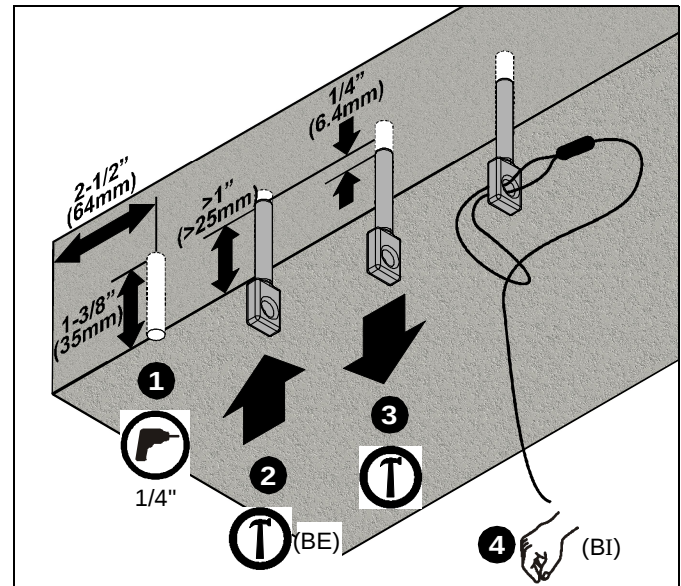


Figure 12

2. Tap anchor (BE) into each hole until the anchor head is seated in the hole. (See Figure 12)



WARNING: Failure to properly set anchor may result in failure of anchor and serious personal injury or damage to equipment!

3. Using claw portion of hammer, set each anchor (BE) by pulling it out of hole approximately 1/4" (6.4mm). (See Figure 12)
4. Insert portion of manufactured *loop* on cable (BI) through hole in anchor (BE). Insert end of cable (BI) through loop. Repeat for 3 remaining support locations. (See Figure 12)

Wood Ceiling Structure



WARNING: Anchors must be installed into wood that measures at least 3-1/2" x 1-1/2" (88.9mm x 38.1mm), and the anchor must install in the center of the narrower (1-1/2" [38.1mm]) face.

1. Drill 5/32" diameter x 2" deep hole at each marked cable anchor support location (See Figure 13). Remove debris from hole.

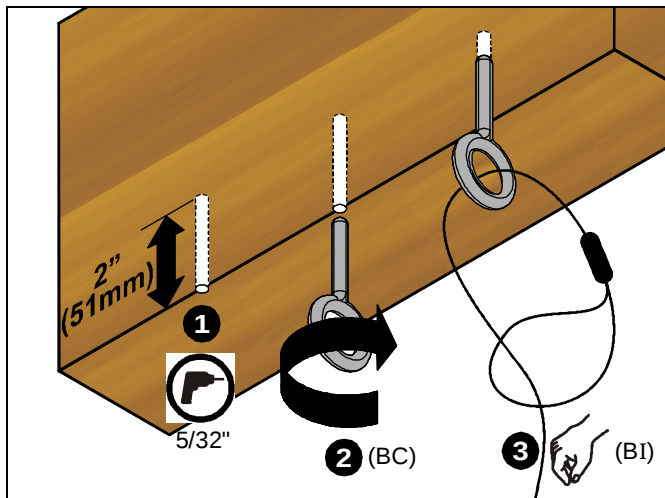


Figure 13

2. Fully thread eye lag (BC) into each hole (See Figure 13).
3. Route end of cable (BI) through eye lag (BC) and then through cable loop (See Figure 13). Repeat for 3 remaining support locations.

Completing Ceiling Plate Assembly Installation

1. **Installing on Top of Existing Ceiling Tile only:** Reinstall ceiling tile with extension column hole. Ensure tile is oriented for proper location of hole.
2. **Installing on Top of Existing Ceiling Tile only:** Reinstall ceiling plate assembly (R) on top of ceiling tile so that extension column support is centered over hole in tile.
3. Position ceiling plate assembly (R) with four screws (BH) as required:
 - **For 625mm (24-5/8 in.) Framework:** Install screws through end bracket *inside* holes. (See Figure 14)
 - **For 610mm (24 in.) Framework:** Install screws through end bracket *inside* holes. (See Figure 14)
 - **For 600mm (23-5/8 in.) Framework:** Install screws through end bracket *outside* holes. (See Figure 15)

OPTIONAL: An additional four screws (BH) may be used (if desired) to further secure the ceiling plate assembly in place and prevent any movement. (See Figure 14) and (See Figure 15)

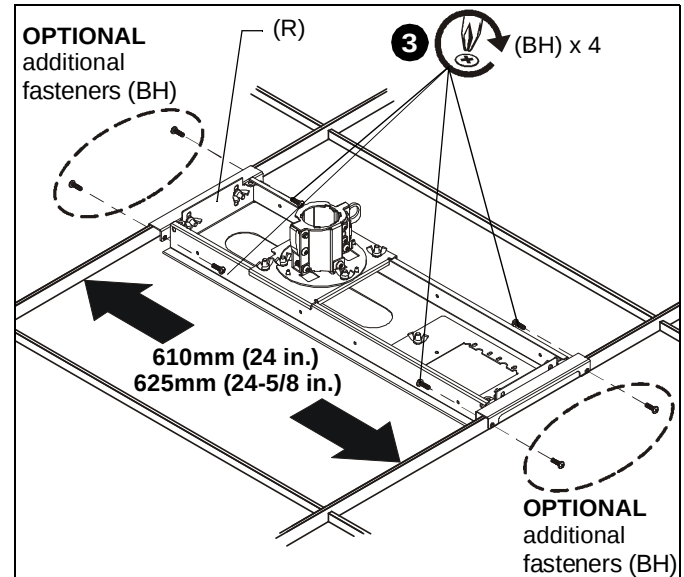


Figure 14

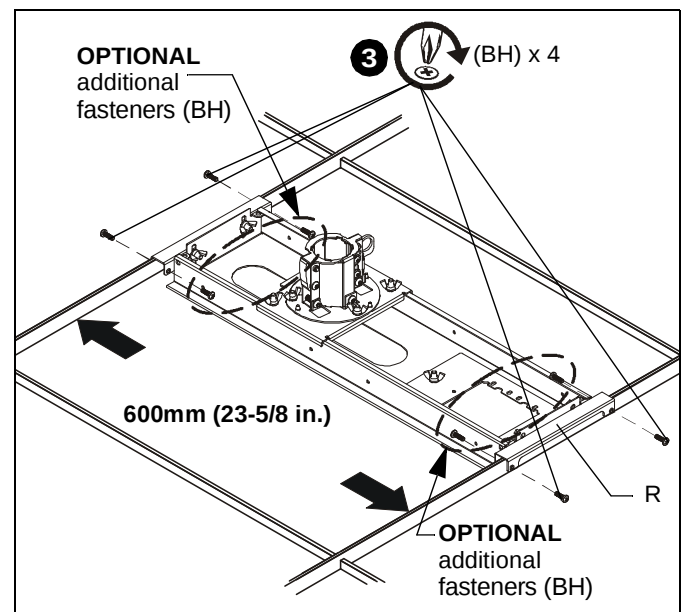


Figure 15



CAUTION: Failure to properly tension cables (BI) may result in damage to ceiling tile framework!

4. Thread each cable (BI) completely through cable lock (BD), corresponding hole in corner of ceiling plate assembly (R), and completely through opposite side of cable lock (BD). (See Figure 16)
5. Adjust cable tension until ceiling plate assembly (R) is supported *entirely* and *evenly* by all four support cables, but not so tight as to distort ceiling tile framework.

NOTE: Cable lock (BD) will allow cable to enter from only one direction per side, indicated by arrows on lock. Depress spring loaded pins on cable lock (BD) to release cable tension.

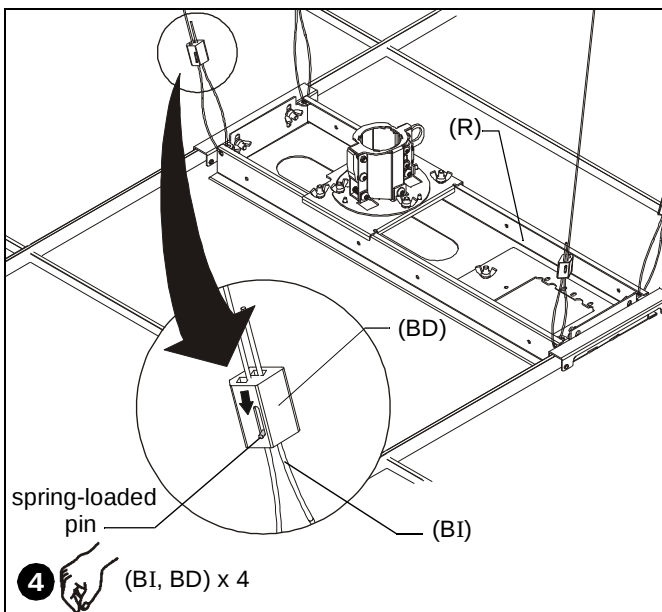


Figure 16

Installing Projector Mount and Column



WARNING: Exceeding the weight capacity can result in serious personal injury or damage to equipment! It is the installer's responsibility to make sure the combined weight of all components attached to the SYSAU up to (and including) the display/projector, does not exceed 35 lbs (15.9 kg).

NOTE: The column may be shortened if there are space limitations above the ceiling plate.

1. **OPTIONAL:** Use a band saw or similar sawing device to remove the desired length of column.

IMPORTANT ! : At least one full hole (on side of column) must be visible above the upper clamping system. (See Figure 18)

NOTE: Be sure to line up the projector mount so that it faces the screen. The projector mount lock will appear on the left side of the assembly. (See Figure 17)

2. Install projector mount and column (S) from underneath and up through suspended ceiling plate assembly (R). (See Figure 17)

3. Move projector mount and column upward to desired position. The mount and column will lock into place as soon the column's upward motion is stopped.
4. If necessary, pull up on the release ring found on the suspended ceiling plate assembly (R) in order to move the column downward. (See Figure 18)

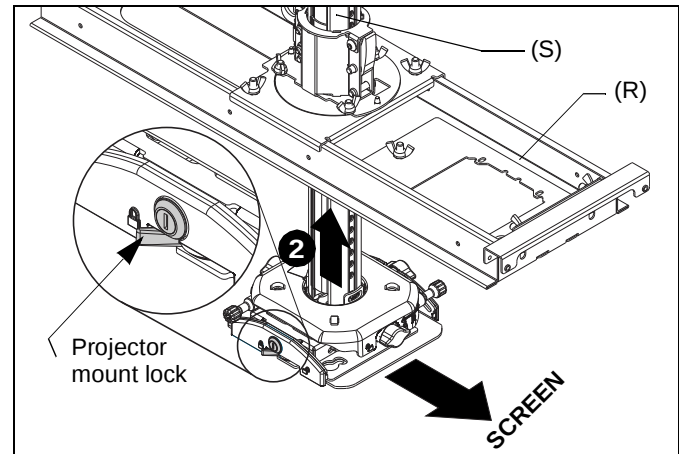


Figure 17

5. Push lock lever up to stabilize motion of the projector mount. (See Figure 18)

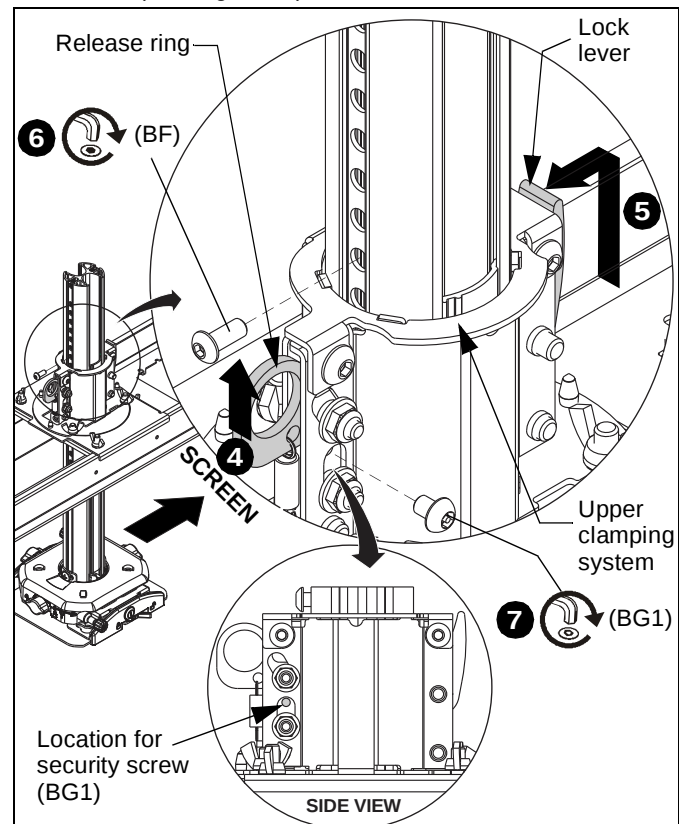


Figure 18

6. Install one 1/4-20 x 5/8" button head screw (BF) into extension column in first opening above column collar, tightening firmly against column. (See Figure 18)
7. Install one 10-24 x 1/4" security button head screw (BG1) into column mechanism on suspended ceiling plate assembly to prevent movement of the release ring and further movement of the column. (See Figure 18)

8. **Flush with Suspended Ceiling only:** Re-install ceiling tile to fit along side(s) of SYSAU. (See Figure 19)

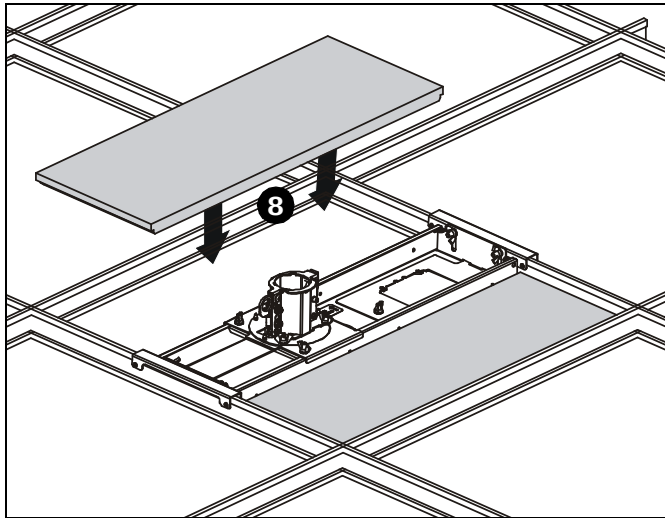


Figure 19

9. **OPTIONAL:** Install column trim ring (BA) on extension column below or flush with ceiling tile. (See Figure 20)

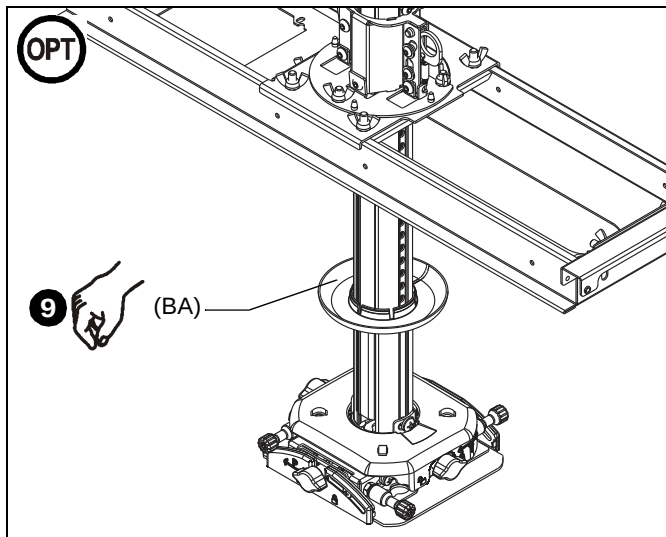


Figure 20

Installing Projector



WARNING: IMPROPER INSTALLATION CAN LEAD TO PROJECTOR FALLING RESULTING IN SERIOUS PERSONAL INJURY OR DAMAGE TO EQUIPMENT. Make certain mounting slots in projector mount base slide under thumb screws and that screws are seated in the back of slots.

1. Orient projector with interface bracket so that the projector mount lock appears on the left side of the assembly (when viewed from screen). (See Figure 21)
2. Lift projector so that thumb nuts on attached interface bracket are aligned with mounting slots in projector mount base.

3. Slide projector with interface bracket into mounting slots in mount base until thumb nuts are seated in the narrow portion of mounting slots against the opposite side of mounting slots. (See Figure 21)

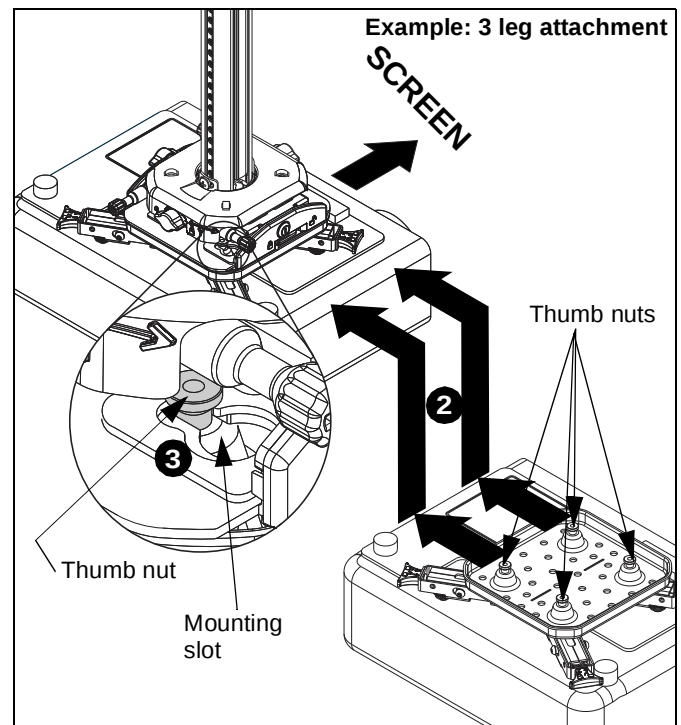


Figure 21

4. Move locking lever to "Locked" position. (See Figure 22)
5. Insert key into lock and turn to secure projector to projector mount.

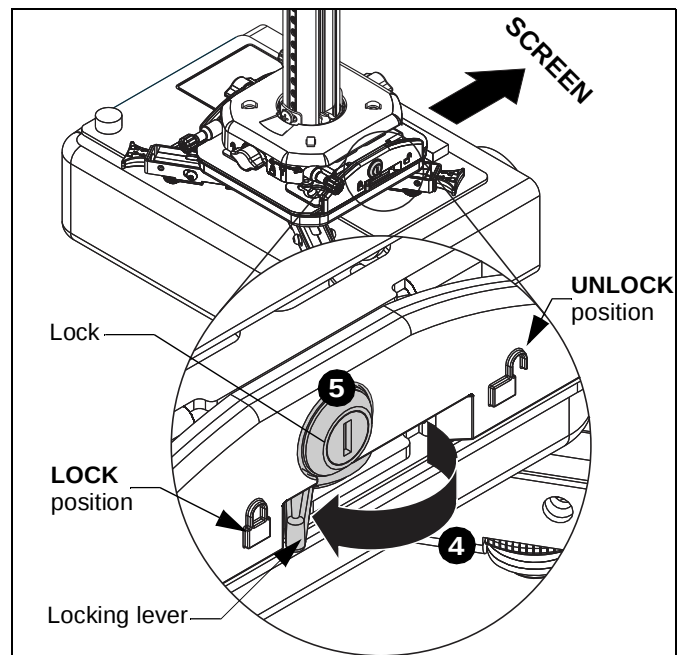


Figure 22

Adjustments

NOTE: Be sure to use the correct adjustment feature (**Yaw**, **Roll** or **Pitch**) when adjusting the projector mount. (See Figure 23)

NOTE: The fine adjustment knobs can also be turned using a Phillips number 2 screwdriver or a 1/2" twelve point socket.

YAW Adjustment

1. Turn the YAW adjustment locking knob (**Y**) counterclockwise (to the left) to **UNLOCK** (disengage) the drive.
2. Adjust the YAW freely to the desired macro position, as required.
3. Turn the YAW adjustment locking knob (**Y**) clockwise (to the right) to **LOCK** (engage) the drive.
4. Turn YAW micro-adjustment knob right or left until image is properly aligned on target. (See Figure 23)

ROLL Adjustment

5. Turn the ROLL adjustment locking knob (**R**) counterclockwise (to the left) to **UNLOCK** (disengage) the drive.

6. Adjust the ROLL freely to the desired macro position, as required.
7. Turn the ROLL adjustment locking knob (**R**) clockwise (to the right) to **LOCK** (engage) the drive.
8. Turn ROLL micro-adjustment knob right or left until image is properly aligned on target. (See Figure 23)

PITCH Adjustment

9. Turn the PITCH adjustment locking knob (**P**) counterclockwise (to the left) to **UNLOCK** (disengage) the drive.
10. Adjust the PITCH freely to the desired macro position, as required.
11. Turn the PITCH adjustment locking knob (**P**) clockwise (to the right) to **LOCK** (engage) the drive.
12. Turn PITCH micro-adjustment knob right or left until image is properly aligned on target. (See Figure 23)

IMPORTANT ! : After adjustment, set screws may be tightened to secure Yaw, Roll and Pitch adjustments. (See Figure 23)

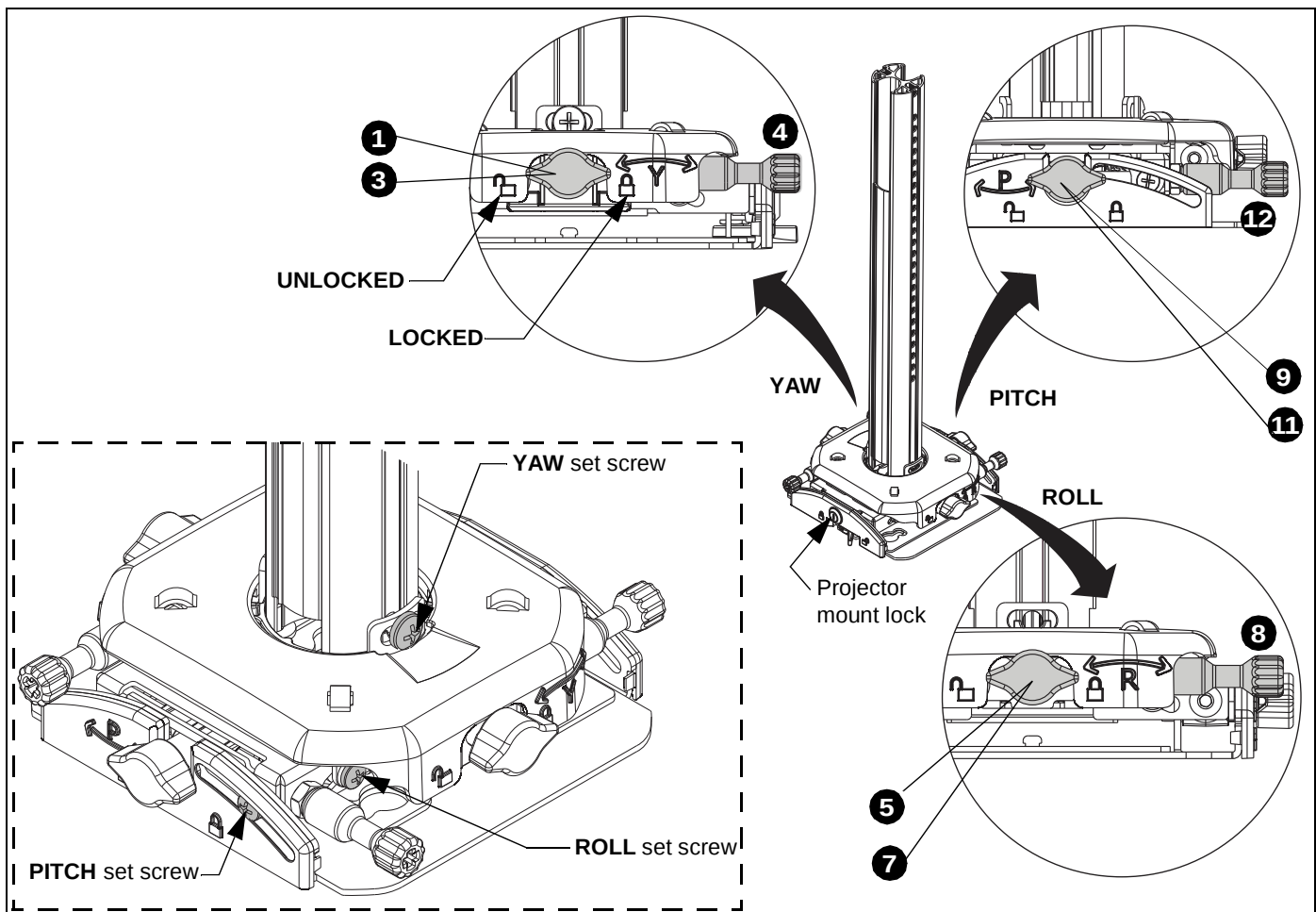


Figure 23

Cable Management

1. Open the cable management cover on the column by opening the side with double raised edge. (See Figure 24)

NOTE: The cable management cover may also be slid out of place along the column length.

2. Place cables behind cover and close cover.
3. Cables may be secured using zip-ties (not included) through cable management points on projector mount. (See Figure 24)

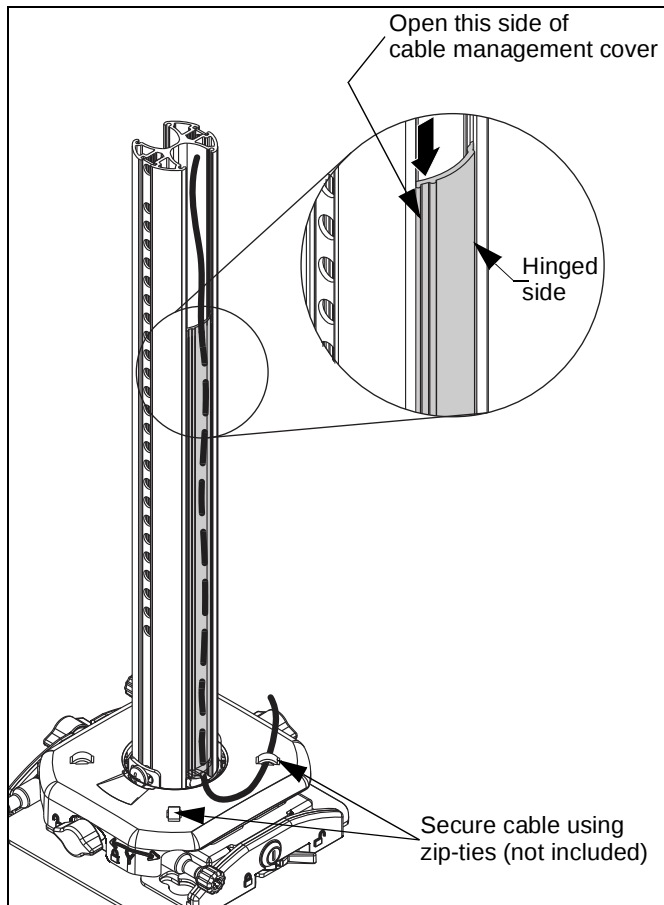


Figure 24



Our Mounts. **Your Vision.**

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