

Desono™ EX Surface Mount Loudspeakers

Installation & Operation Guide



Models
EX-S6
EX-S8
EX-S10
EX-S10SUB

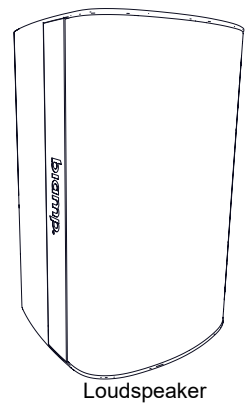
PRODUCT DESCRIPTION

The Desono™ EX product family includes three two-way full-range and one subwoofer surface-mount loudspeaker designs. They deliver excellent musicality and high intelligibility with deep extended bass response and wide, conical coverage patterns. The full range models are EN54-24, and ISO 7240-24 (ROW) certified, and all models are ETL listed to comply with UL 1480A, CSA 62368-1, CE and RoHS.

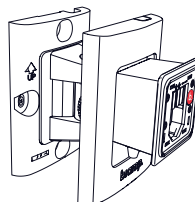
The loudspeakers are designed to be used in both indoor and outdoor environments and share attractive modern aesthetic styling. The loudspeakers can be mounted with our innovative ClickMount™ pan-tilt system than provides indexed aiming control. A ClickMount U-Bracket also is available for low profile mounting to a structure.

CONTENTS

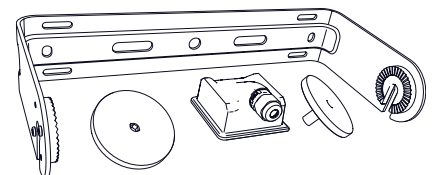
- White or Black Loudspeaker: EX-S6, EX-S8, EX-S10, or EX-S10Sub
- Mounting bracket (color-matched) ClickMount pan-tilt bracket with cover plate (EX-S#-CM models) OR U-Bracket with ClickPlug (EX-S#-UB models)
- Documentation: Drilling template QR to access on-line install; safety guide



Loudspeaker

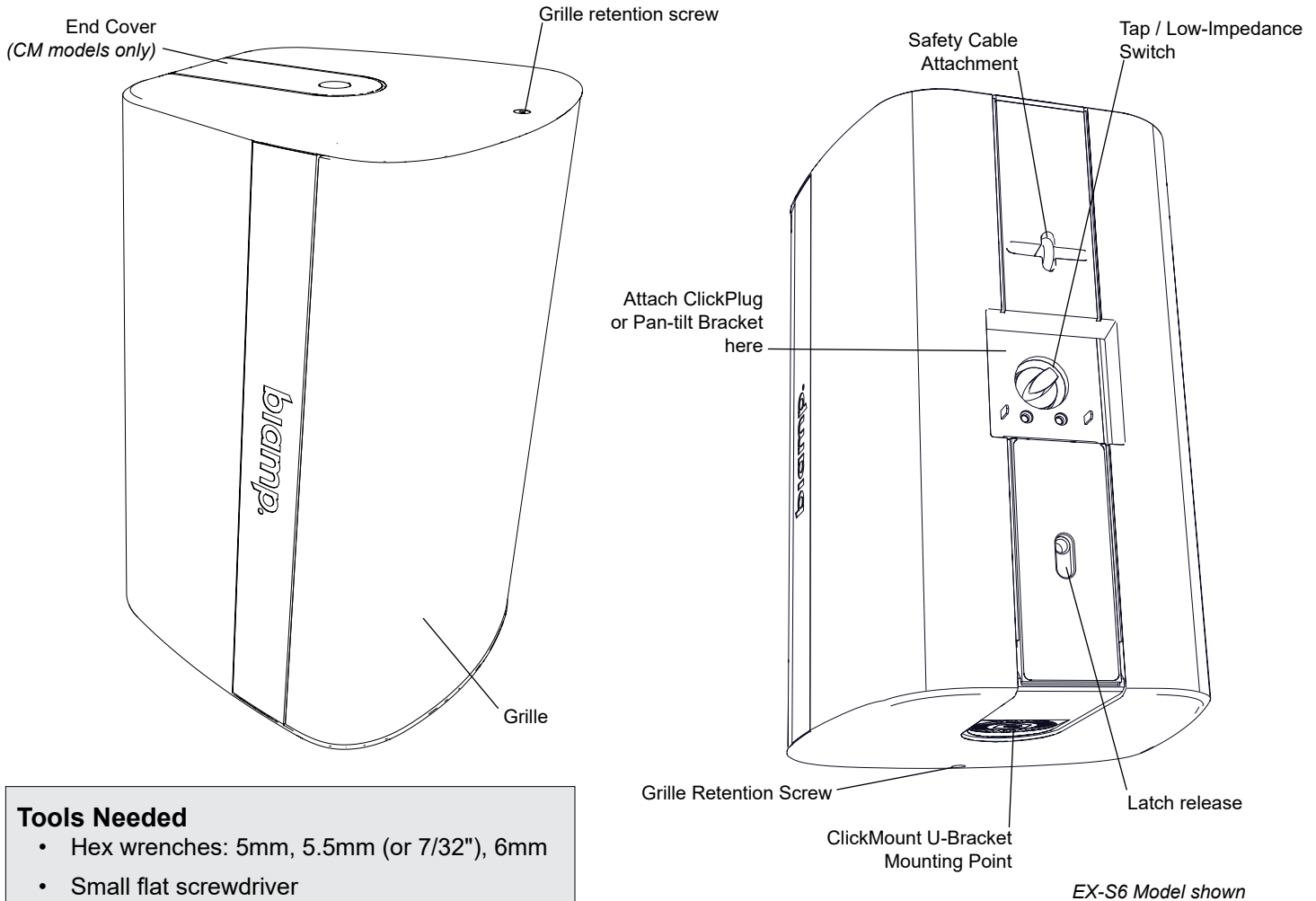


ClickMount pan-tilt bracket



U-bracket with ClickPlug and hardware

PRODUCT REPRESENTATION



Tools Needed

- Hex wrenches: 5mm, 5.5mm (or 7/32"), 6mm
- Small flat screwdriver

b. **Revision Note:** v2 models manufactured starting in 2025 have a red b on the tap switch label and matching ClickMount and ClickPlugs. These models cannot be exchanged with older mounting systems because the depth of the recess, insert, and plug has changed. See more information on the [next page](#).

RIGGING AND ELECTRICAL SAFETY



IMPORTANT: The loudspeakers described in this manual are designed and intended to be mounted to differing building surfaces using a variety of rigging hardware, means and methods. All electrical connections must conform to applicable city, county, state, and national (NEC) electrical codes.



DANGER: It is possible to experience severe electrical shock from a power amplifier. Always make sure that all power amplifiers are in the "OFF" position and unplugged from an AC Mains supply before performing electrical work.



IMPORTANT: Refer to the sections on installation and connections later in this manual for additional information on rigging and electrical safety.



IMPORTANT: When installing loudspeakers outdoors, use a support system with enough wind-load strength to comply with applicable codes and standards.



IMPORTANT: Please review the safety guide accompanying this product and these installation instructions prior to installing this loudspeaker.



CAUTION: Installation of Biamp loudspeakers should only be performed by trained and qualified personnel. It is strongly recommended that a licensed and certified professional structural engineer approve the mounting. Severe injury and/or loss of life may occur if this product is improperly installed.



DANGER: It is advised that a safety cable be secured to a suitable load-bearing point separate from the primary loudspeaker mounting point, with as little slack as possible so as not to develop undue kinetic force if the primary mount were to fail.

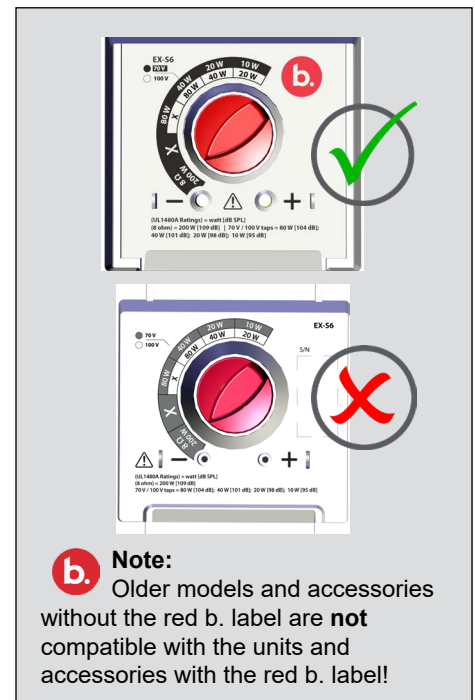
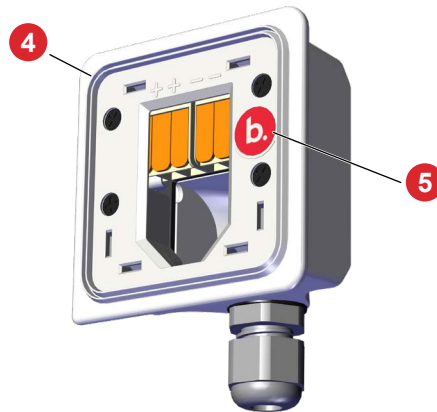
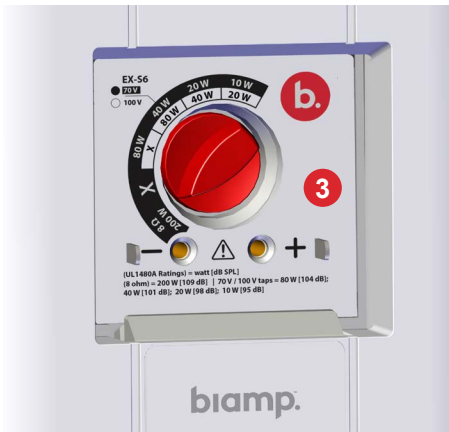
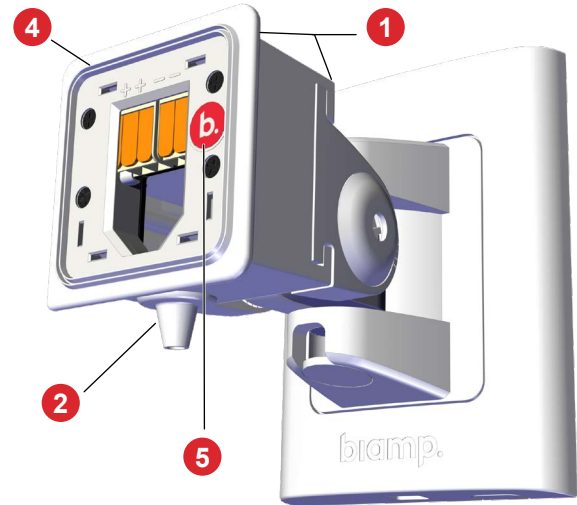


ENVIRONMENTAL:

- 1) This device is not intended for water immersion in applications requiring UL1480A Certification.
- 2) This device is not intended for direct exposure to sunlight in applications requiring UL1480A Certification.

WHAT IS NEW ABOUT EX 2.0!

1. The ClickMount has been redesigned with a deeper plug area to handle more extreme wet conditions - to impede moisture from getting into the electronics.
2. A new rubber cable grommet was added to the ClickMount to provide additional protection for the input cable / wiring.
3. A new compressible input panel label to increase the seal on all models.
4. Improved ribbing on both the ClickMount and ClickPlug to press against the label.
5. All of the new models are identified with a red **b.** label on the ClickMounts, ClickPlugs and input panel labels. They are not interchangeable with older versions without that indicator.
6. Both ClickMount and U-Bracket models can be utilized outside and inside in portrait (vertical) and horizontal (landscape) orientations.



NOTE - Older models without red **b. sticker:** The EX-S Gen 1 information (manuals and drawings) are packaged in a zip file available at this link: bia.mp/EX-S_Gen1_zip

INSTALLATION

The loudspeaker must be mounted to structural load bearing surfaces or substrates (not electrical gang boxes). When installing EX models outdoors, do not aim them upwards. Doing so will void the warranty and reduce the life of the loudspeaker. Run cable/wiring to the mounting locations of each loudspeaker.

There are two mounting options: a ClickMount pan-tilt bracket, or an indexing U-Bracket with the waterproof ClickPlug wiring insert.

Install the ClickMount Pan-tilt Bracket

The bracket mounting points are centered on the top, bottom and sides for direct mounting to wall studs and/or structural cross-members. They are sized to accommodate bolts up to 6 mm (1/4"), in order to provide a high safety factor when mounted. Orient the bracket with the arrow pointing UP.

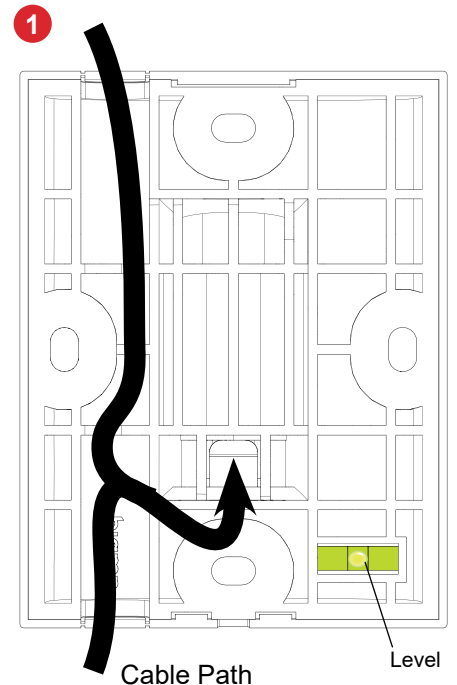
1. Route the wire as shown along the channel and out the center hole, before attaching the wall plate to the mounting surface (attachment hardware is not included). Use the small level in the lower left corner to ensure the bracket is straight. Do NOT install the cover plate until the loudspeaker is ready for installation. Pull enough wire through so that the bracket arm can be fully tilted or panned. If mounting outdoors or in moist environments, form a drip loop to keep moisture from migrating into the ClickMount. Route the wire through the grommet to the terminals. The grommet can be cut back for multiple cable insertion (see dual cable example below).
2. Strip 0.5" (13 mm) insulation from the end of each wire. Lift a lever up and fully insert the wire into the terminal (polarity is noted above the terminals). Press the lever fully back down on the wire to secure the connection. Ensure wires are tight and can't be pulled out. Stranded wire should be twisted or crimp-on wire ferrules used to ensure all strands are captured.

NOTES: The rubber grommet provides an additional moisture proof seal, but may be removed for indoor installs in dry environments.

The levers are stiff - take care when lifting or pressing them down.

IMPORTANT: If the wall surface will be finished after the brackets are installed, mask off the bracket, the ClickMount arm and wiring terminals to prevent any paint or dust from getting into the aiming mechanism or interfering with the wiring connectivity. Use low-adhesive painter's tape.

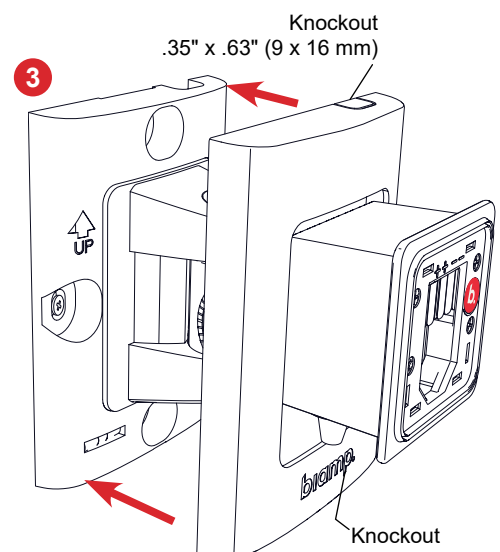
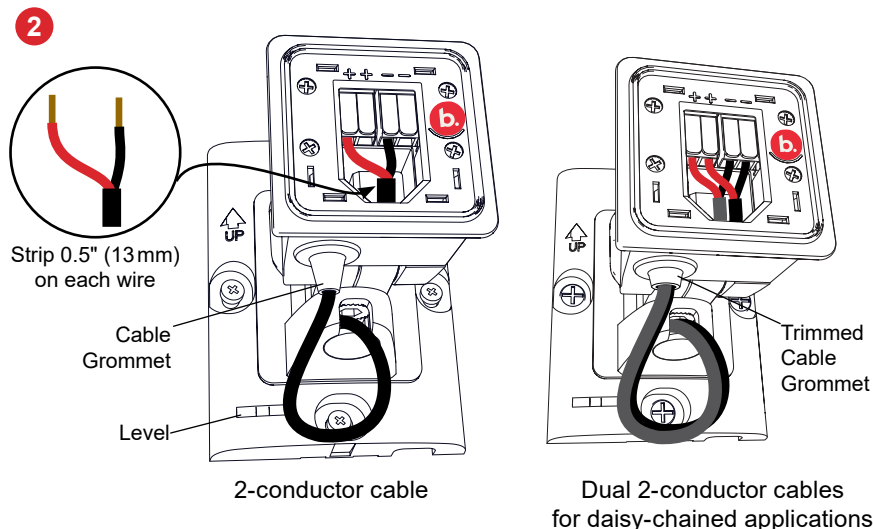
3. Once the wall is finished, install the cover plate. Knockouts can be removed to accommodate surface wiring. Rotate the cover over the bracket arm and snap into place. To remove the plate, insert a small screwdriver to depress the tab in the center bottom edge of the plate.



Lever-actuated (tool-less) wiring terminals will accommodate up to a 6 mm² (10 ga) conductor.

The bracket will accept up to 8 mm (0.3") diameter cable. The opening to the pan-tilt mechanism is 8 x 12 mm (0.3" x 0.47").

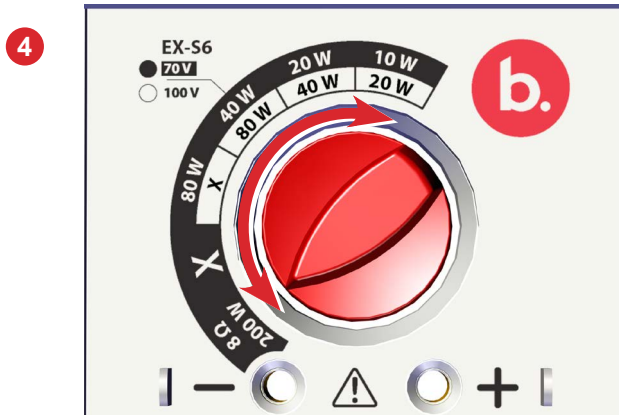
Indoor-only The grommet can be removed for daisy-chain applications requiring 4 conductors.



Installation - ClickMount Pan-tilt Bracket (continued)

Adjust the Tap Switch

4. Rotate the tap switch to the desired setting **before** you attach the speaker to the bracket.



b. **Revision Note:** Models manufactured starting in late 2025 have a red b on the tap switch label and matching ClickMount. These models cannot be exchanged with older mounting systems because the depth of the recess, insert, and plug has changed.

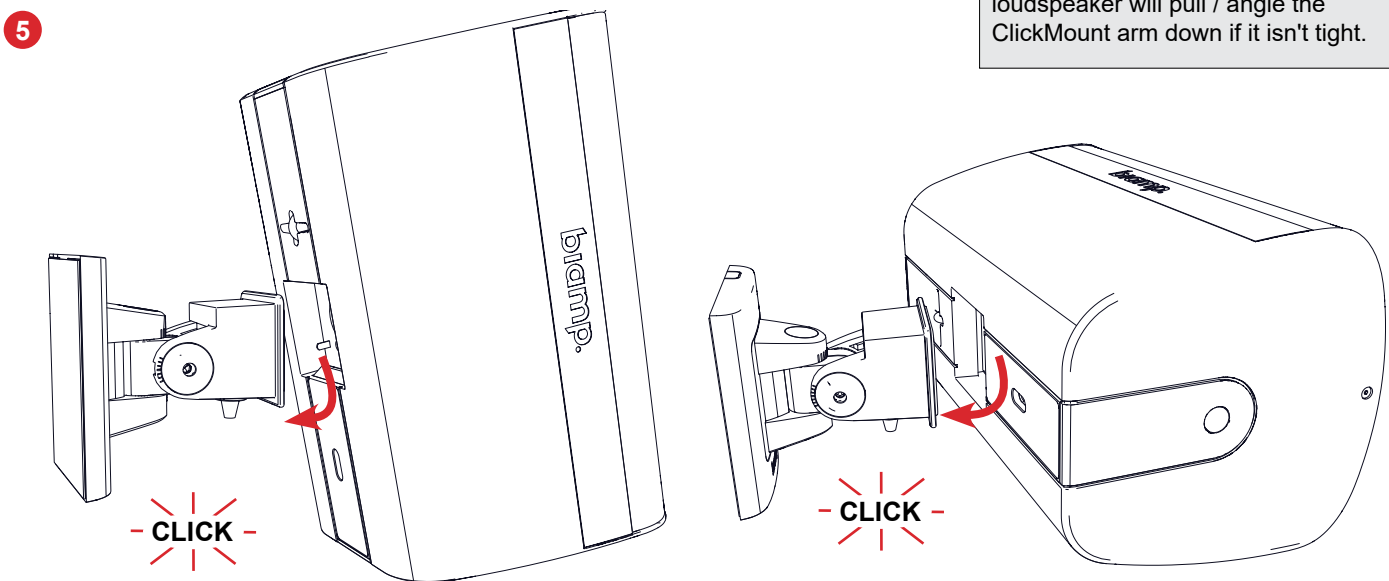
Attach the loudspeaker to the bracket

NOTES: If you know the desired aiming angle of the loudspeaker, the ClickMount bracket can be adjusted before attaching the loudspeaker. Refer to aiming instructions on the next page.

5. Mount the loudspeaker to the bracket by clicking the loudspeaker onto the ClickMount bracket. The loudspeaker fits on the bracket top first, then can be rotated in to engage the latch. The loudspeaker may be installed in vertical or horizontal orientation. See Aiming Angle information on [pages 8-10](#).

NOTE: It will not install upside down in a vertical orientation.

WARNING: Fully support the loudspeaker until it is clicked in place, and verified that the latch is fully engaged. The weight of the loudspeaker will pull / angle the ClickMount arm down if it isn't tight.

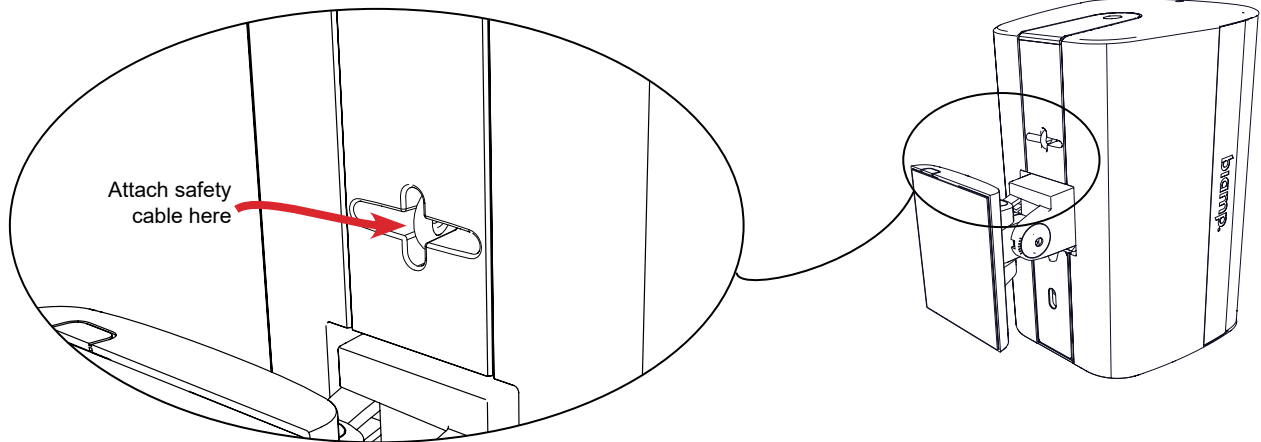


Installation - ClickMount Pan-tilt Bracket (continued)

- Secure the loudspeaker with a safety cable attached to the loop on the rear. The cable should be mounted to a secondary mounting point close to the bracket to avoid any kinetic force if the wall mount should fail, or the latch be released without the loudspeaker being supported. The cable should be a little slack to accommodate the aiming angle.

NOTE: The installer is responsible for sourcing the proper safety cable to meet all applicable local building codes and standards.

6



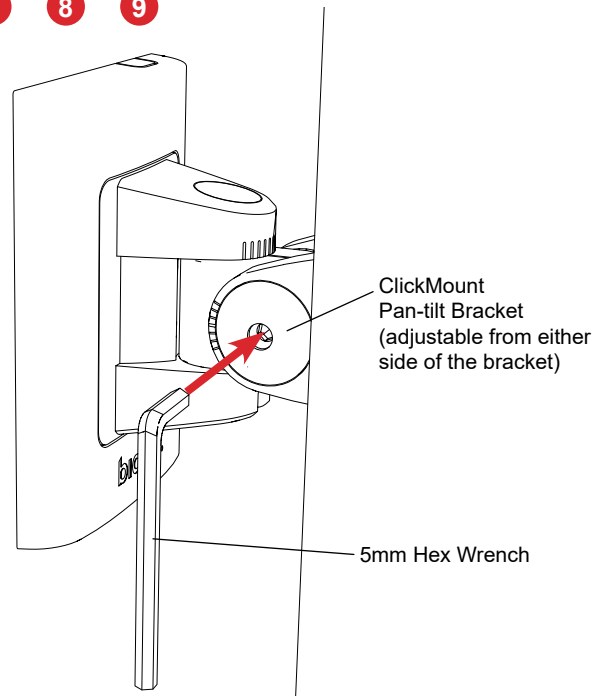
Aim the loudspeaker

- Insert a 5mm hex wrench into the bracket as shown (Figure 7) and loosen. The adjustment mechanism can be accessed from either side of the bracket.
- IMPORTANT:** Support the loudspeaker while manipulating the bracket's pan and tilt, because the weight of the loudspeaker will pull it down.
- As the bracket is loosened, it will first move vertically (tilt) and then horizontally (pan) as it is fully loosened. The bracket will move in indexed predetermined angles (see illustrations on [pages 8-10](#) for aiming angle definitions). Fully loosen the bracket, pan it to reach the desired side angle, tighten the bracket slightly and set the vertical angle.
 - Fully tighten the bracket with the hex wrench from the same side that it was loosened. Do **not** overtighten.

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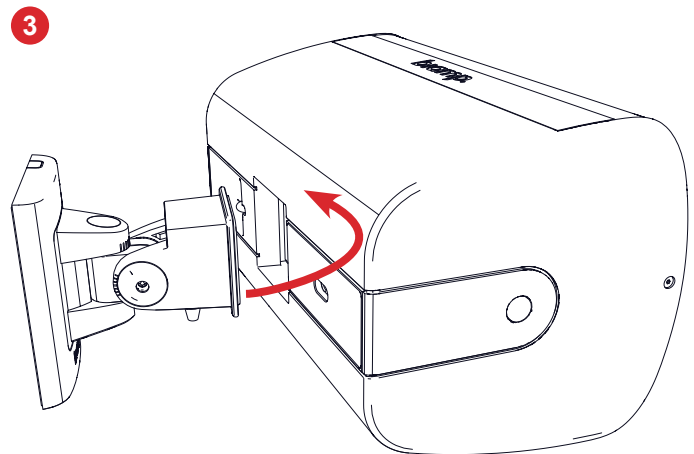
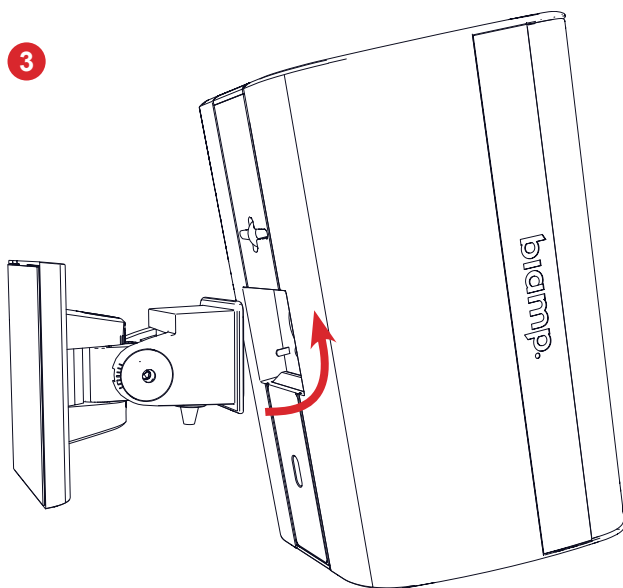
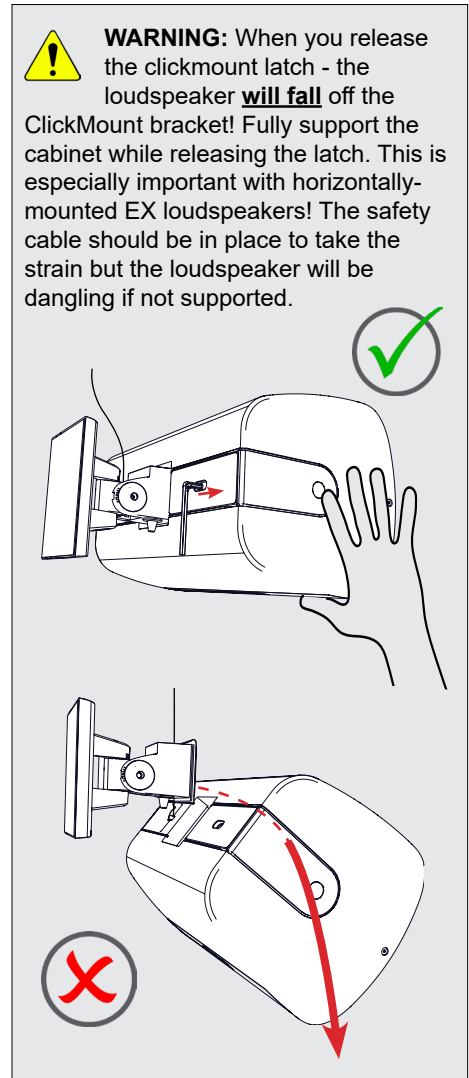
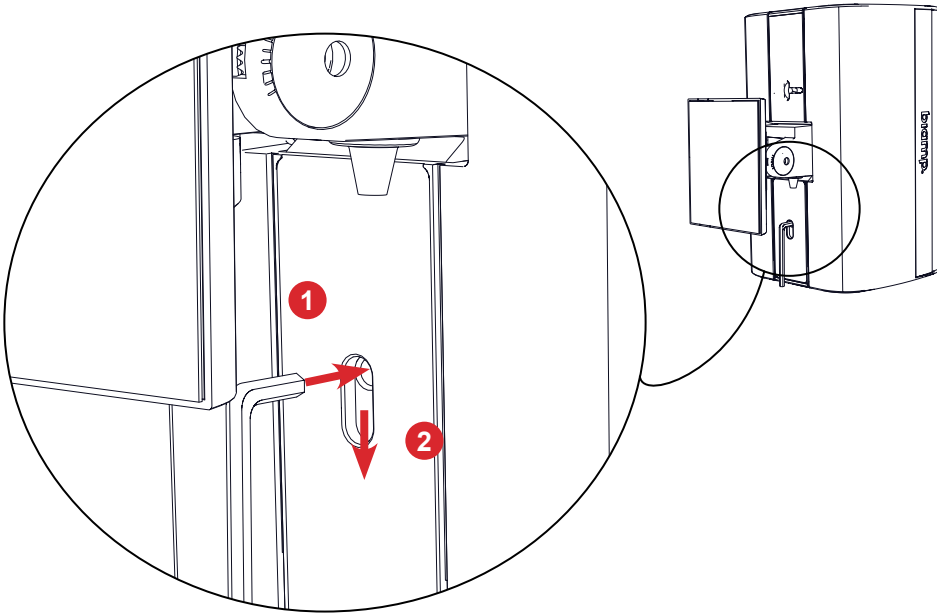


Installation - ClickMount Pan-tilt Bracket (continued)

To remove loudspeaker from the bracket

The loudspeaker can be removed from the ClickMount pan-tilt bracket as follows:

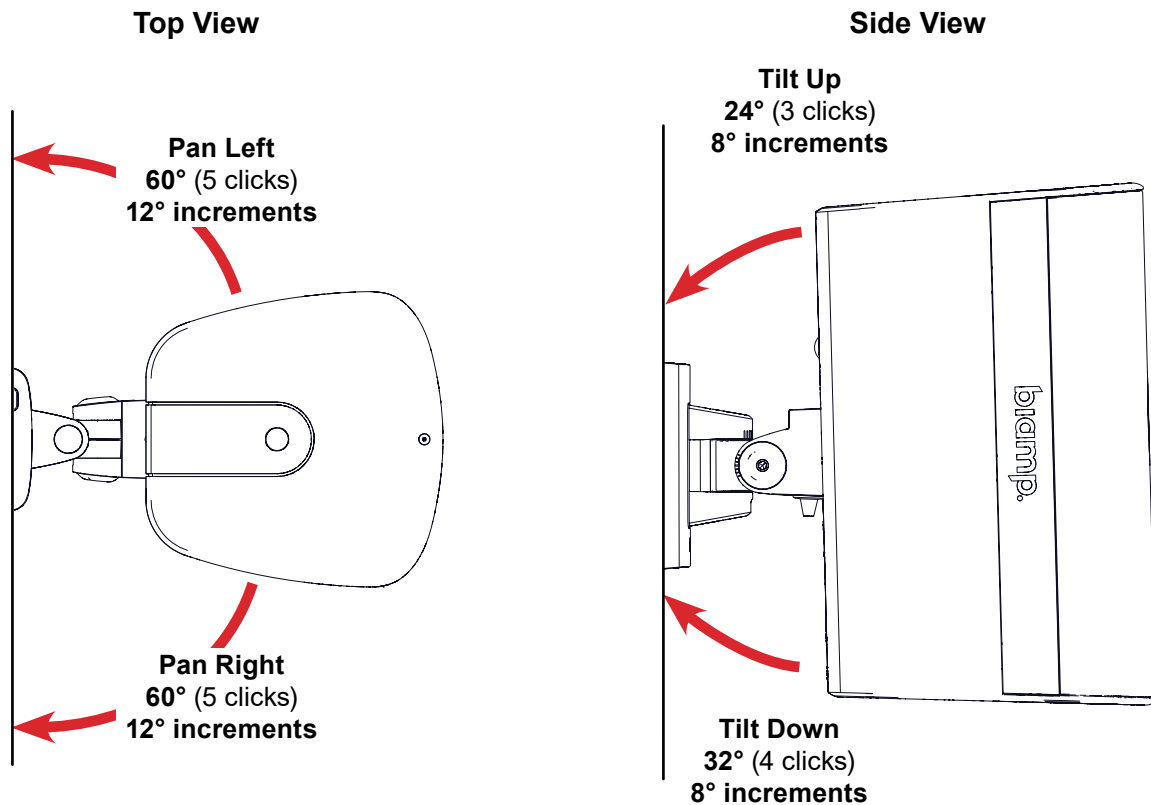
1. Insert a 5mm hex wrench into the hole within the slot in the middle of the label on the rear panel (Figure 8a).
2. Pull down (or toward the base) and the latch will release and remain in the "unlocked" position until the speaker is removed from the bracket. The loudspeaker must be fully supported as you release the latch. See Warning at right.
3. Rotate the bottom of the speaker away from the ClickMount Bracket.



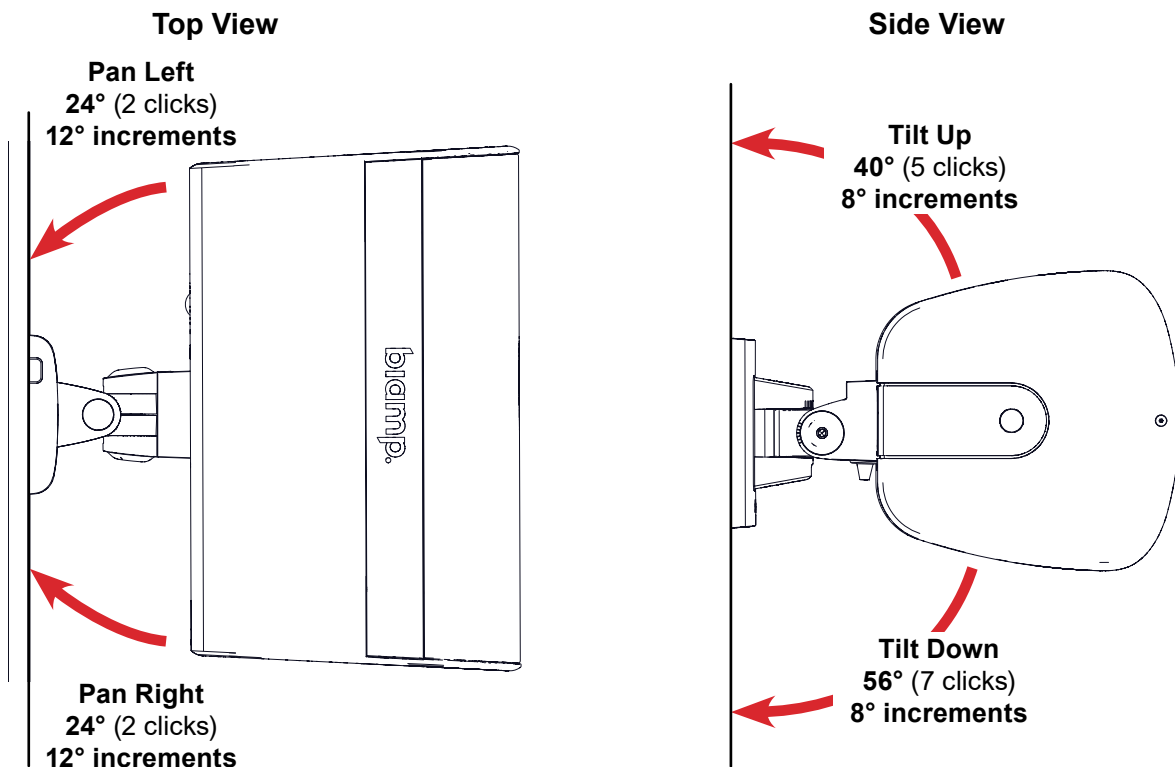
Lift and rotate bottom of speaker away from the ClickMount bracket.

ClickMount Pan-tilt Aiming Angles (Small Bracket EX-S6)

Portrait [Vertical] Orientation

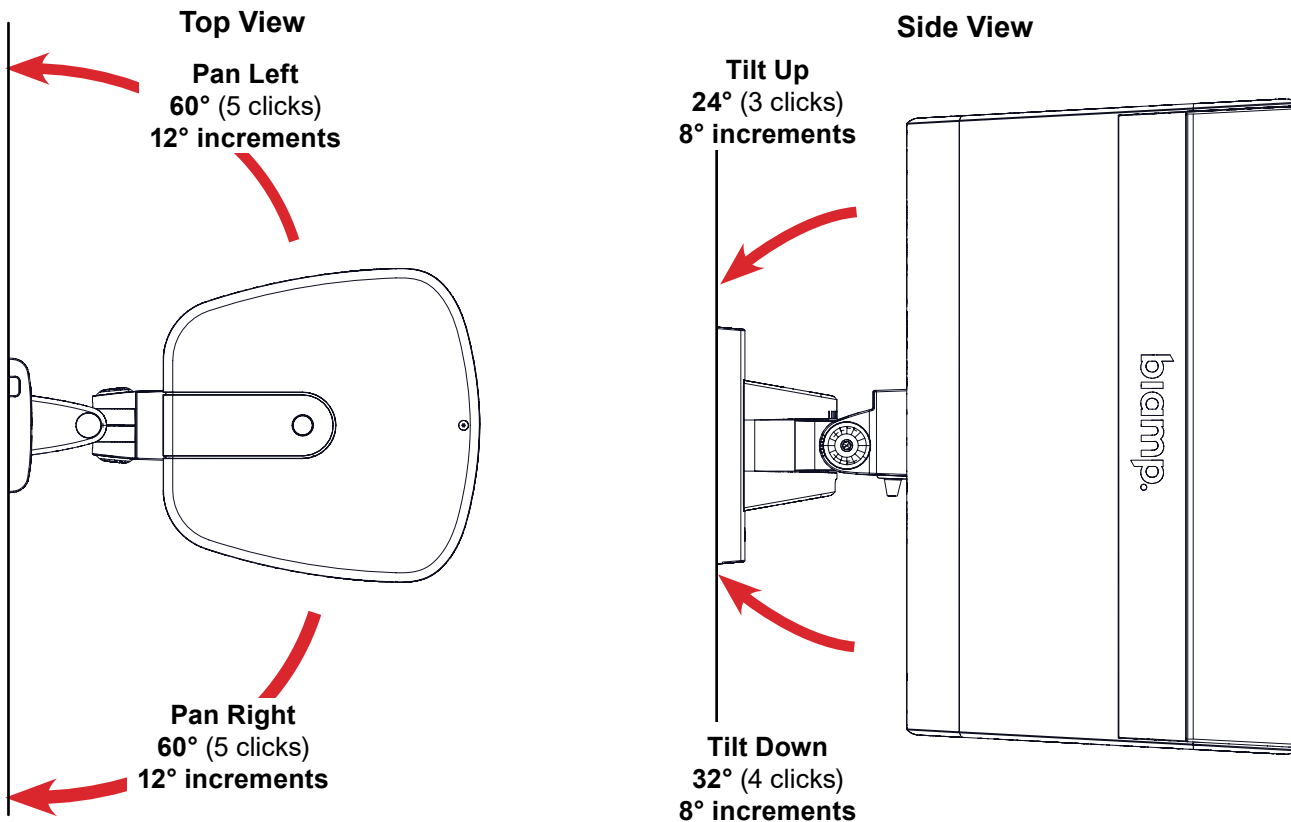


Landscape [Horizontal] Orientation

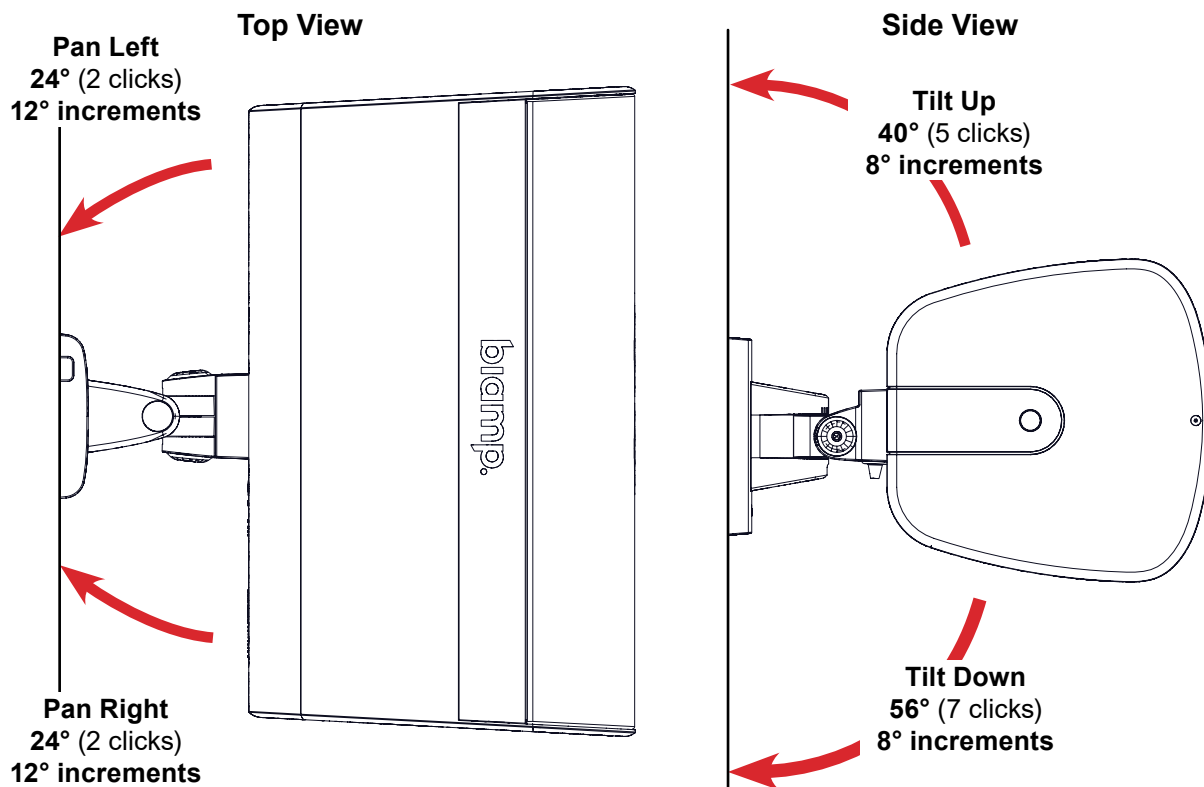


ClickMount Pan-tilt Aiming angles (Large Bracket EX-S8)

Portrait [Vertical] Orientation

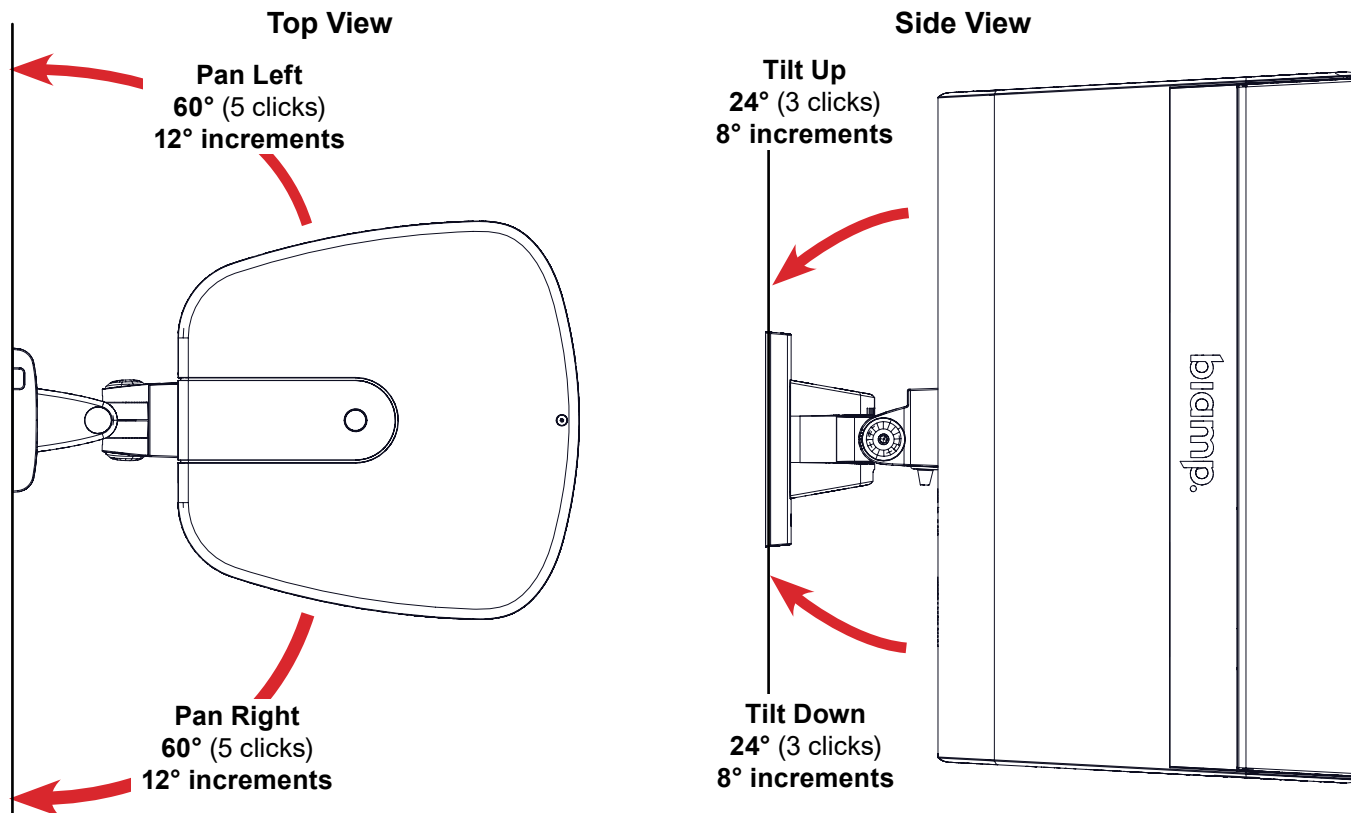


Landscape [Horizontal] Orientation

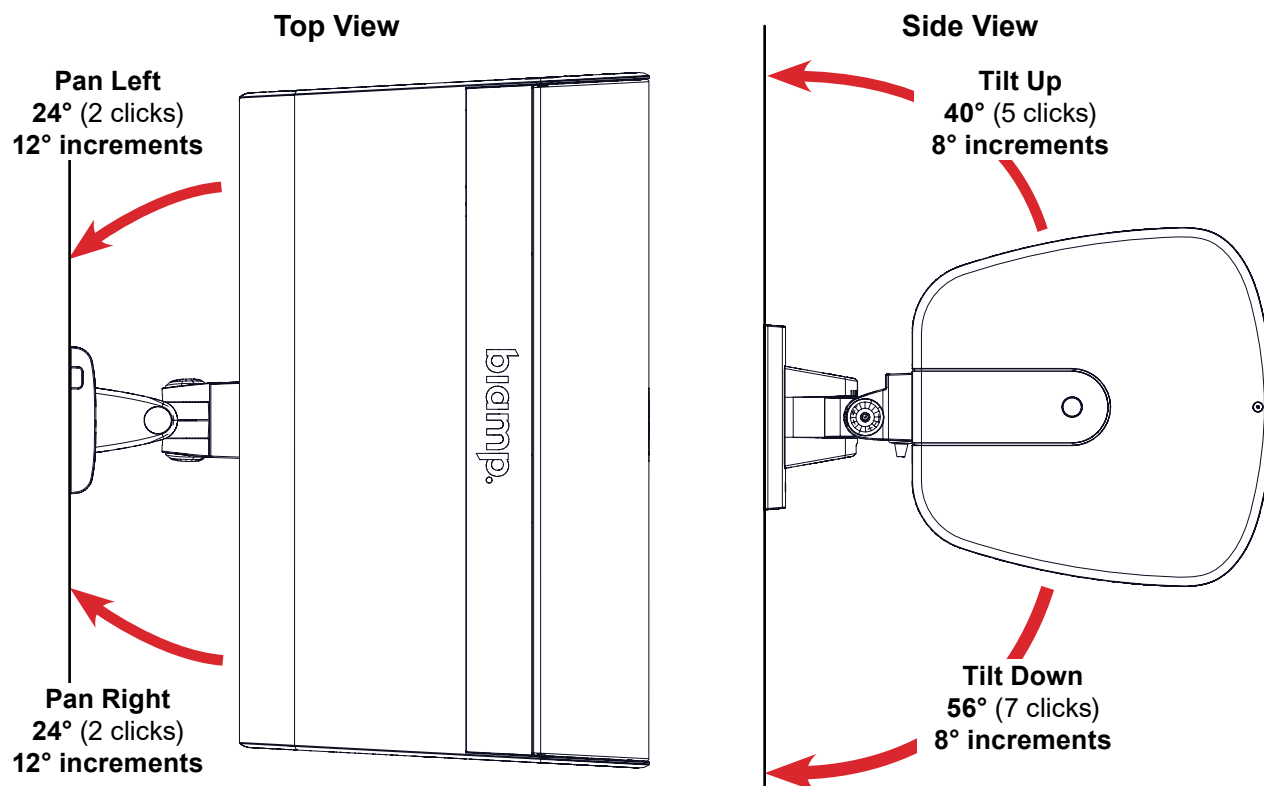


ClickMount Pan-tilt Aiming angles (Large Bracket EX-S10, EX-S10SUB)

Portrait [Vertical] Orientation



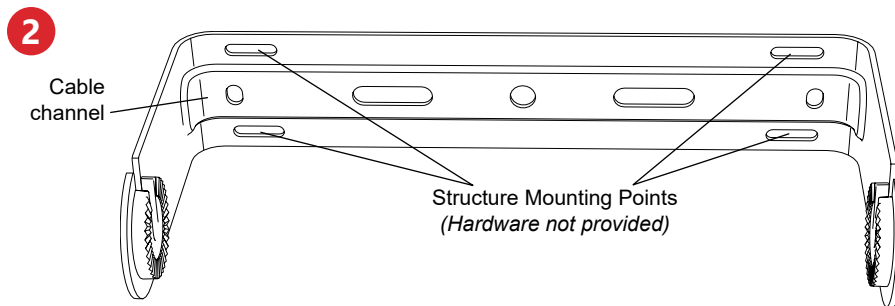
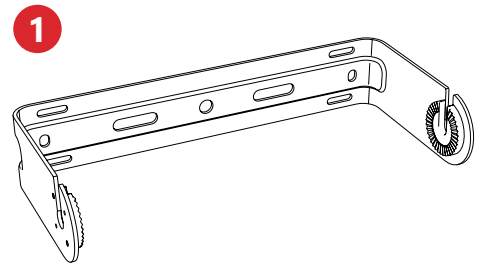
Landscape [Horizontal] Orientation



Installation - U-Bracket

The U-Bracket is a low profile powder-coated Marine Grade aluminum design that allows the unit to be connected to a center suspension post or against the wall, ceiling or other flat surface. It can also be mounted to a variety of third party stand and pole adapters.

1. Mount U-Bracket to wall prior to loudspeaker installation - the wiring can be routed along the channel and out any of the interior holes not used for mounting the U-Bracket. If mounting in a horizontal orientation on a wall, the slots must face up - see image at right.
2. Sufficient cable should be pulled through the bracket holes to create a drip loop (damp/wet applications) with enough extra to connect to the ClickPlug. If the wall is to be finished before the loudspeaker is mounted, the U-Bracket and cable should be masked with painter's tape or other masking material.



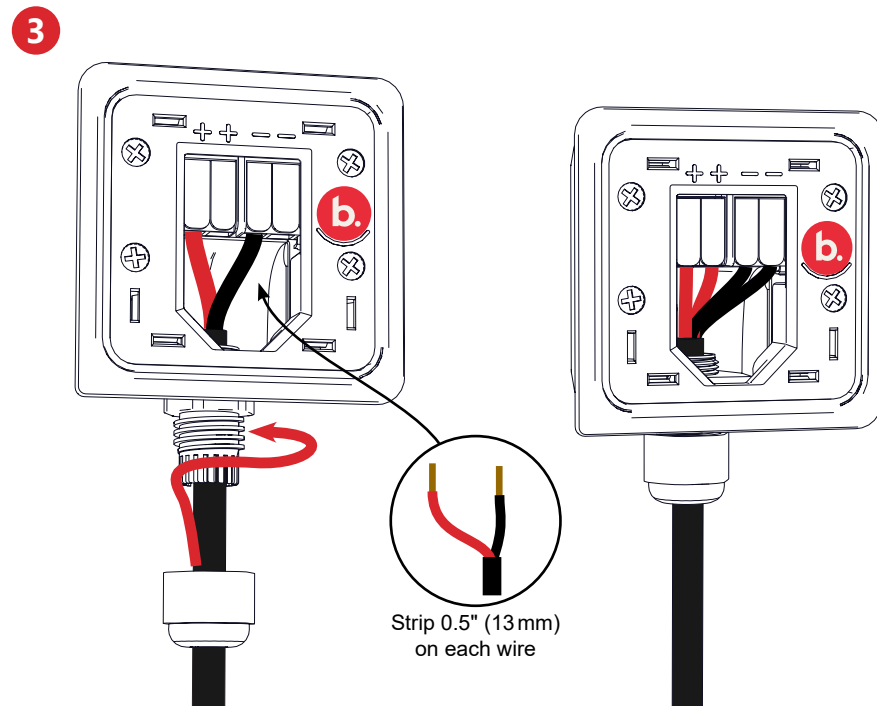
Cable / Wire Size

ClickPlug Cable gland nut will accept a 4-8mm (0.15-.3 in) diameter cable or 2 pairs 1.5mm² (16 ga) or 1 pair 2.5mm² (14 ga). For outside or moisture-rich environments - round SJOW cable or equivalent is advised to provide a weather-resistant seal in the tightened gland nut. Forming the cable into a drip loop will also prevent any moisture migrating into the gland nut.

Tools Needed

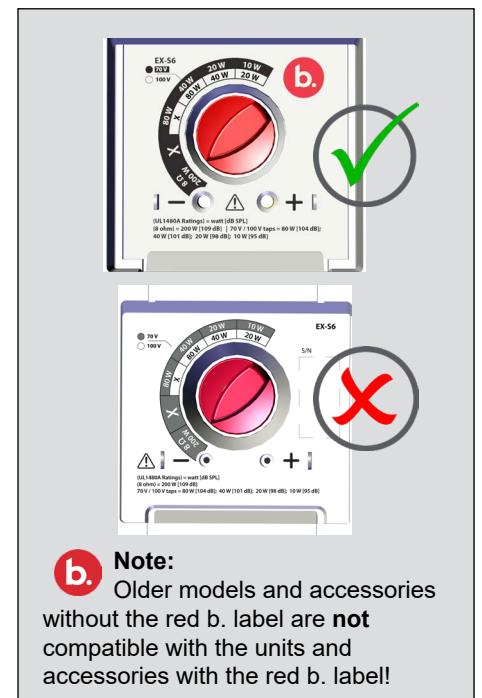
- 5.5mm (or 7/32") Hex wrench

3. Wire ClickPlug as shown leaving enough for the likely mounting angle and a drip loop for damp/wet applications. Do before mounting the loudspeaker.



Thread cable through gland nut and barrel into ClickPlug (2 conductor cable shown)

ClickPlug wired with 2 pairs for daisy-chained applications



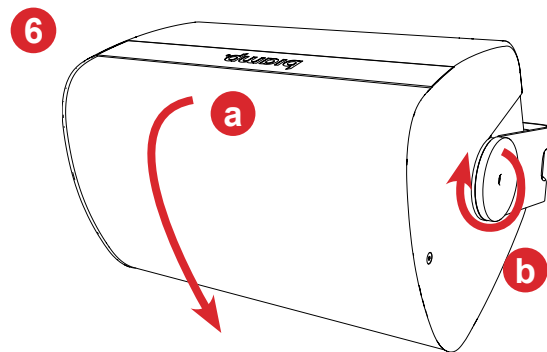
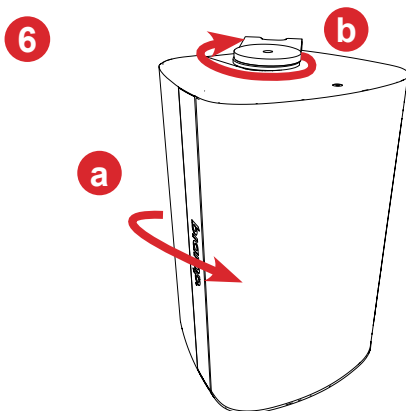
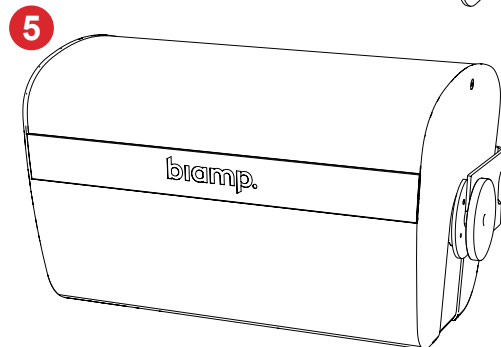
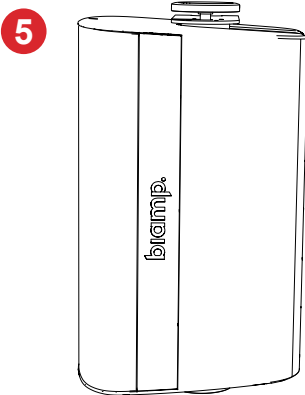
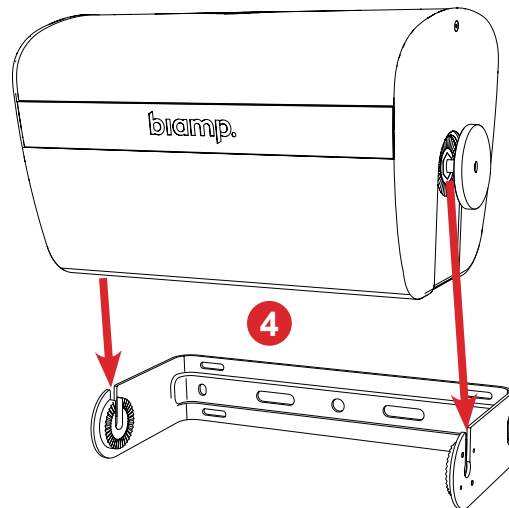
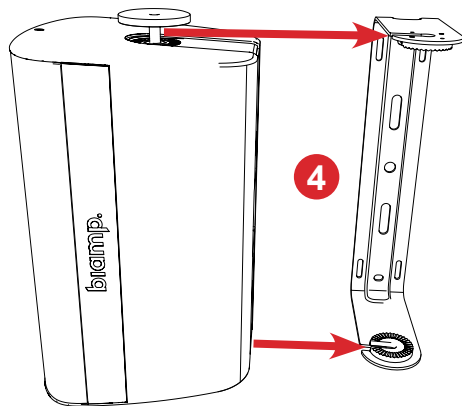
Note:
Older models and accessories without the red b. label are **not** compatible with the units and accessories with the red b. label!

Installation - U-Bracket (continued)

Attach the Loudspeaker to the U-Bracket

4. The loudspeaker must be mounted in a specific way to allow the ClickMount teeth on the U-Bracket to guide the speaker perfectly into place using the shallow channels on each end of the speaker. The grille must face directly away from the slots in the bracket - See below for both loudspeaker mounting positions. Partially screw the knobs on the loudspeaker (leaving 16mm [0.63"]) and fully fit the loudspeaker in the bracket slots.
5. Tighten the knobs loosely by hand so that teeth in the yoke ends engage with the loudspeaker teeth, but still allow the EX to rotate (with clicks).
6. Set aiming angle (a) and tighten the knobs by hand (b) to prevent any movement. Once angle is final, fully tighten knobs by using a 5.5mm (7/32") hex wrench. The loudspeaker will rotate 200° on the bracket in 10° increments.

IMPORTANT: The cabinet is finished with a light coat of paint. Take care to avoid scratching or marring the finish when sliding the loudspeaker onto the U-Bracket.

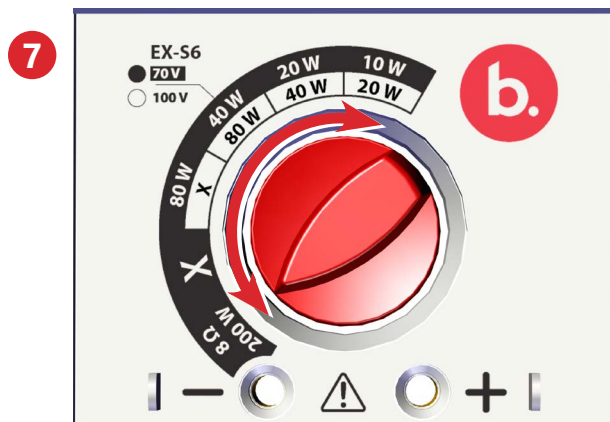


Mount the loudspeaker on the U-Bracket, rotate and secure angle
(Vertical and horizontal orientations shown)

Installation - U-Bracket (continued)

Adjust the Tap Switch

7. The tap switch should be adjusted before you attach the ClickPlug to the loudspeaker. Rotate the switch to the desired setting (Figure 11).



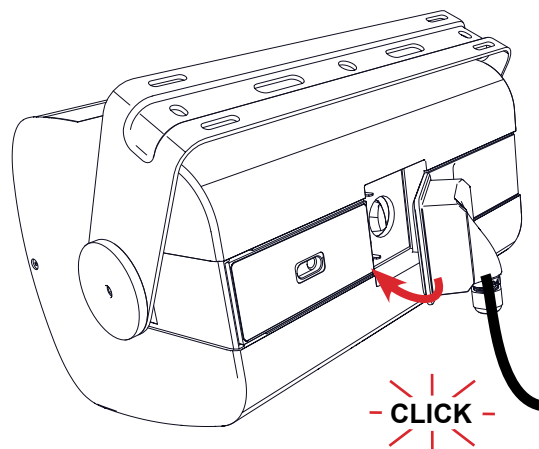
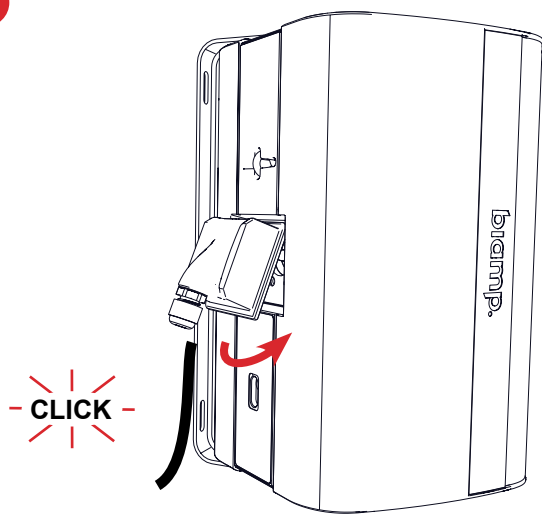
Attach the ClickPlug

8. Insert the wired ClickPlug into the opening with the plug top (or side) into the indent under the safety cable loop first, then "click" it into place by pushing it against the latch (Figure 12) until it is fully seated. The general orientation of the ClickPlug should be with gland nut pointed down (exception noted at right). It cannot be mounted with the gland nut pointed toward the safety loop. **IMPORTANT:** The fit is very tight; press on the raised portion of the ClickPlug rather than the gland nut when inserting it.



CAUTION: The ClickPlug fit is very tight and is difficult to remove, especially if it is oriented toward the side of the unit. Avoid attaching the ClickPlug until the speaker is fully installed. If the unit is installed outdoors or in a damp location make sure a cable drip loop is utilized to prevent any moisture from migrating into the gland nut.

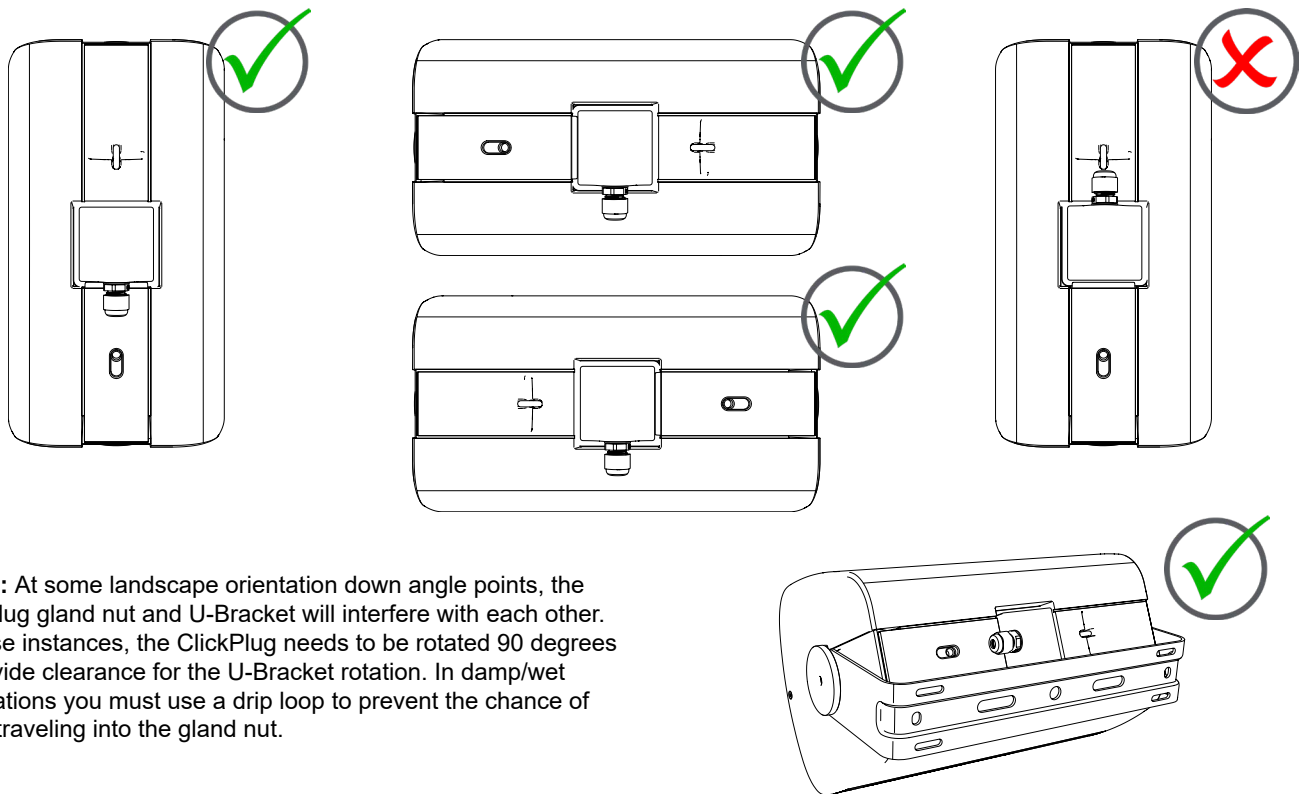
8



Attach ClickPlug

Installation - U-Bracket (continued)

The ClickPlug should be oriented as shown below. It can not be installed upside-down (Figure 13).



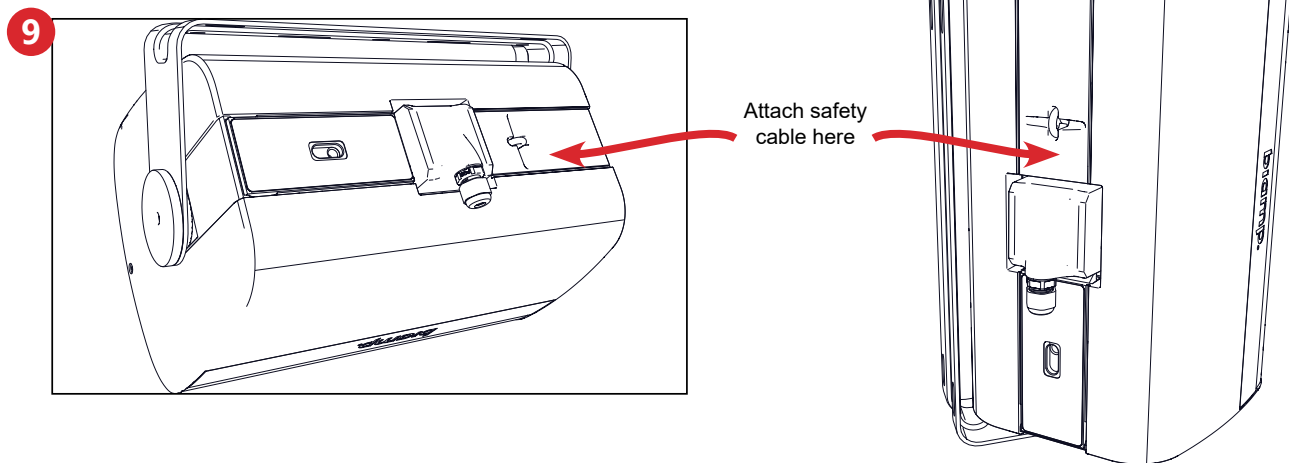
NOTE: At some landscape orientation down angle points, the ClickPlug gland nut and U-Bracket will interfere with each other. In these instances, the ClickPlug needs to be rotated 90 degrees to provide clearance for the U-Bracket rotation. In damp/wet applications you must use a drip loop to prevent the chance of water traveling into the gland nut.

ClickPlug orientation

Attach Safety Cable

9. Secure the loudspeaker with a safety cable attached to the loop on the rear (Figure 14). The cable should be mounted to a secondary mounting point close to the U-Bracket to avoid any kinetic force if the mount should fail.

NOTE: The installer is responsible for sourcing the proper safety cable to meet all applicable local building codes and standards.



Attach safety cable

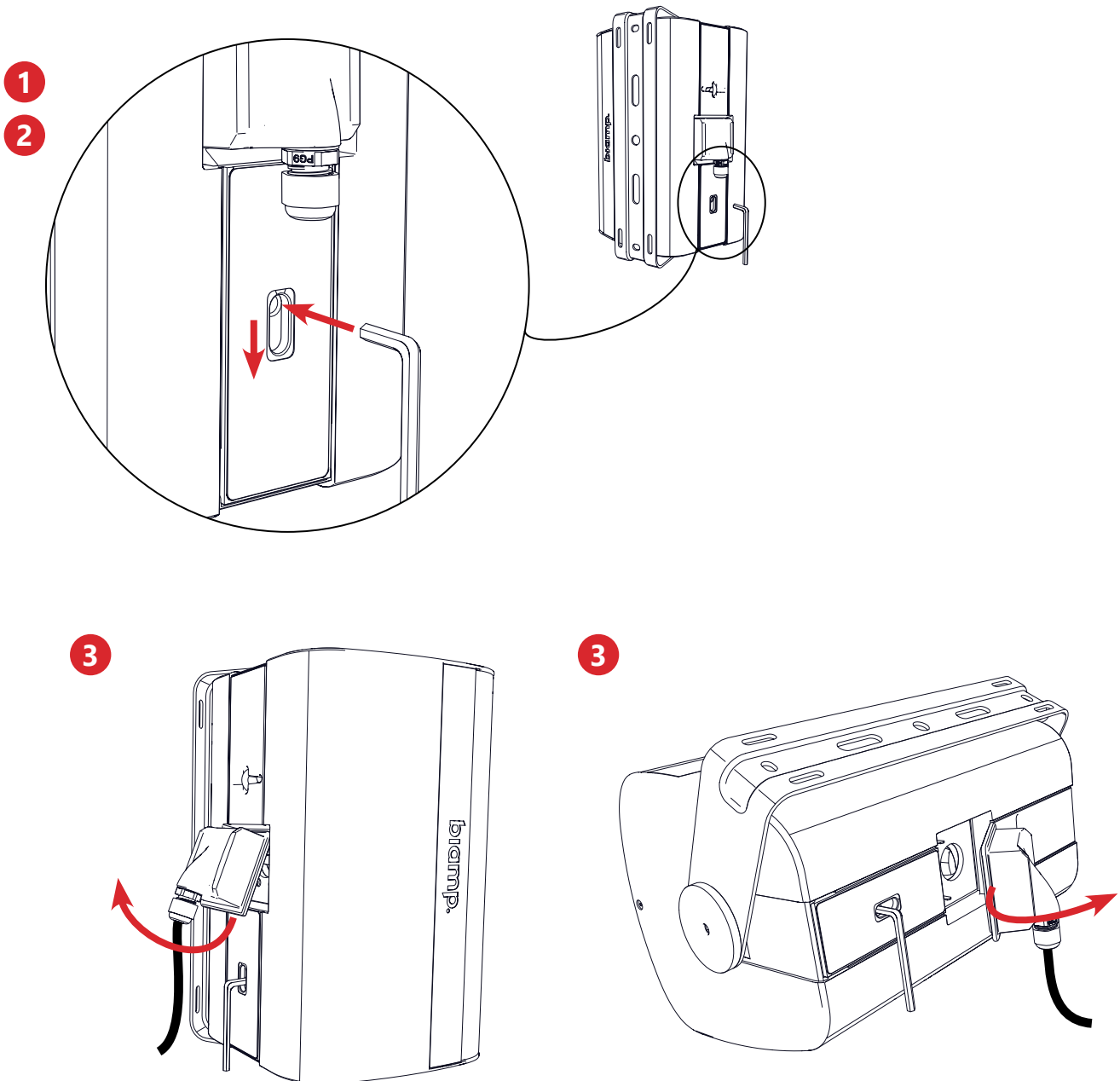
CLICKPLUG REMOVAL

The ClickPlug can be removed from the loudspeaker as follows:

1. Insert a 5mm hex wrench into the hole within the slot in the middle of the label on the rear panel (Figure 12a).
2. Pull down (or toward the base) and the latch will release and remain in the "unlocked" position until the ClickPlug is removed. If the loudspeaker is mounted close to a surface you can loosen the end knobs and rotate the speaker to access the ClickPlug. Take care to note the original position so it can be restored once the ClickPlug is back in place. See Caution at right.
3. The ClickPlug must be pulled away from the latch side first. Do **NOT** use a tool to remove it as you will mar and/or deform the plastic.



CAUTION: The ClickPlug fit is tight and is difficult to remove, especially if oriented toward the side of the unit. Avoid attaching the ClickPlug until the speaker is fully installed. If the unit is installed outdoors or in a damp location make sure a cable drip loop is utilized to prevent any moisture from migrating into the gland nut.



END CAP COVERS

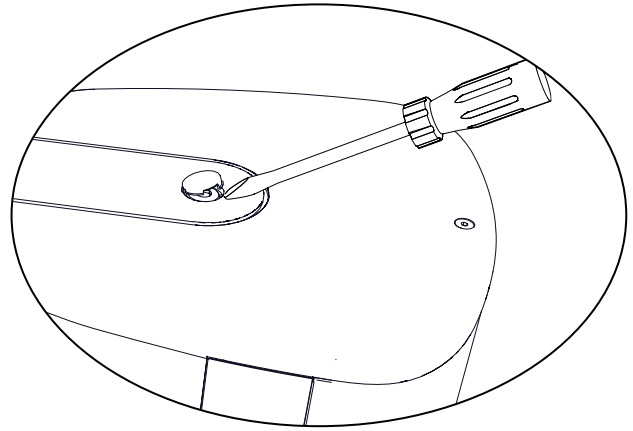
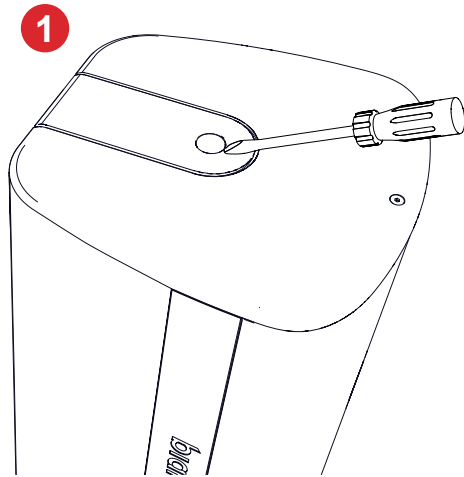
The end cap covers can be removed if you purchased a unit with a ClickMount pan-tilt bracket and need to change it to a U-Bracket mount with the addition of an accessory UB kit. If you purchased a UB model and need to change to a pan-tilt bracket, the covers can be reattached starting at Step 5.

Tools Needed

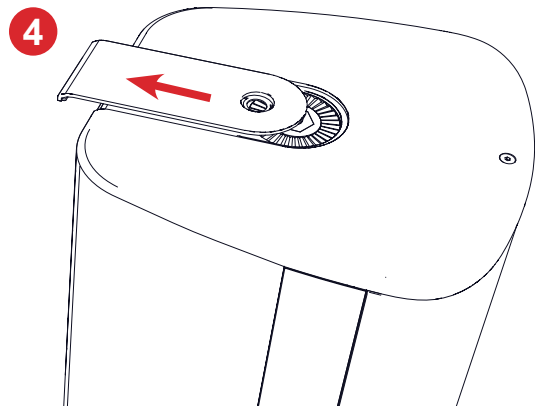
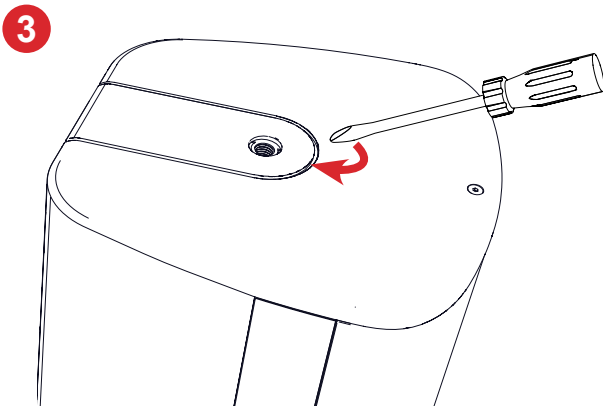
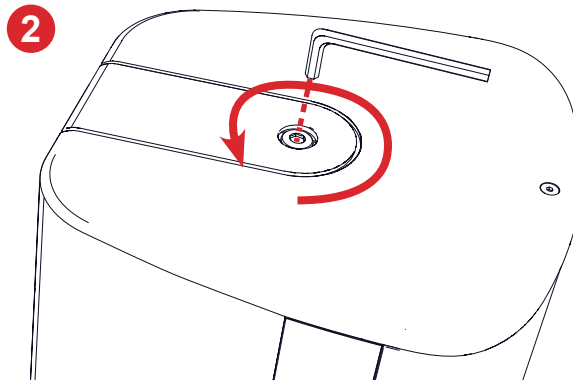
- Small flat screwdriver
- 6 mm hex wrench

Cover Removal (Figure 16)

1. Insert a small screwdriver under the front end of the circular cap. Pry up and remove the cap.



2. Use a 6mm hex wrench to remove the cover retention nut.
3. Use a small screwdriver to lift the front end of the cover.
4. Slide cover off, and repeat for the other cover



End Cap Covers (continued)

Cover Attachment (Figure 17)

5. Slide cover on and seat over the threaded insert.
6. Screw on the cover retention nut with the 6mm hex wrench.
7. Cover the nut with the small cap - insert the rear tabs first, then push down the front to fully seat.

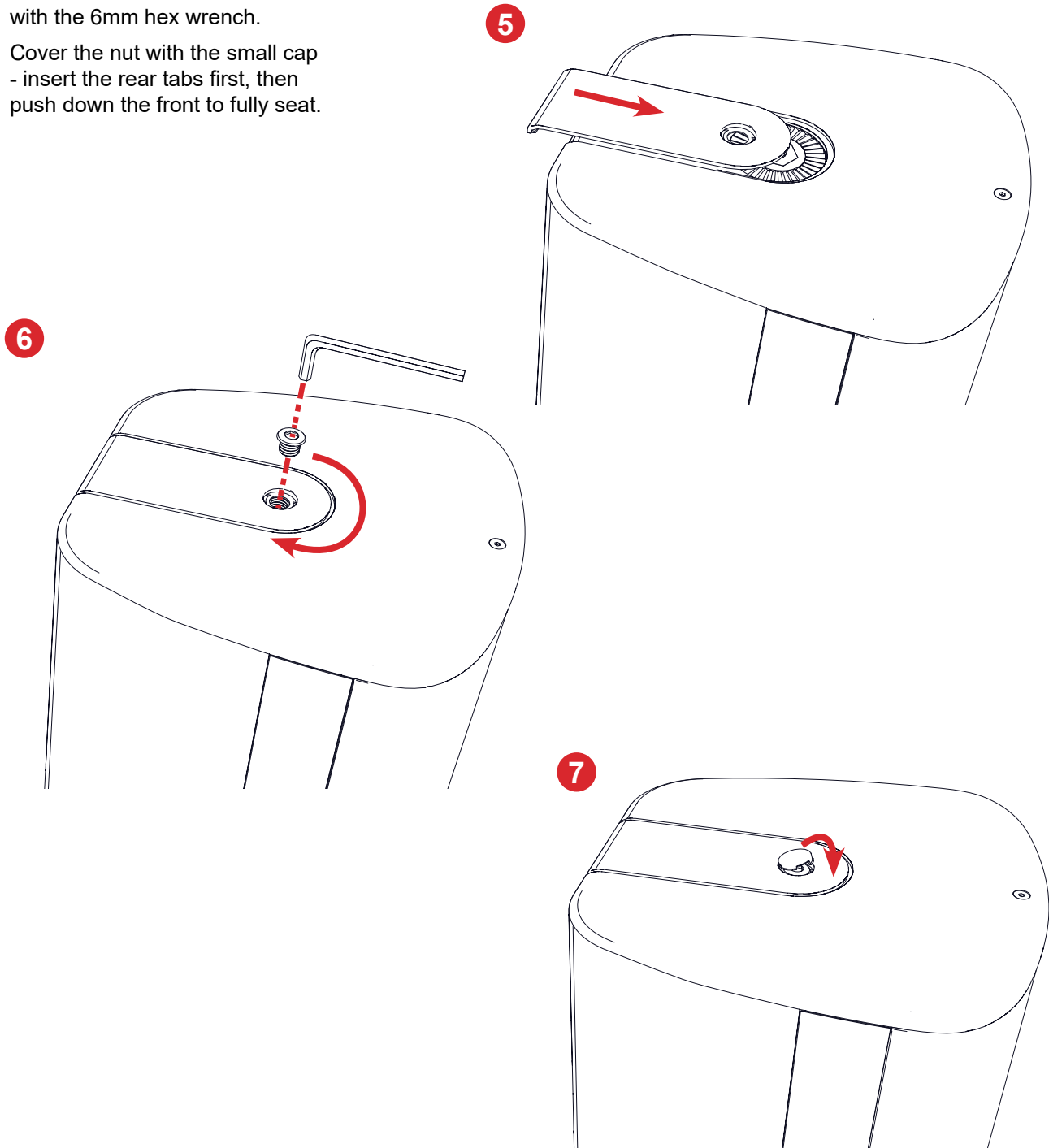


Figure 17. Attach end cap covers

EYEBOLT SUSPENSION (OPTIONAL)

EX loudspeakers can be suspended by a single shouldered eyebolt and have the angle adjusted with a secondary cable attached to the safety cable location. (Figure18) ***This is only applicable for static indoor mounting locations.*** The UB option must have been ordered for this, since it contains the ClickPlug for wiring.

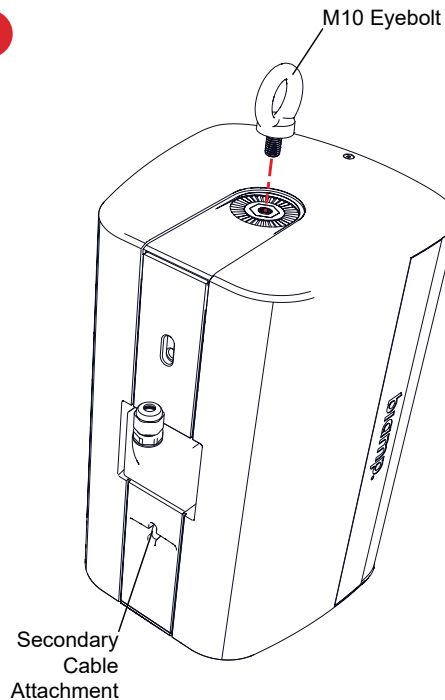
Tools/Hardware Needed

- Rated M10 Eyebolt shaft length 0.75 (20mm)
- 5 mm hex wrench (latch release)

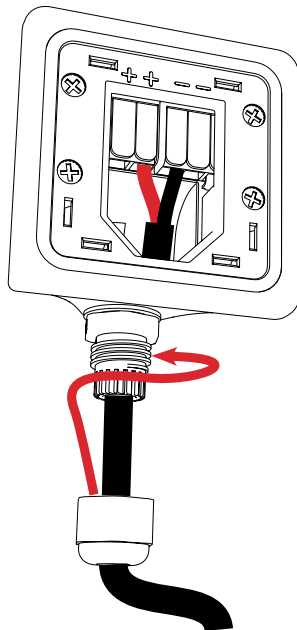
WARNING: The wiring to the ClickPlug must ***NOT*** be weightbearing - it will add stress to the latch mechanism and may affect wiring connections to the unit.

1. If necessary, remove the U-Bracket from the loudspeaker. Screw the eyebolt into the **BOTTOM** threaded insert until fully seated. The loudspeaker will hang upside-down to have the secondary cable attachment below the ClickPlug.
2. Wire the ClickPlug per instructions on [page 11](#). Click it into place with the gland nut aiming up (toward the rear safety label). Make sure it is fully seated and the latch is engaged.
3. Suspend loudspeaker using two (2) cables; primary support from the eyebolt and secondary from the back to refine the aiming angle. ***Never use the safety point as a primary load-bearing mounting point.***

1



2



3



Figure 18. Eyebolt suspension

PAINTING INSTRUCTIONS

The Desono EX cabinets have a light paint coat over the plastic material. They accept almost any type of latex or enamel (oil based) paint. We recommend application of two light coats. If the grille is to be painted, it must be removed to be painted (spray paint only) and then reinstalled.

IMPORTANT: Do not remove the scrim material from the grille. It is treated with a hydrophobic compound to repel moisture.

Process

If the grille will not be painted, fully mask it and proceed to Step 2.

1. Carefully remove the screws at the top and bottom of the cabinet. Pull the grille away from the cabinet. Take care not to bend the tabs or the grille (Figure 19).

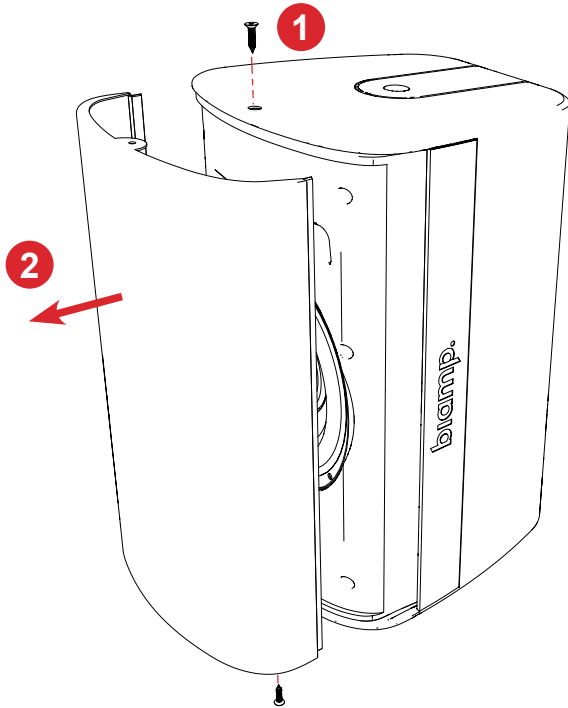


Figure 19. After removing the screws, carefully pry off the grille



CAUTION: NEVER use abrasives, gasoline, kerosene, acetone, methyl ethyl ketone (MEK), paint thinner, harsh detergents or other chemicals on the loudspeaker. These chemicals and agents may permanently damage the finish. Some are also toxic and highly flammable.

IMPORTANT: Take care not to bend or damage the grille on removal or reinstallation.

IMPORTANT: Blocking the grille holes with paint or getting any paint on the drivers or internal parts will affect loudspeaker performance and void the warranty.

IMPORTANT: For applications where UL1480A or EN54-24 certification is required, ensure that relevant information on the rear label is not painted over.

You will need:

- Removable masking tape or painter's tape
- Machinist scribe tool or knife
- Phillips head screwdriver

Useful Tips

Use a sharp knife to trim the masking material close to the edges of the masked areas.

Painting Instructions (continued)

Loudspeaker preparation

2. Fully mask the full (black) loudspeaker face so that all internal components will not receive any paint. Also mask off the rear input panel (area around the tap switch) the retaining latch for the mounts, the rear label and latch access (Figure 20). For UB models, the center mounting holes and teeth on both ends must also be masked. We advise against using conventional masking tape and NEVER use duct tape: these kinds of tape generally leave adhesive residue that can be difficult to remove and that may actually cause damage. Painter's or other low-adhesive tape is best.
3. Clean the grille assembly and the loudspeaker cabinet by rubbing them with a lightly dampened cloth. Do not use abrasives such as sandpaper or steel wool.
4. After cleaning, apply two or more thin coats of either latex or oil-based paints. Latex paint will adhere better if an oil-based primer is used first. Paint is best applied by spraying it on, but the enclosure may be brushed with light coats.
5. To paint the grille, spray paint with 2 light coats – enough to cover grille but NOT clog any of the holes. You can blow air through the back of the grille to ensure that there are no paint particulates on the grille cloth. Let all components dry completely before reassembly.
6. Remove all of the masking materials and reassemble. **IMPORTANT:** The grille must be reinserted as carefully as it was removed - insert the sides into the cabinet with the top and bottom tabs fitting in the channel in the cabinet face. Do not push on the center of the grille as it may deform or not seat properly and adversely affect performance. Re-secure the grille with the screws in the top and bottom of the loudspeaker (Figure 21).

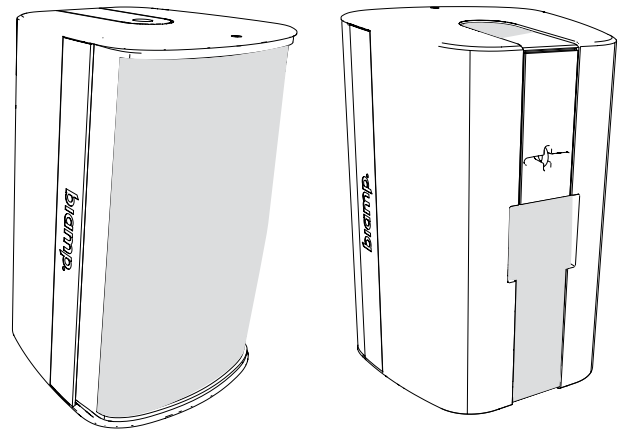


Figure 20. Mask off the full black face, all connection points, input panel, rear label, and latch access

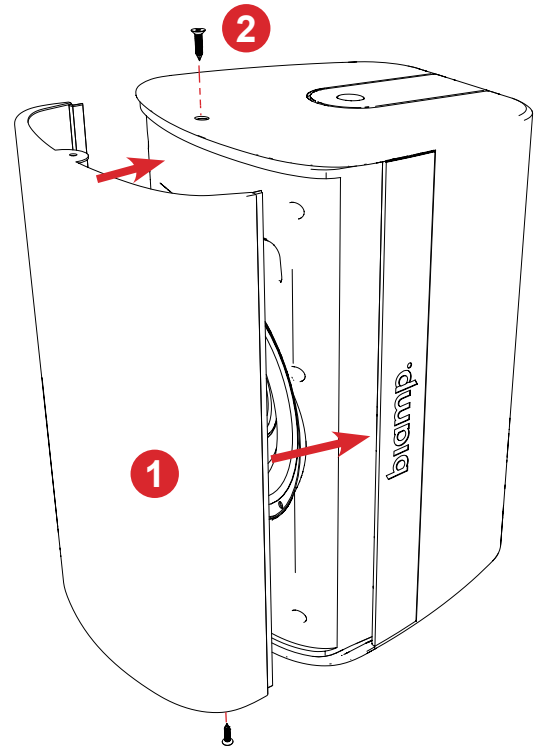
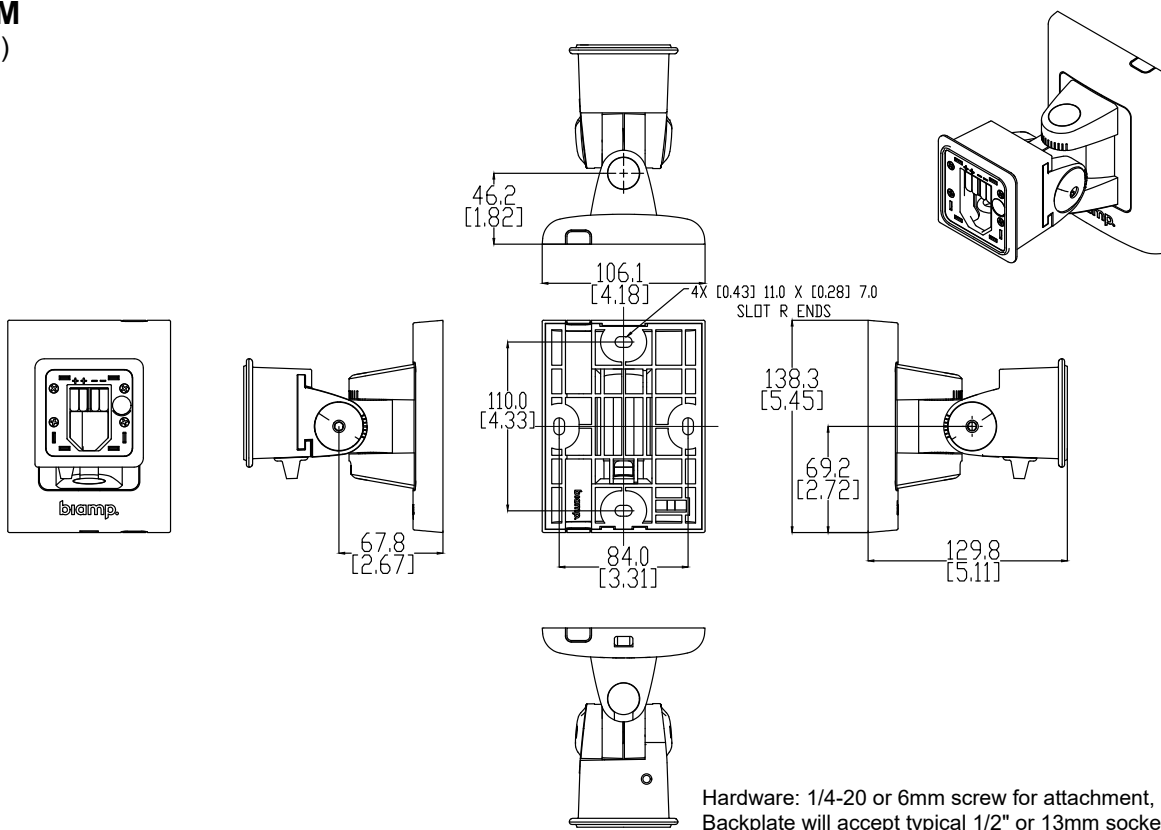


Figure 21. Reassemble the loudspeaker, carefully insert grille tabs and sides into the cabinet then re-install screws.

TECHNICAL DRAWINGS - CLICKMOUNT PAN-TILT BRACKET

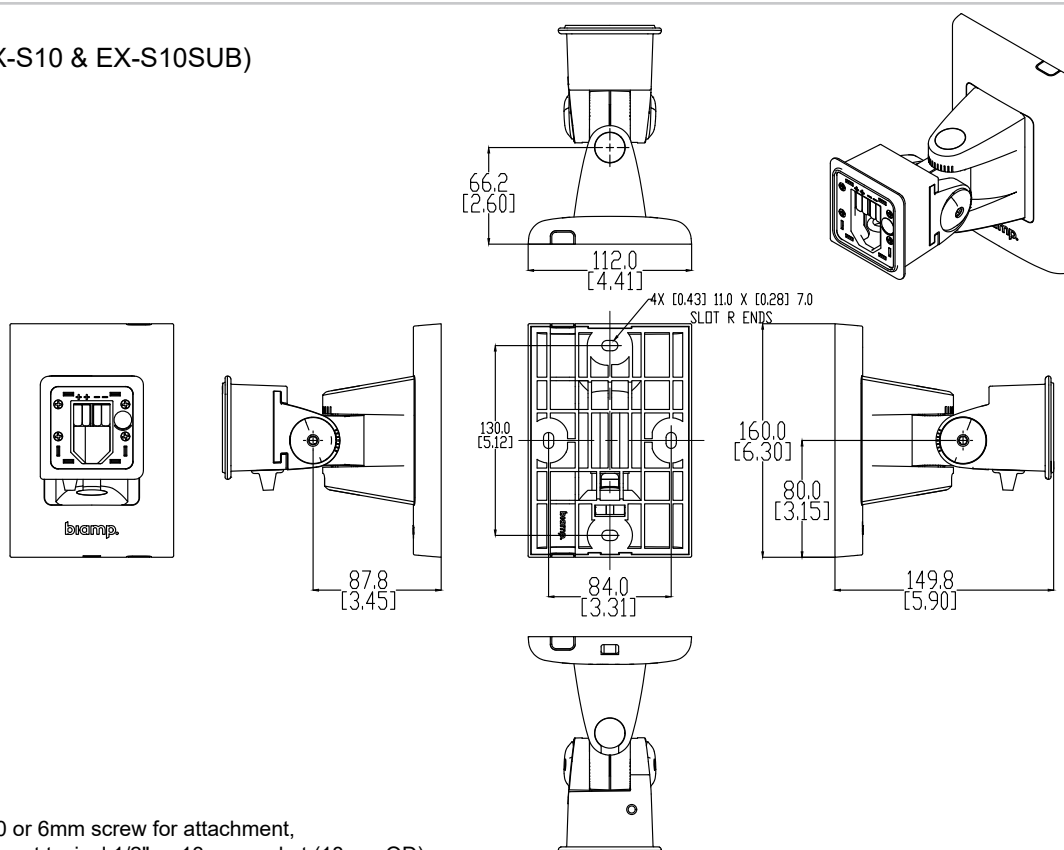
CMX2-SM

(fits EX-S6)



CMX2-LG

(fits EX-S8, EX-S10 & EX-S10SUB)

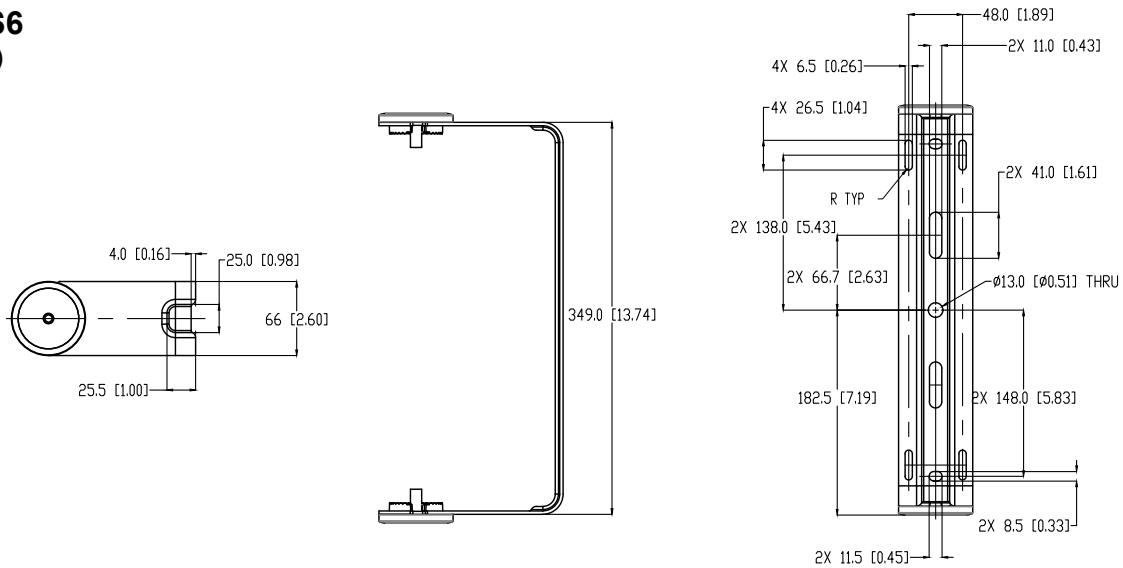


TECHNICAL DRAWINGS - U-BRACKETS

EXUB2 models have the b-dot  marked ClickPlugs. The U-Bracket dimensions are the same as the original EXUB-S# brackets.

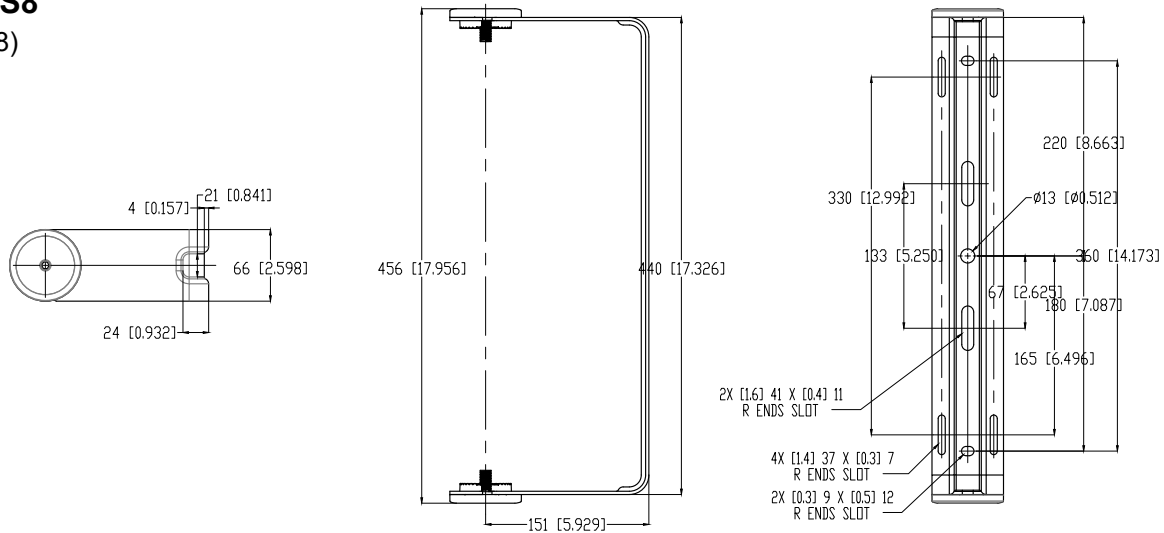
EXUB2-S6

(fits EX-S6)



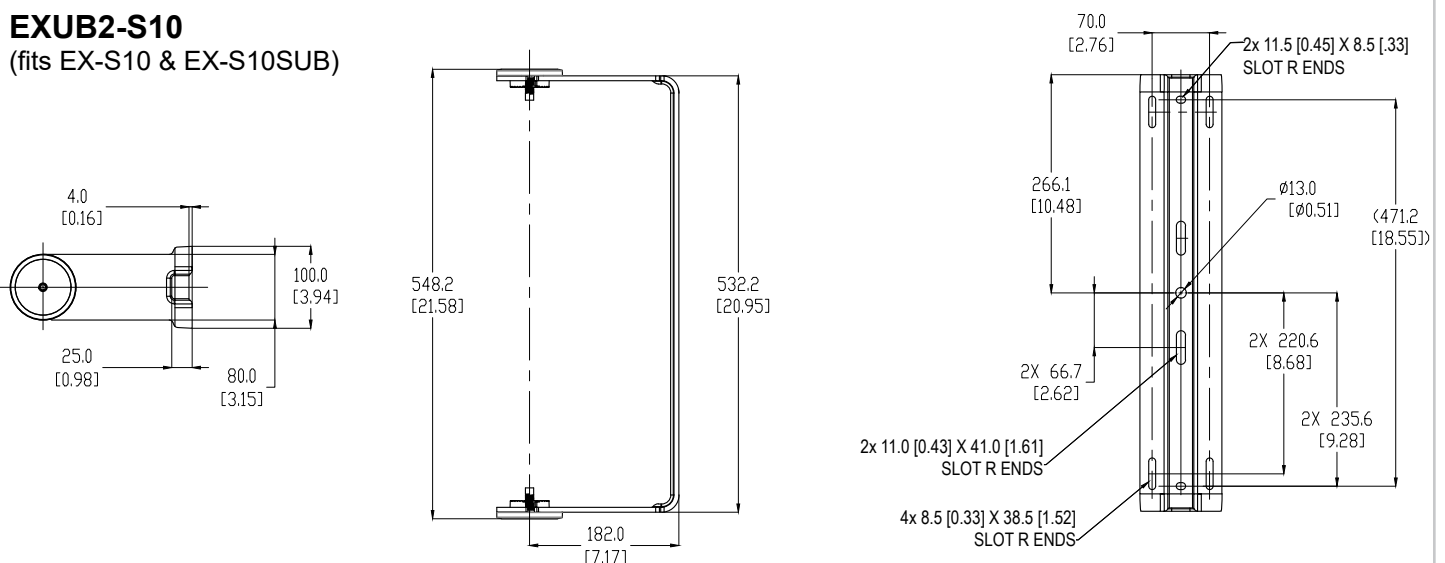
EXUB2-S8

(fits EX-S8)



EXUB2-S10

(fits EX-S10 & EX-S10SUB)



EN54-24 CERTIFICATION

The EX-S6, EX-S8, and EX-S10 models are EN54-24 compliant and meet the following standards for EN54-24 TYPE B Loudspeakers for Voice Control and Indicating Equipment:

Conforms to UL STD 1480A

Certified to CSA STD C22.2# 62368-1

EN54-24 Certification Report: 1438-CPR-0843

Performance can be reviewed by contacting Biamp's compliance department, and referencing DoP: EX-S-001.



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Safety & Compliance: biamp.com/compliance



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W: www.biamp.com

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