



ALA-C1

Acoustic Line Array Loudspeaker System

User Manual



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Introduction

The **Apogee ALA-C1 Acoustic Line Array Loudspeaker** is a high-fidelity 70V/8-ohm, passive, 2-way fixed column, all-weather loudspeaker. It provides superb speech enhancement and music reproduction for small- to medium-sized venues, such as school and civic auditoriums, community theaters, lecture halls, and houses of worship. This system's design offers broad horizontal dispersion (140-degrees) and focused vertical dispersion (25-degrees), which is ideal for uniform side-to-side coverage, while minimizing ceiling and floor reflections that could degrade intelligibility. Mounting is via an included bracket that allows for vertical down tilt of 0-10-degrees.

Package Contents

The ALA-C1 System Package contents include:

- **One (1) ALA-C1 Acoustic Line Array Loudspeaker User Manual**
- **One (1) ALA-C1 Acoustic Line Array Loudspeaker with a pre-installed sliding mounting bracket**
- **One (1) ALA-C1 Wall Mount Kit**

IMPORTANT SAFETY INSTRUCTIONS

Always follow these safety precautions when using or installing the ALA-C1 Loudspeaker and accessories:

- Read and keep these instructions.
- Heed all warnings.
- Follow all instructions, particularly those pertaining to rigging, mounting, hanging, and electrical connections.
- Only use accessories that are specified and approved by Bogen.

Mounting Instructions

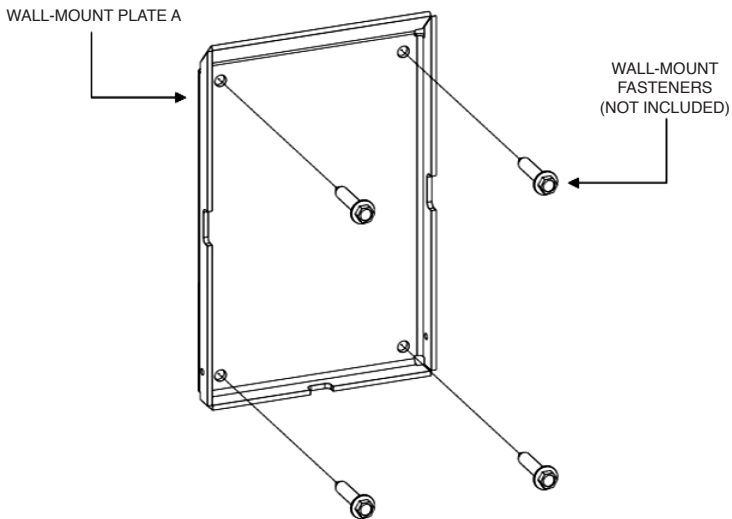


Figure 1, Installing Wall-Mount Plate A

Mounting is via an included wall-mount plate set that allows for vertical down tilt of 0-, 5-, or 10-degrees. The ALA-C1 Loudspeaker has a pre-installed sliding mounting bracket. The mounting bracket slides freely along a built-in bracket channel on the rear of the speaker enclosure.

MOUNTING INSTRUCTIONS (cont'd):

1. Attach the **Wall-Mount Plate A** to the desired location on the wall using the proper fasteners.

NOTE: *Wall-Mount fasteners are NOT INCLUDED as mounting requirements vary depending on the wall structure or surface.*

Screws should be used in each of the four holes on the **Wall-Mount Plate A** as shown in **Figure 1** to ensure that the plate supports the entire weight of the loudspeaker. The screws and the wall material/supporting structure must support the entire speaker weight. Failure to do so could lead to an unsafe mounting.

2. Slide the mounting bracket to the desired position on the back of the speaker. The mounting bracket can be slid freely along the back of the speaker enclosure. To prevent top-heavy installation, we recommend installing the mounting bracket as high on the speaker as possible while still allowing you to achieve the desired install angle.

NOTE: *For 0- or 5-degree tilts, use the full range of the speaker enclosure. For a 10-degree tilt, we recommend sliding the bracket down to the built-in stop.*

3. Use the four M4.7 self drilling screws and four M5 lock washers to secure the mounting bracket to the speaker. Tighten each screw to 24-26 in-lbs.

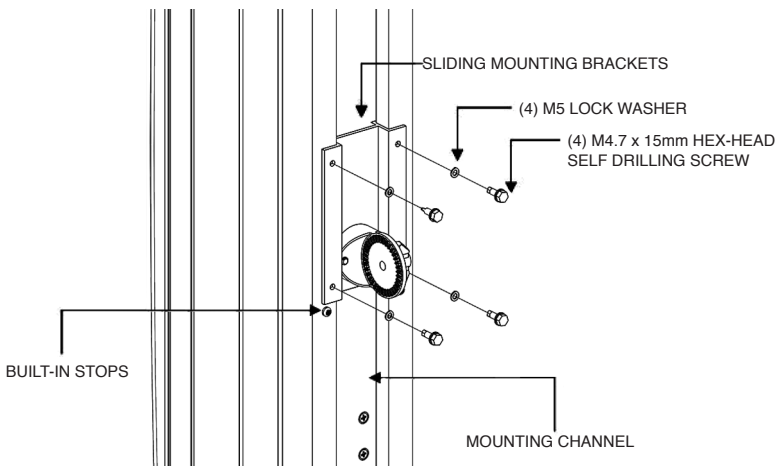


Figure 2, Securing Sliding Mounting Bracket

MOUNTING INSTRUCTIONS (cont'd):

4. Select the desired tilt knuckle.

NOTE: Two different tilt knuckles are included to provide the vertical focus angle or optimal coverage. Use the tilt knuckle with sticker A for a 0-degree or a 10-degree angle. Use the tilt knuckle with sticker B for a 5-degree angle. (See Figure 3.)

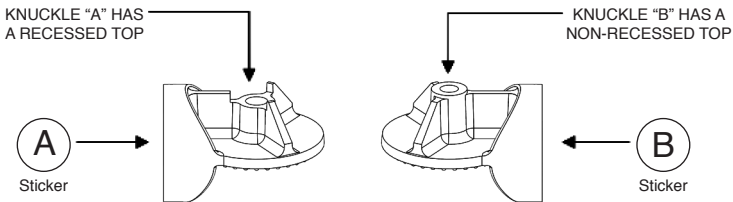


Figure 3, Selecting Tilt Knuckle

5. Bolt the selected tilt knuckle to the **Wall-Mount Plate B** using the three M6 x 14mm screws and lock washers included in the mounting kit. Tighten each screw to 40-45 in-lbs. (See **Figure 4.**)

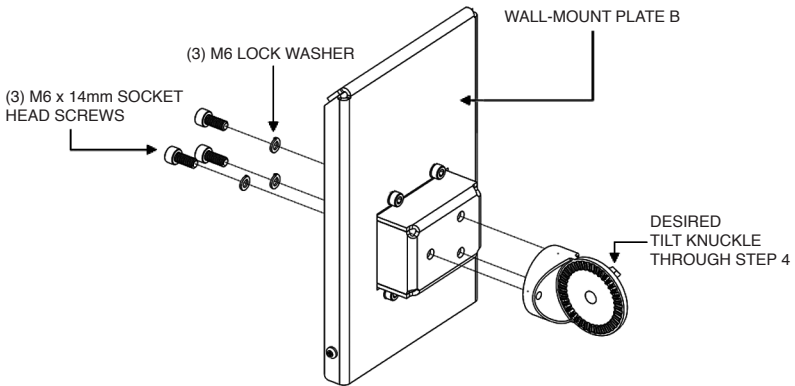


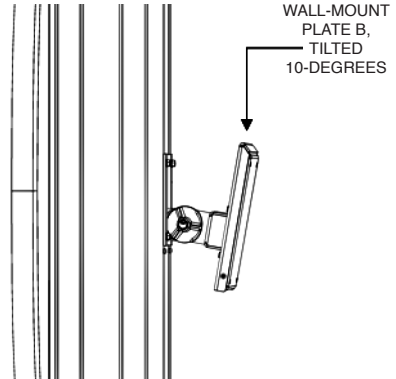
Figure 4, Installing Tilt Knuckle to Wall-Mount Plate B

NOTE: Verify that the screws are securely tightened to the torque specs provided. Failure to do so may result in an unsafe installation.

MOUNTING INSTRUCTIONS (cont'd):

6. Attach the two knuckle pieces together.

To have 0-degree installation, make sure the **Wall-Mount Plate B** is parallel to the speaker enclosure. Rotate the top tilt knuckle one step clockwise to obtain a 10-degree tilt. (See **Figure 5**.)



7. Secure both knuckle pieces using one M8 hex head screw and M8 lock washer. Tighten the screw to 95-105 in-lbs.

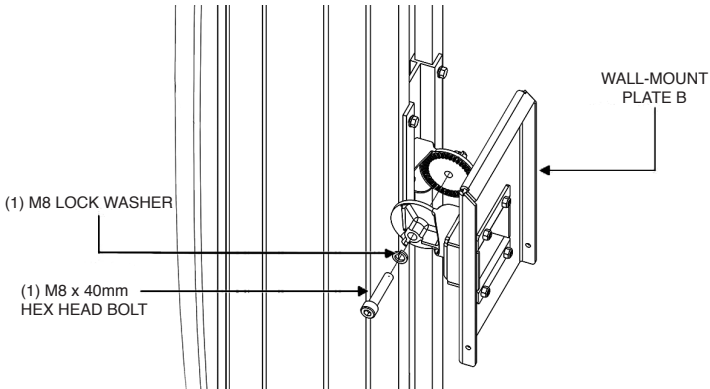


Figure 6, Securing Tilt Knuckle

NOTE: Make sure all parts are assembled in the order shown in Figure 6.

WARNING

All fasteners must be securely tightened to keep the speaker in position and ensure it is securely mounted. Failure to follow this instruction may result in property damage, injury, death, and/or legal liability to you and your company.

MOUNTING INSTRUCTIONS (cont'd):

8. Arrange the speaker so that **Wall-Mount Plate B** slides over the top of **Wall-Mount Plate A**. The folded edges on the top side of the plates should line up.
9. Align the screw holes on the sides of Wall-Mount Plate A with those on Wall-Mount Plate B and secure them using two M4 sheet metal screws with lock washers. Tighten each screw to 18 in-lbs. (See **Figure 7**.)

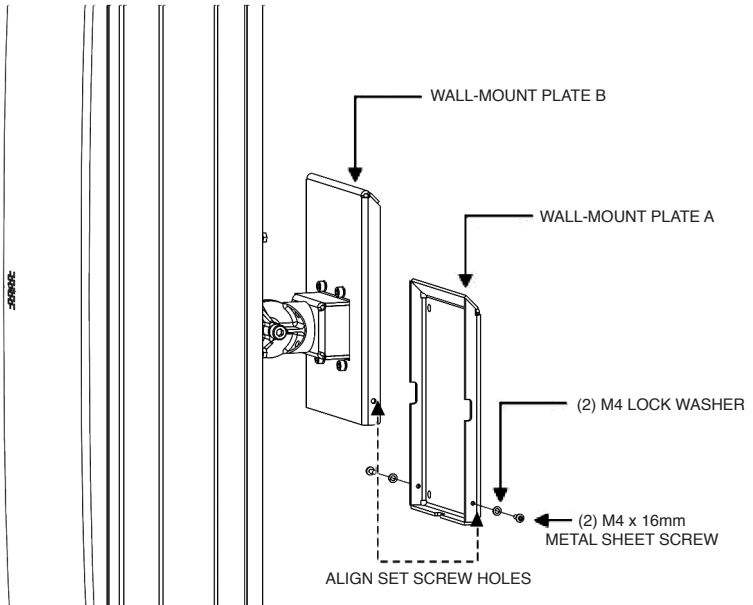



Figure 7, Hanging Loudspeaker

Rigging Installation




WARNING

The loudspeaker described in this manual is designed and intended to be mounted using a variety of rigging hardware, means, and methods. Severe injury and/or loss of life may occur if the speaker is improperly installed. Only trained and qualified personnel should install the ALA-C1 loudspeaker. We recommend that a licensed and certified professional structural engineer approve the mounting plan.



WARNING

All rigging fittings must be fully tightened and secured. Any missing fasteners will compromise the structural integrity of the enclosure and constitute a safety hazard. Do not suspend this loudspeaker unless all fasteners are securely in place.




A safety cable (supplied) must be used whenever an ALA-C1 is mounted using the supplied mounting bracket. The safety cable must be secured to a suitable load-bearing point (not supplied) on the wall or ceiling. After final positioning of the loudspeaker, make sure that the cable is taut to minimize shock load in the event of bracket failure.

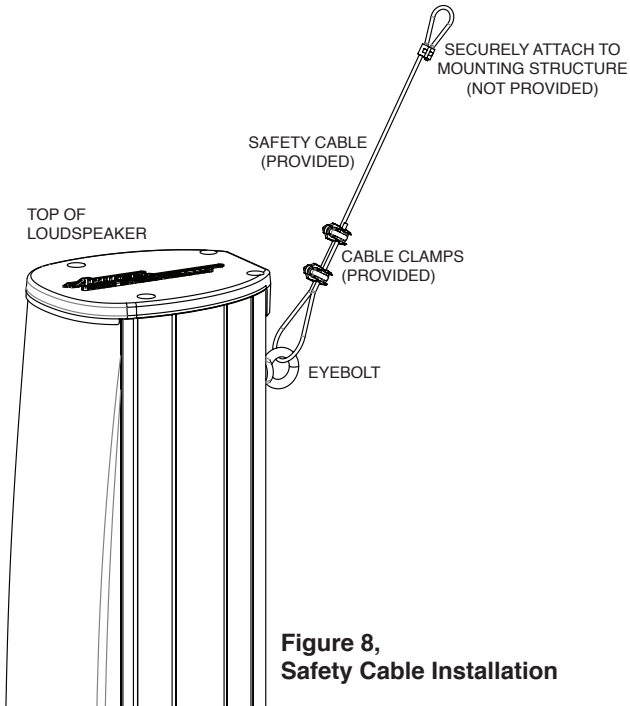


WARNING

The working load should never be exceeded. Failure to follow this instruction may result in property damage, injury, death, and/or legal liability to you and your company.



RIGGING INSTALLATION (cont'd):



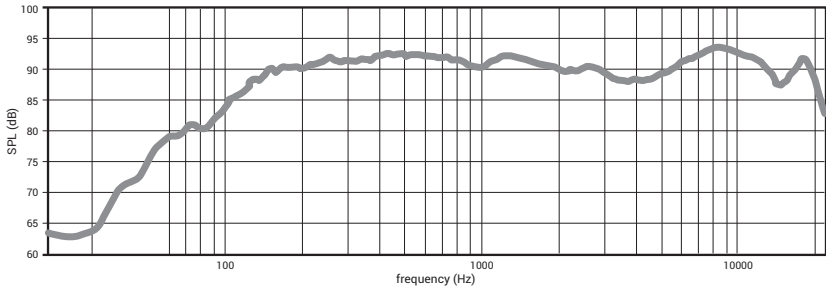
**Figure 8,
Safety Cable Installation**

1. Secure the fixed loop of the safety cable to the wall using the appropriate user-provided bolt or hook (See **Figure 8.**)
2. Thread the cable through the eyebolt that is pre-installed on rear of the speaker.
3. Adjust the free cable as needed to remove slack and then secure in place using the cable clamps that are provided.

WARNING

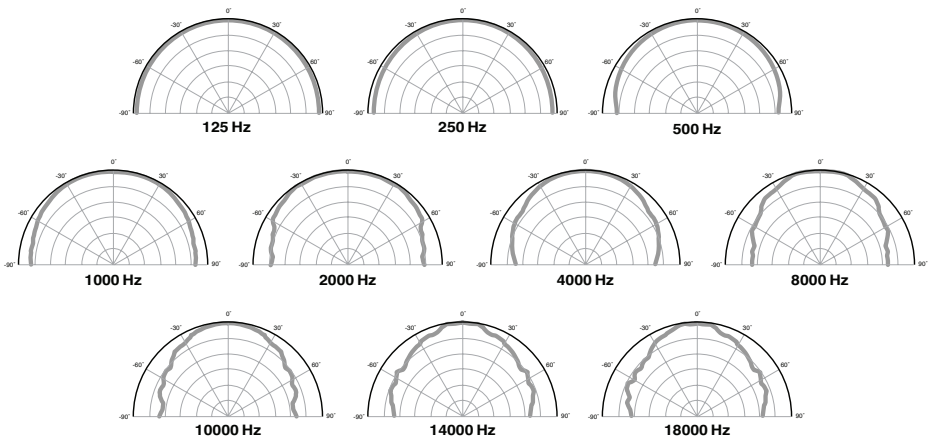
Cable clamps must be securely tightened. Failure to do so may result in property damage, injury, death, and/or legal liability to you and your company.

Frequency Response



Measured in a free-field environment using swept one-third octave input.

Polar Measurements



All polar measurements obtained in a free-field environment at 5° increments. (6 dB/divisions, normalized)

Electrical Connection Wiring Guide

BLACK	Common
BLUE	8 Watts
GREEN	16 Watts
YELLOW	32 Watts
GRAY	64 Watts
BROWN	128 Watts
RED	8-Ohm Input
WHITE	Connect To Red for 70V; Disconnect for 8-Ohm

Technical Specifications

Dispersion (1M on axis):	140° H x 25° V
Frequency Response (1M on axis):	150Hz - 18kHz (+/- 3 dB)
Sensitivity (1W @ 1M):	93dB
Max. Power Handling (@8-Ohms):	400W Continuous/800W Peak
Max. SPL (@1M):	118dB Continuous/121dB Peak
70V Transformer Taps:	128W, 64W, 32W, 16W, 8W @ 70V
Inputs:	8-conductor (stripped & tinned) 9.8' (3-meter) long pig-tail cable included
Mounting:	Vertically adjustable (0°, 5° and 10°) ball bracket and safety cable included
Dimensions:	43" x 6" x 8.6" (110 X 15 X 22.6 cm)
Weight:	46.8 lbs (21.23 kg)
Colors:	Black (ALA-C1B) , White (ALA-C1W)

Limited Warranty; Exclusion of Certain Damages

The Apogee ALA-C1 Acoustic Line Array Loudspeaker System is warranted to be free from defects in material and workmanship for 5 (five) years from the date of sale to the original purchaser. Any part of the product covered by this warranty that, with normal installation and use, becomes defective (as confirmed by Bogen upon inspection) during the applicable warranty period, will be repaired or replaced by Bogen, at Bogen's option, provided the product is shipped insured and prepaid to the Bogen Factory Service Department: 4570 Shelby Air Drive, Suite 11, Memphis TN 38118, USA. Repaired or replacement product will be returned to you freight prepaid. This warranty does not extend to any of our products that have been subjected to abuse, misuse, improper storage, neglect, accident, improper installation or have been modified or repaired or altered in any manner whatsoever, or where the serial number or date code has been removed or defaced.

THE FOREGOING LIMITED WARRANTY IS BOGEN'S SOLE AND EXCLUSIVE WARRANTY AND THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY. BOGEN MAKES NO OTHER WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED AND EXCLUDED TO THE MAXIMUM EXTENT ALLOWABLE BY LAW. Apogee's liability arising out of the manufacture, sale or supplying of products or their use or disposition, whether based upon warranty, contract, tort or otherwise, shall be limited to the price of the product. **IN NO EVENT SHALL BOGEN BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS, LOSS OF DATA OR LOSS OF USE DAMAGES) ARISING OUT OF THE MANUFACTURE, SALE OR SUPPLYING OF PRODUCTS, EVEN IF BOGEN HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR LOSSES.** Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from State to State.

Products that are out of warranty will also be repaired by the Bogen Factory Service Department. The parts and labor involved in these repairs are warranted for 90 days when repaired by the Bogen Factory Service Department. All shipping charges in addition to parts and labor charges will be at the owner's expense. All returns require a Return Authorization number. For most efficient warranty or repair service, please include a description of the failure.

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