

ALA-9

ACOUSTIC LINEAR ARRAY LOUDSPEAKER SYSTEM MANUAL



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Specifications subject to change without notice.
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Introduction

Thank you for purchasing Apogee Sound International products. By choosing Apogee's precision tools for professional audio, you have made an investment in superior quality products that will provide years of service with minimal care and maintenance.

You will find the ALA-9, the largest of our Linear Array Loudspeakers, to be the most efficient and elegant tool of its kind on the market today. Every aspect of the product has been optimized: efficient handling; truck packing; overall aesthetics; power output; pattern control; and sonic quality.

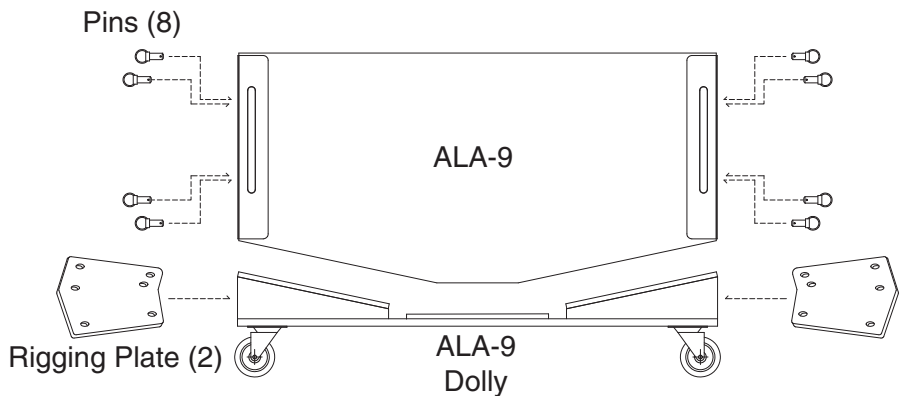
Whether installed permanently in larger venues or used in touring applications, the ALA-9 will prove to be a benchmark by which you rate all products.

Package Contents

Inside this shipping carton, you will find the following:

- ALA-9 User Manual
- ALA-9 Loudspeaker
- 8 Rigging pins (installed in the sides of the speaker)
- 2 Standard Rigging plates

Figure 1



Rigging System and Handling

The ALA-9 speakers are linked together with a series of rigging plates and aircraft pins. The standard rigging plate will allow you to link the speakers in a Tight-pack (10 deg.) or Flat-pack (0 deg.) configuration. A steel frame, internal to the speaker, connects all the pin locations together creating a steel rigging chain with the speaker suspended within the links.

The ends of the rigging plate that are inserted into the speakers are painted white so that the proper plate orientation can easily be determined. The white marking on one side wraps around the plate slightly, this indicates the bottom of the plate. The plate will always be used in the same orientation.

Figure 2

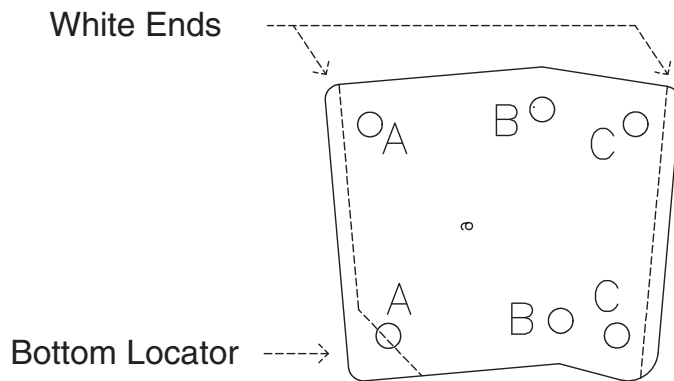
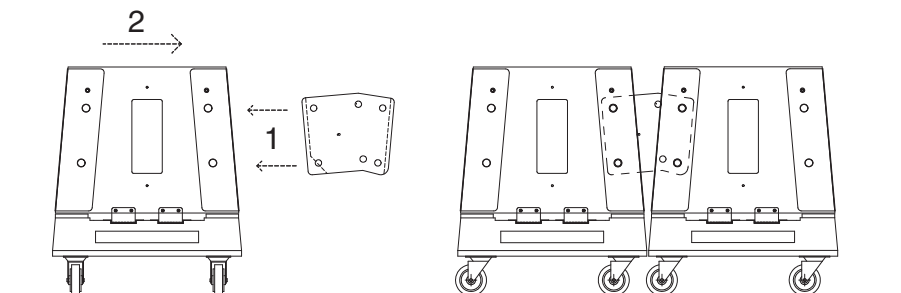
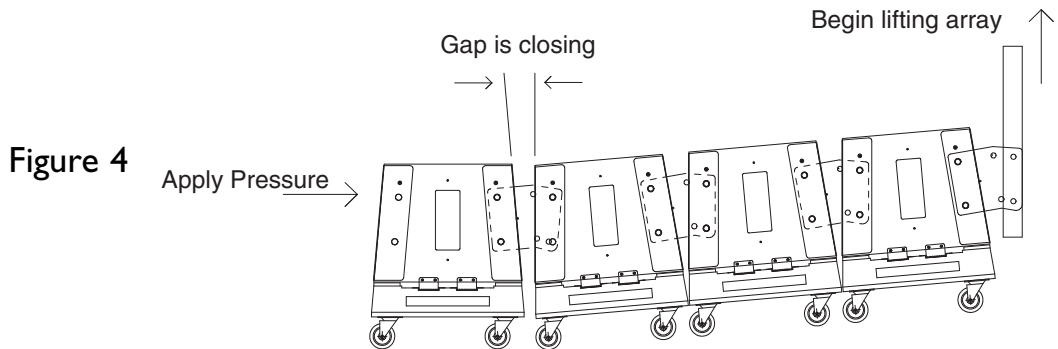


Figure 2 shows holes A, B, and C in the rigging plate. Holes "A" are always inserted and pinned first into a speaker. This speaker, with rigging plate attached, is pushed into the speaker in front of it. Holes "C" will line up in the second speaker and can be pinned if the Flat-pack configuration is desired. Figure 3 shows three speakers in Flat-pack configurations.

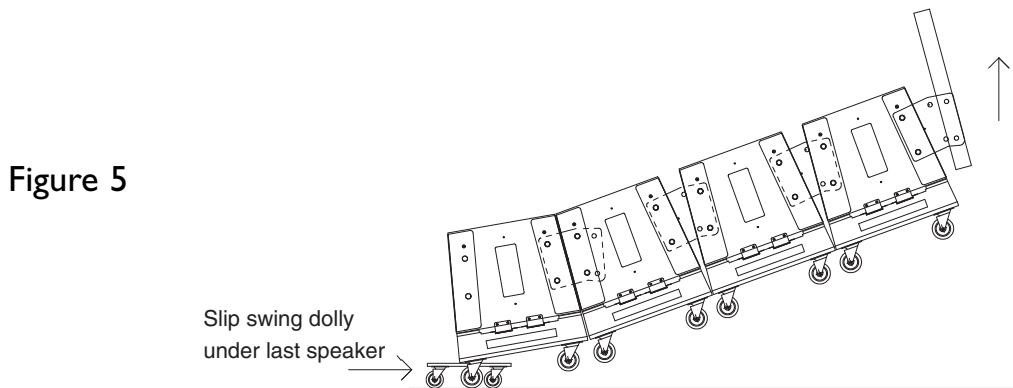
Figure 3



If Tight-pack configuration is desired, insert the rigging bars as before and then pin locations "A". Push the speaker, with its bars, into the speaker in front of it. Holes "B" will be pinned for Tight-pack. They will not line up with the holes at this point. You now need to begin lifting the array from the rigging frame (see *Figure 4*). As the array lifts, the gap between the last two speakers will begin to close. While the array is lifting, apply pressure on the last cabinet to insure that it is tight against the next cabinet in the array. When the last two cabinets have come together, holes "B" will align and the pins can be driven. This process is repeated for additional speakers.



When all the desired speakers have been added to the array, the swing dolly must be slipped under the last speaker (see *Figure 5*). As the array is lifted into the air, this small dolly will act as a pivot point for the bottom of the array.

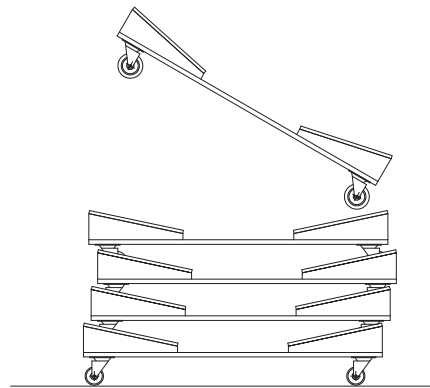


Dollies

The dollies should be removed from the front of the speakers as the array is lifting. The dollies are attached to the speakers by magnetics. There are no catches or latches. A sharp tug to the dolly will remove it from the speaker. Handholds are provided on the bottom of the dolly for this purpose. With the speaker in the air, the bottom of the dolly will be facing you. Grab the handholds and pull sharply.

As the dollies are removed, they can be stacked to minimize the floor space they take up. When adding a dolly to the stack, tip the dolly to one side to align the wheels before stacking them as shown in *Figure 6*. The entire array of dollies can be put away by one person.

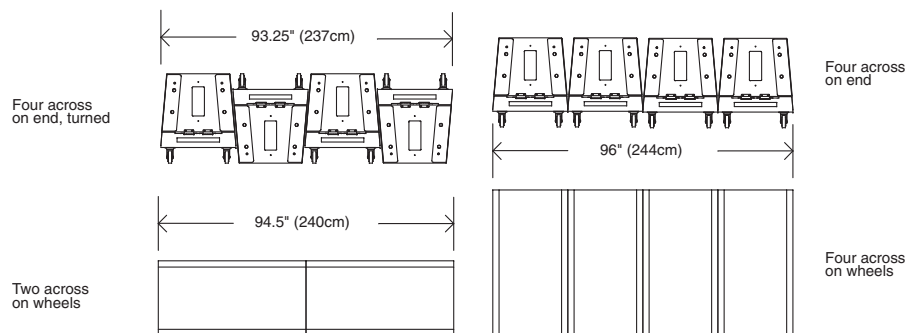
Figure 6



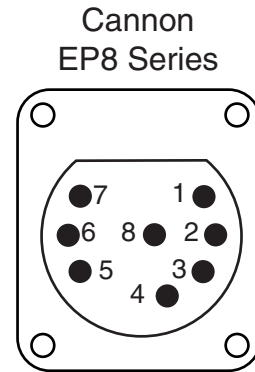
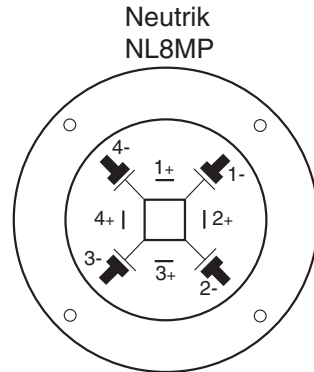
Truck Packing Dimensions

Figure 7 shows various common packaging configurations and the dimensions associated with them.

Figure 7



Cabinet Wiring and Amplification



| | NL-8 | | EP-8 | | Impedance | Power Handling |
|------|------|-----|------|-----|-----------|--------------------|
| | POS | NEG | POS | NEG | | Maximum Continuous |
| LF 1 | 1+ | 1- | 1 | 2 | 8 ohms* | 600 watts* |
| LF 2 | 2+ | 2- | 3 | 4 | 8 ohms* | 600 watts* |
| MF | 3+ | 3- | 5 | 6 | 4 ohms** | 600 watts** |
| HF | 4+ | 4- | 7 | 8 | 4 ohms** | 450 watts** |

Note: All connections to and within this speaker are "in phase".
 All MF drivers are wired in parallel.
 All HF drivers are wired in parallel.

- * Value represents the impedance and power handling of one driver.
- ** Value represents the total combined impedance and power handling.

Loop Through

You will find two connectors on the back of the ALA-9. They are wired in parallel. Either can be used as an input to the speaker. The second unused connector can be used to "Loop Through" the speaker and continue on to a second speaker. If this is done, two ALA-9 speakers will be driven by the same cable run.

WARNING:

Caution must be taken when using the Loop Through because the total impedance seen by the amplifier will be cut in half. This will create a 2-ohm load.

Product Specifications

DRIVER COMPLEMENT:

LOW FREQUENCY: Dual Apogee 15" (381mm) permanent magnet cone-type drivers are treated with Ferrofluid® and a waterproofing compound, providing resistance to moisture and enabling long-term stability of cone resonance and cone mass parameters

MID FREQUENCY: Dual Apogee 10" (254mm) permanent magnet cone-type drivers are treated with Ferrofluid and a waterproofing compound, providing resistance to moisture and enabling long-term stability of cone resonance and cone mass parameters

HIGH FREQUENCY: Three Apogee 2" (51 mm) throat compression drivers treated with Ferrofluid for greater power handling capability, lower distortion, and control of short-term impedance rise

INPUT CONNECTORS:

Neutrik™ NL8MP Speakon™ connectors standard; Cannon EP series and gas-tight barrier strips optional

ENGINEERING DATA:

FORMAT:

Tri-amped/Three-way/Horn-loaded MF and HF/Electronically-coupled

DISPERSION:

ALA-9W H: 90° x **V:** 10°

FREQUENCY RESPONSE (1M ON AXIS):

45 Hz to 17.5 kHz + 3 dB

MAX SPL (@1M):

136 dB cont./142 dB peak

PTML (PEAK TRANSIENT MECHANICAL LIMIT):

153 dB

SENSITIVITY (1 W @ 1 M):

LF: 100 dB SPL **MF:** 108 dB SPL **HF:** 112 dB SPL

NOMINAL IMPEDANCE:

LF: 8 ohms x 2 **MF:** 4 ohms **HF:** 4 ohms

MAX POWER HANDLING:

LF: 1200 W cont./ 4800 W peak

MF: 600 W cont./ 2400 W peak

HF: 450 W cont./ 1800 W peak

DIMENSIONS:

front: 47" (1194mm) W x 24" (610mm) H

rear: 47" (1194mm) W x 20.1" (511mm) H

depth: 22.7" (577mm)

WEIGHT:

236 lb. (107 kg)



LIMITED WARRANTY

Apogee Sound International products are warranted to be free from defects in materials and workmanship, under normal use and service, when installed and operated in accordance with product specifications, from the date of original purchase for a period of five (5) years for amplifiers and a period of one (1) year for other equipment.

If any part of the equipment covered by this warranty malfunctions, it will be repaired or replaced, at our option, provided the equipment is shipped prepaid to an authorized Apogee Service Facility.

This warranty does not extend to finish; appearance items; or any product malfunctions due to abuse, accident, misuse, negligence, misapplication or operation under other than specified conditions, or if altered in any way; nor does it extend to incidental or consequential damages of any kind.

THIS LIMITED WARRANTY IS OUR SOLE AND EXCLUSIVE WARRANTY AND THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY. APOGEE SOUND INTERNATIONAL MAKES NO OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED AND EXCLUDED.

Before returning products for warranty or non-warranty repair or replacement, call the Customer Service Department (see below) to obtain a factory-issued Return Merchandise Authorization (RMA) number, and make sure the freight charges are prepaid. Merchandise returned without an RMA on the outside of the box will not be accepted.

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The salespersons or agents of Apogee Sound International, or its dealers, are not authorized to make any representations, promises, or warranties regarding products on behalf of Apogee Sound International or in any manner obligate Apogee Sound International to the purchaser.

This warranty applies only to products sold in the United States. Please consult your Apogee Sound International distributor for warranty information, service, and parts outside of the United States.

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