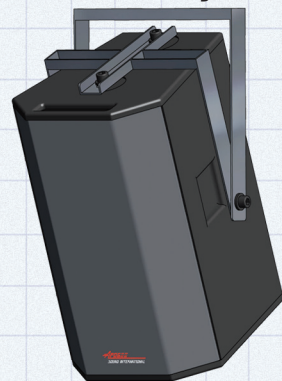


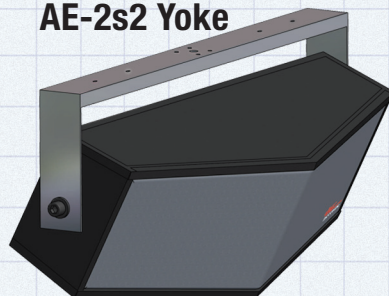
Apogee AE Loudspeaker Rigging Systems

The various yokes and assemblies listed in this section have been designed, built, and tested to provide safe, proper, and economical methods of employing Apogee speaker systems in both fixed installations and temporary applications. Apogee also provides additional hardware not shown.

AE-5 Yoke Assembly



AE-2s2 Yoke



Yokes and yoke assemblies are available for the small & mid-sized AE models.

AE-5 Adjustable Rigging Beam

The Adjustable Rigging Beam for Apogee mid-sized loudspeakers is the safest, simplest, and most cost effective way to hang a pair of speakers.



Apogee AE-5 Array with MARS 20° Couplers



- 1 AE-5 MARS Rigging 20° Couplers - 2 Places
- 2 Quick Release Splay Pins - 8 Places
- 3 AE-5 MARS Module - 3 Places

Apogee AE-5 Array with MARS Rigging



- 1 AE-5 MARS Module
- 2 AE-5 MARS 45° Coupler with Hanging Tee
- 3 Quick Release Splay Pins - 8 Places
- 4 AE-5 MARS 30° Coupler with Hanging Tee
- 5 Quick Release Tight Pack Pins - 2 Places
- 6 AE-5 MARS Tight Pack Coupler with Hanging Tee
- 7 AE-5 MARS Module

MARS: *Apogee's Exclusive Modular Arrayable Rigging System*

Because many Apogee loudspeakers like the AE-5 or AE-9 are fully arrayable, a special collection of hardware has been designed to allow simple or complex arrays to be quickly and easily configured. This hardware system is referred to as the **M**odular **A**rrayable **R**igging **S**ystem, or simply "MARS" for short.

MARS clears away the unwieldy "bumpers", trusses, and grids of conventional rigging systems, allowing the installer or touring sound engineer to quickly and easily create a properly aligned array that is ideally suited to each unique acoustical environment. With **MARS**, the possibilities for system configuration are nearly endless. And because of its modularity, you will never "run out of truss" which occurs with conventional rigging.

Apogee loudspeaker systems and MARS components far exceed even the most stringent safety standards throughout the world.

APOGEE
SOUND INTERNATIONAL, LLC
www.apogee-sound.com

AE Series

L O U D S P E A K E R S



APOGEE
SOUND INTERNATIONAL, LLC



AE Series

Apogee AE Series

Since first released in 1985, Apogee's AE Loudspeaker Series has set the standard for quality in the professional audio industry. Every aspect, from close-coupled signal-processing to cabinet design and construction, including advanced transducer technology, have been proven time and time again. Used in some of the most diverse and demanding applications, AE Loudspeakers are an invaluable tool for the truly discerning user.

AE Series loudspeakers are ideal for use in theaters, courtrooms, clubs, meeting rooms, houses of worship, sports arenas, and television sound stages.

Essential aspects of Apogee products are briefly explained here. Comprehensive data sheets and other product and corporate information are available online at www.apogee-sound.com, or send an e-mail to literature@apogee-sound.com, or contact your Apogee distributor or dealer.

Loudspeakers

Apogee loudspeakers offer some of the most advanced engineering in the world. We use proprietary drivers with special driver treatments, low resonant materials for horn flares, and exquisitely designed and crafted enclosures.

All Apogee loudspeaker systems are constructed of 18 ply, cross laminated birch plywood and are finished with a durable epoxy coating.

All AE Series speaker enclosures come standard with built-in rigging hardware. We make many styles and forms of rigging brackets, rigging frames, and related accessories to complement our loudspeaker designs. In all cases, you can rest assured that flying an Apogee loudspeaker is simple, convenient, and above all, safe!

Loudspeaker Processing

The Apogee DLC24 Digital Loudspeaker Controller helps ensure optimal loudspeaker system management and control in a variety of applications. The processor has standard front panel controls for easy local control. In addition, using the processor's software program, Apogee Digital Audio Management (ADAM), allows for easy remote configuration, management, control, and monitoring of the system. Multiple DLC24's, as well as Apogee's DSP-based powered loudspeakers, can be operated on a single network. In addition, they can also be controlled by non-Apogee software and devices.

The DLC24 processes either analog or digital audio input signals. ADAM uses simple, easy-to-navigate menus that allow control of output levels, delay times, polarity, high pass, and 12 bands of EQ (per channel). In addition, each loudspeaker can be grouped into rooms, arrays, and subarrays. The ADAM software allows you to save your configuration, allowing for easy reconfiguration of your system for recurring events. Password protection ensures settings stay secure.

With Apogee's new DLC24 processor and ADAM, audio engineers can command entire systems from one location!

AE-3Ms2 Stage Monitor System

The AE-3Ms2 stage monitor is optimized for exceptional power and clarity in the vocal range. It produces extremely high acoustic output from a very small and unobtrusive enclosure.

ENGINEERING DATA

Format:
Single-amped/Two-way/Electronically-coupled

Drivers:
LF: 10" (254mm)
HF: 1" (25mm)

Dispersion:
H: 45° x V: 70°

Frequency Response (1m on axis):
70 Hz to 18 kHz $\pm$ 3 dB

Max. SPL (@1m):
121 dB cont./127 dB peak

PTML (Peak Transient Mechanical Limit):
138 dB

Sensitivity (1W @ 1m):
99.5 dB/200 Hz to 4 kHz

Nominal Impedance:
8-ohm

Max. Power Handling (cont./peak):
300 W cont./1200 W peak

Dimensions:
16.25" (413mm) W by 12.5" (318mm) H
by 14" (356mm) D

Weight:
36 lb. (16.4 kg)

AE-3Ms2



AE-4M Stage Monitor System

The cost effective AE-4M stage monitor offers high power output and exceptionally clean sound without bi-amplification, in a classic wedge-style design.

ENGINEERING DATA

Format:
Single-amped/Two-way/Electronically-coupled

Drivers:
LF: 12" (305mm)
HF: 1" (25mm)

Dispersion:
H: 90° x V: 45°

Frequency Response (1m on axis):
60 Hz to 16.5 kHz $\pm$ 3 dB

Max. SPL (@1m):
125 dB cont./131 dB peak

PTML (Peak Transient Mechanical Limit):
140 dB

Sensitivity (1W @ 1m):
101.5 dB/200 Hz to 4 kHz

Nominal Impedance:
8-ohm

Max. Power Handling (cont./peak):
200 W cont./800 W peak

Dimensions:
14" (356mm) W by 20.5" (521mm) H by
27.5" (699mm) D

Weight:
54 lb. (24.5 kg)

AE-4M



AE-8B Concert Stage Monitor System

The AE-8B bi-amped stage monitor features a unique articulated baffle allowing large format components to be contained in a low profile enclosure. The AE-8B is especially effective on large reverberant concert stages.

ENGINEERING DATA

Format:
Bi-amped/Two-way/Electronically-coupled

Drivers:
LF: 15" (381mm)
HF: 2" (51mm)

Dispersion:
H: 60° x V: 40°

Frequency Response (1m on axis):
46 Hz to 16 kHz $\pm$ 3 dB

Max. SPL (@1m):
127 dB cont./133 dB peak

PTML (Peak Transient Mechanical Limit):
143 dB

Sensitivity (1W @ 1m):
LF: 99 dB/100 Hz to 1 kHz
HF: 104 dB/1 kHz to 20 kHz

Nominal Impedance:
8-ohm, each driver

Max. Power Handling (cont./peak):
LF: 600 W cont./2400 W peak
HF: 150 W cont./600 W peak

Dimensions:
19.5" (495mm) W by 21.5" (546mm) H by
26.7" (678mm) D

Weight:
80 lb. (36 kg)

AE-8B



AE-4s2



AE-4s2 Compact Loudspeaker System

The extremely versatile AE-4s2 two-way, single-amped system offers very high acoustic output, low distortion, and a flat, full range response all in a moderately sized enclosure.

ENGINEERING DATA

Format:
Single-amped/Two-way/Electronically-coupled

Drivers:
LF: 12" (305mm)
HF: 1" (25mm)

Dispersion:
H: 90° x V: 45°

Frequency Response (1m on axis):
60 Hz to 16.5 kHz $\pm$ 3 dB

Max. SPL (@1m):
125 dB cont./131 dB peak

PTML (Peak Transient Mechanical Limit):
140 dB

Sensitivity (1W @ 1m):
101.5 dB/200 Hz to 4 kHz

Nominal Impedance:
8-ohm

Max. Power Handling (cont./peak):
200 W cont./800 W peak

Dimensions:
front: 14" (356mm) W by 23" (584mm) H
rear: 9.3" (236mm) W by 23" (584mm) H
depth: 16.5" (419mm)

Weight:
70 lb. (31.8 kg)

AE-5



AE-5 Arrayable Loudspeaker System

The AE-5 two-way, bi-amped loudspeaker is the flagship of the Apogee line. This fully arrayable system functions brilliantly when used alone, or as a building block of a large, sophisticated system, making it one of the most versatile speakers ever developed.

ENGINEERING DATA

Format:
Bi-amped/Two-way/Electronically-coupled

Drivers:
LF: 12" (305mm)
HF: 1" (25mm)

Dispersion:
H: 90° x V: 45°

Frequency Response (1m on axis):
53 Hz to 17 kHz $\pm$ 3 dB

Max. SPL (@1m):
126 dB cont./132 dB peak

PTML (Peak Transient Mechanical Limit):
144 dB

Sensitivity (1W @ 1m):
LF: 99 dB/100 Hz to 1 kHz
HF: 106 dB/1 kHz to 20 kHz

Nominal Impedance:
8-ohm, each driver

Max. Power Handling (cont./peak):
LF: 300 W cont./1200 W peak
HF: 150 W cont./600 W peak

Dimensions:
front: 14" (356mm) W by 23" (584mm) H
rear: 9.3" (236mm) W by 23" (584mm) H
depth: 16.5" (419mm)

Weight:
76 lb. (34.5 kg)

AE-8 Arrayable Loudspeaker System

The AE-8 bi-amped system offers flat power response and a precisely controlled radiation pattern for smooth acoustic integration in virtually any size room. It is particularly effective in reverberant spaces and is fully arrayable.

ENGINEERING DATA

Format:
Bi-amped/Two-way/Electronically-coupled

Drivers:
LF: 15" (381mm)
HF: 2" (51mm)

Dispersion:
H: 60° x V: 40°

Frequency Response (1m on axis):
48 Hz to 16 kHz $\pm$ 3 dB

Max. SPL (@1m):
127 dB cont./133 dB peak

PTML (Peak Transient Mechanical Limit):
143 dB

Sensitivity (1W @ 1m):
LF: 99 dB/100 Hz to 1 kHz
HF: 104 dB/1 kHz to 20 kHz

Nominal Impedance:
8-ohm, each driver

Max. Power Handling (cont./peak):
LF: 600 W cont./2400 W peak
HF: 150 W cont./600 W peak

Dimensions:
front: 19" (483mm) W by 30.8" (782mm) H
rear: 11.5" (292mm) W by 30.8" (782mm) H
depth: 17.3" (440mm)

Weight:
90 lb. (40.8 kg)

AE-8



AE-9 Concert Loudspeaker System

The AE-9 is a bi-amped, three-way system offering exceptional power output, smooth frequency response, and predictable directional control. The AE-9 can be easily positioned or arrayed in spaces that are too small for other horn-loaded systems. Speaker is fully arrayable.

ENGINEERING DATA

Format:
Bi-amped/Three-way/Electronically-coupled

Drivers:
LF: 15" (381mm)
MF: 10" (254mm)
HF: 1" (25mm)

Dispersion:
H: 60° x V: 40°

Frequency Response (1m on axis):
44 Hz to 17 kHz $\pm$ 3 dB

Max. SPL (@1m):
127 dB cont./133 dB peak

PTML (Peak Transient Mechanical Limit):
144 dB

Sensitivity (1W @ 1m):
LF: 98 dB/44 Hz to 300 Hz
MF/HF: 101.5 dB/300 Hz to 17 kHz

Nominal Impedance:
8-ohm, each driver

Max. Power Handling (cont./peak):
LF: 600 W cont./2400 W peak
MF: 400 W cont./1600 W peak
HF: 75 W cont./300 W peak

Dimensions:
front: 22" (559mm) W by 38" (965mm) H
rear: 15" (381mm) W by 38" (965mm) H
depth: 23" (584mm)

Weight:
145 lb. (65.8 kg)

AE-9



AE-10



AE-10 Compact Subwoofer System

Characterized by a tight and punchy sound, the AE-10 subwoofer produces high-level, low frequency output. It adds depth and dramatic impact to musical passages, and when mated with other AE Series loudspeakers, it extends their low frequency response without muddying or coloring the upper frequencies.

ENGINEERING DATA

Format:
Single-amped/Electronically-coupled

Drivers:
Dual 15" (381mm)

Dispersion:
Omni-directional

Frequency Response (1m on axis):
38 Hz to 120 kHz $\pm$ 3 dB

Max. SPL (@1m):
130 dB cont./136 dB peak

PTML (Peak Transient Mechanical Limit):
142 dB

Sensitivity (1W @ 1m):
95 dB/20 Hz to 100 Hz, each driver

Nominal Impedance:
8-ohm, each driver; separate connections to each driver

Max. Power Handling (cont./peak):
1200 W cont./4800 W peak (600 W cont./2400 W peak, each driver)

Dimensions:
front: 32" (813mm) W by 22.5" (572mm) H
rear: 25" (635mm) W by 22.5" (572mm) H
depth: 24" (610mm)

Weight:
131 lb. (59.5 kg)

AE-12s2



AE-12s2 Concert Subwoofer System

Designed to produce extremely high level, low frequency output from an easy to transport enclosure, the AE-12s2 subwoofer delivers a deep, accurate response, adding power and intense impact without muddying or coloring the upper frequencies. The AE-12s2 perfectly complements Apogee Systems from the AE-5 to the ALA-9 Line arrays.

ENGINEERING DATA

Format:
Single-amped/Electronically-coupled

Drivers:
Dual 18" (460mm)

Dispersion:
Omni-directional

Frequency Response (1m on axis):
30 Hz to 105 kHz $\pm$ 3 dB

Max. SPL (@1m):
132 dB cont./138 dB peak

PTML (Peak Transient Mechanical Limit):
145 dB

Sensitivity (1W @ 1m):
98 dB/20 Hz to 100 Hz, each driver

Nominal Impedance:
8-ohm, each driver; separate connections to each driver

Max. Power Handling (cont./peak):
1200 W cont./4800 W peak (600 W cont./2400 W peak, each driver)

Dimensions:
44.75" (1137mm) W by 30" (762mm) H by 22.5" (572mm) D

Weight:
204 lb. (92.6 kg)

SSM Compact Loudspeaker System

The SSM two-way, single-amped, electronically-coupled loudspeaker system is extremely small and lightweight, yet capable of high acoustical output with exceptional linearity.

ENGINEERING DATA

Format:
Single-amped/Two-way/Electronically-coupled

Drivers:
LF: Dual 4.5" (115mm)
HF: 1" (25mm)

Dispersion:
H: 90° x V: 100°

Frequency Response (1m on axis):
85 Hz to 25 kHz $\pm$ 3 dB

Max. SPL (@1m):
112 dB cont./118 dB peak

PTML (Peak Transient Mechanical Limit):
129 dB

Sensitivity (1W @ 1m):
88.8 dB/200 Hz to 4 kHz

Nominal Impedance:
16-ohm

Max. Power Handling (cont./peak):
150 W cont./600 W peak

Dimensions:
front: 13" (330mm) W by 5.5" (140mm) H
rear: 13" (330mm) W by 3.7" (94mm) H
depth: 5.9" (150mm)

Weight:
11 lb. (5 kg)

SSM



AE-2s2 Wide-Angle Loudspeaker System

The AE-2s2 is a wide-angle, two-way, single-amped system designed for extended horizontal dispersion and high fidelity response. The unique shape of the enclosure produces the wide coverage angle (165°) while minimizing sight-line obstructions.

ENGINEERING DATA

Format:
Single-amped/Two-way/Electronically-coupled

Drivers:
LF: Dual 8" (204mm)
HF: Dual 1" (25mm)

Dispersion:
H: 165° x V: 45°

Frequency Response (1m on axis):
63 Hz to 19 kHz $\pm$ 3 dB

Max. SPL (@1m):
117 dB cont./123 dB peak

PTML (Peak Transient Mechanical Limit):
131 dB

Sensitivity (1W @ 1m):
97.4 dB/200 Hz to 4 kHz

Nominal Impedance:
16-ohm

Max. Power Handling (cont./peak):
240 W cont./960 W peak

Dimensions:
front: 32" (813mm) W by 10.5" (267mm) H
rear: 32" (813mm) W by 8.5" (216mm) H
depth: 10" (254mm)

Weight:
38 lb. (17.3 kg)

AE-2s2



AE-3s2 Compact Loudspeaker System

The AE-3s2 two-way, single-amped system produces high acoustic output from a small enclosure. A pair can cover large hotel ballrooms or auditoriums for speech reproduction or add an optional subwoofer for wide-range music reproduction.

ENGINEERING DATA

Format:
Single-amped/Two-way/Electronically-coupled

Drivers:
LF: 10" (254mm)
HF: 1" (25mm)

Dispersion:
H: 70° x V: 45°

Frequency Response (1m on axis):
70 Hz to 18 kHz $\pm$ 3 dB

Max. SPL (@1m):
124 dB cont./130 dB peak

PTML (Peak Transient Mechanical Limit):
138 dB

Sensitivity (1W @ 1m):
99.5 dB/200 Hz to 4 kHz

Nominal Impedance:
8-ohm

Max. Power Handling (cont./peak):
300 W cont./1200 W peak

Dimensions:
front: 12.5" (318mm) W by 16.25" (413mm) H
rear: 10" (254mm) W by 16.25" (413mm) H
depth: 10" (254mm)

Weight:
36 lb. (16.4 kg)

AE-3s2

