Model No.

4A30

Premium 4" 30W Coaxial Driver

Part of the premium "A Series" driver line, the 4A30 represents a deliberate step up in sound quality and performance over standard commercial coaxial drivers, providing excellent voice and music re-production over a large coverage area. With smooth musical sound, wide dispersion (135 degrees) and small architectural footprint, the 4A30 is engineered for very high quality paging and background music in hotel lobbies, stores, terminals and similar venues where clear, intelligible communication with accurate reproduction is key.

Construction & Features

- 30W coaxial 4" (EIA 5") driver has the capacity to deliver a wide angle of sound distribution at 2kHz with uniform response and clear audibility to ensure complete coverage with minimum units.
- Includes 10 oz. magnet, 1" copper voice coil, and polypropylene cone with half-roll rubber surround for long cone travel and good edge damping.
- Post-mounted liquid-cooled tweeter is a 1" diameter balanced drive dome with first order high-pass filter.
- Frequency response is 71Hz-20kHz (+6dB); 50Hz-20kHz (+8.8dB); with a crossover at 5kHz.
- Stamped 20-gauge steel frame with black enamel paint finish and zinc plated backplate.

A&E Specifications

The coaxial 4" (EIA 5") driver shall be AVLELEC Model 4A30. It shall have a high frequency transducer (tweeter with 1" dia. balanced drive dome) and low frequency transducer (4" dia. polypropylene cone). A built-in electrical crossover network shall be employed for proper frequency divisions. Crossover frequency shall be at 5kHz with a first order high-pass filter. The 4A30 shall be capable of pro-ducing a uniform audible frequency response over the range of 71Hz-20kHz (+6dB); 50Hz-20kHz (+8.8dB) with dispersion angle of 135 degrees @2000Hz -6dB. Average sensitivity shall measure 88.0dB (SPL at 1W/1M). Power rating shall be 30 watts (EIA 426B). The low frequency voice coil shall have 1" diameter and operate in a magnetic field derived from a ferrite (ceramic) magnet with nominal weight of 10 oz. The high frequency voice coil shall have a 0.53" dia. and operate in a magnetic field derived from a Neodymium magnet with nominal weight of 0.06 oz. Voice coil impedance shall be 8 ohms. The assembly shall have a round, structurally reinforced, stamped 20-gauge steel frame to maintain precise mechanical alignment. Overall diameter shall be 5" with four round and four obround holes equally spaced on a 4.688" dia. mounting bolt circle. Mounting depth shall not exceed 2.25". External metal parts shall be finished in black enamel paint or zinc plating.

Technical Information

PERFORMANCE	
Power Rating	30 watts (EIA 426B)
Sensitivity	88.0dB SPL (avg) measured 2.83V @ 1m
	Max SPL 102.8dB (calculated value based on power rating and measured sensitivity) 8 ohms (nominal), minimum 6.4 ohms @508Hz
Impedance	
Frequency Response	71Hz-20kHz (±6dB); 50Hz-20kHz (±8.8dB)
Crossover Frequency	5000Hz, 1st order high-pass filter
Dispersion Angle	135 degrees @ 2000Hz octave (-6dB)

PHYSICAL – WOOFER	
Cone Material	Polypropylene with rubber half-roll (up) surround
Magnet Weight, Material	10oz. (283g), ferrite ceramic
Voice Coil Diameter, Material	1 inch (25mm), copper wire over aluminum former
Terminals	Quick connect type - two 0.187" spade lugs (push terminals)

PHYSICAL – TWEETER	
Diameter	1.75 inch (44.5mm) housing with 1 inch (26mm) Dia.
Magnet Weight, Material	balanced-drive dome 0.06oz. (1.8g), neodymium magnet
Voice Coil Diameter, Material	0.5 inch (14mm), liquid cooled copper wire

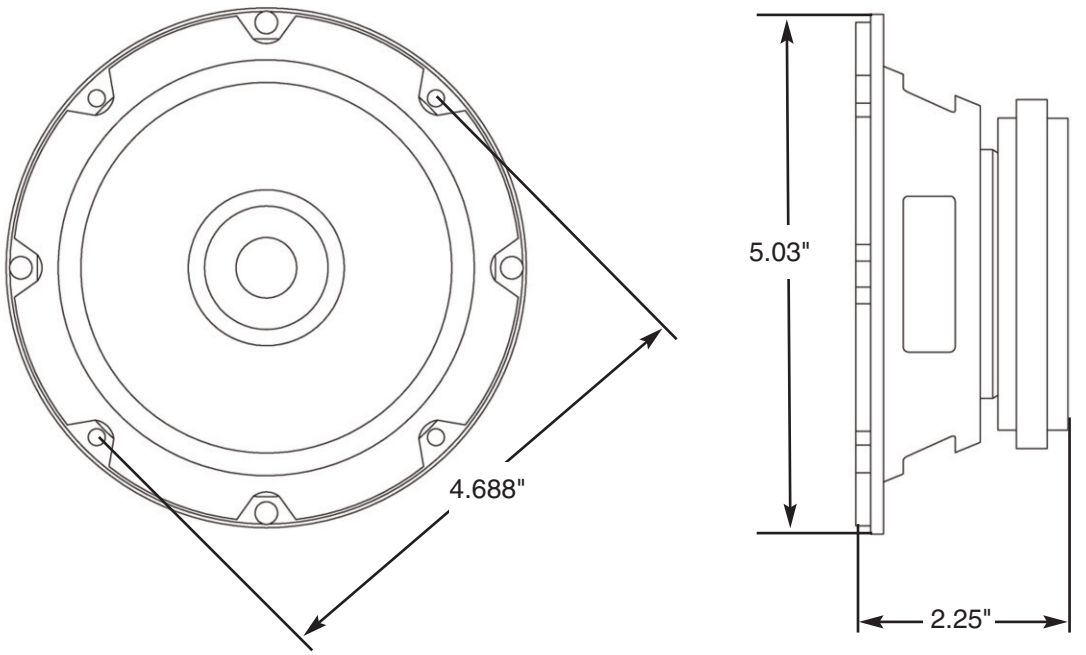
MECHANICAL	
Basket	20-gauge stamped steel with black enamel paint
Outside Diameter	5.03 inch (128mm)
Mounting Bolt Circle	4.688 inch (119mm) with 4 obround holes spaced at 90 degrees, and 4 round holes spaced at 90 degrees
Cutout Diameter	4.125 inch (105mm)
Mounting Depth	2.25 inch (57mm)
Net Weight	1.75 lbs. (0.79kg)

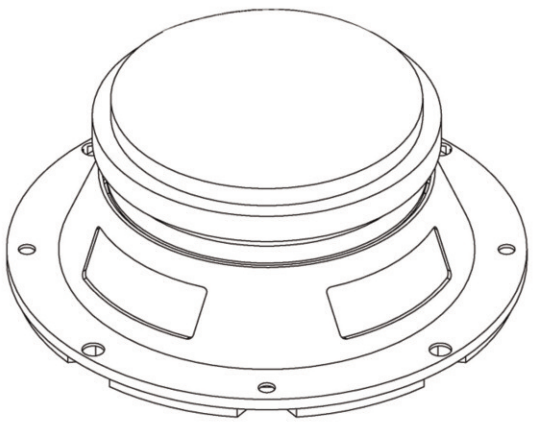
Test Methodology

AVLELEC speaker systems are thoroughly tested to provide specifiers and contractors with solid, accurate data. Test equipment includes the GoldLine TEF-20 analyzer.

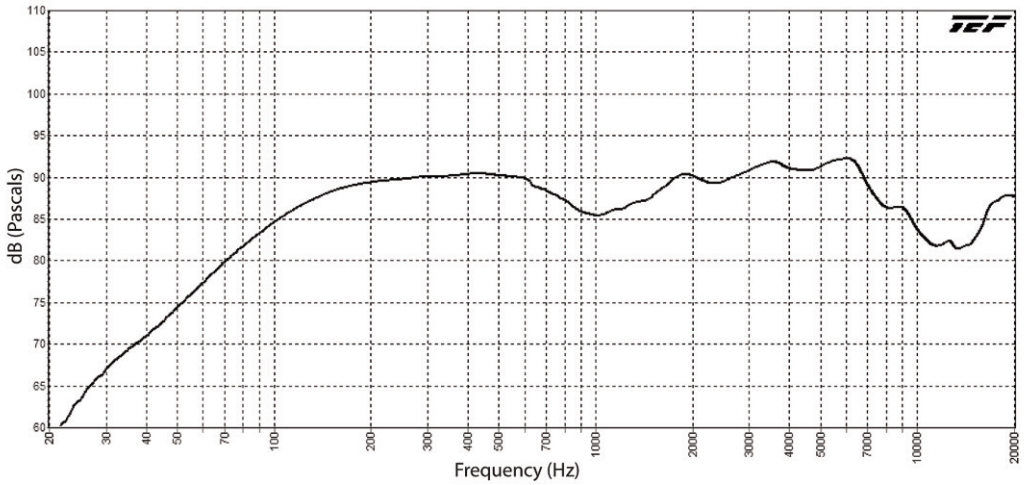
- **Power Rating:** specification is based on E.I.A. Standard RS-426B.
- **Frequency Response:** describes the usable response range defined by a ±6dB window, which is useful in predictive en-gineering calculations.
- **Sensitivity:** is a computer calculation of the log average sound pressure level (SPL) over the entire engineering bandwidth as given in the Frequency Response ±6dB.
- **Maximum SPL:** is calculated based on the Power Rating and the measured log average Sensitivity where Maximum SPL = (Sensitivity @ 1W1M) + 10 log (Power Rating).
- **Dispersion Angle:** is defined as the angle of coverage that is no more than 6dB down from the on-axis value averaged over the 2kHz octave band. Since speech intelligibility is dependent upon the 2kHz octave, this specification is useful in designing voice reinforcement and music systems that provide even coverage and intelligibility.

Drawings

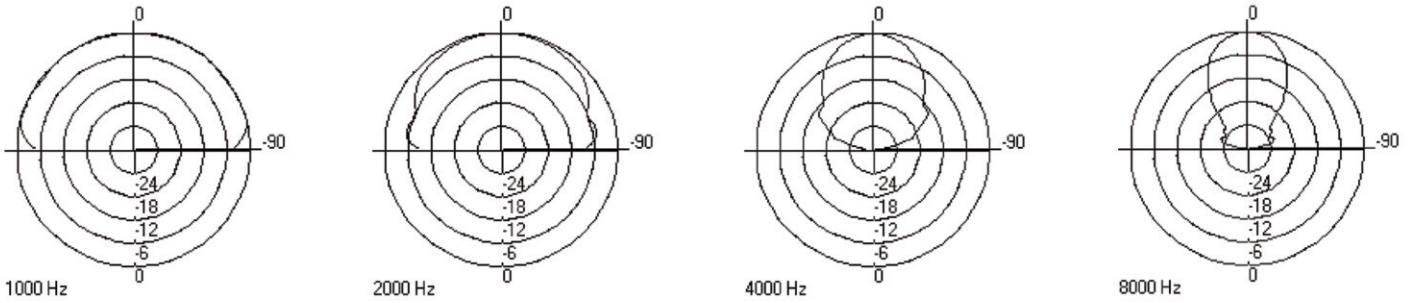




SPL vs. Frequency 1W/1M (half space) On-axis



Polar Data (half space)



Impedance