

DS-115A

Dynamics

series



INTRODUCTION

The D.A.S. DS-115A is a versatile biamplified 2-way vented loudspeaker system.

APPLICATIONS

Intended for use in fixed and portable sound reinforcement applications such as clubs, solo musicians, small bands. PA applications such as recitals, conferences, receptions, or any event that requires a system that is easy to use and transport, will benefit also from the DS-115A.

DESCRIPTION

The system incorporates a 300 W class D switching amplifier for the low-frequency section and a 100W class AB amplifier for the high frequency driver.

The low frequency section utilizes a high efficiency Neodymium magnet 15" low frequency speaker with a 3" voice coil using a combination of side slot and direct convection cooling to provide high power handling and low power compression.

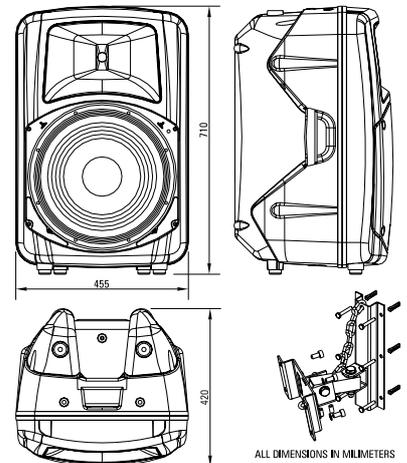
The high frequency section makes use of a Neodymium 1" exit compression driver with 1.75" titanium diaphragm, coupled to a constant directivity horn that is integral to the enclosure baffle.

Full use of high pressure injection moulding techniques has achieved a mineral loaded polypropylene cabinet of a very high density with minimum vibration. Computer assisted internal design provides extensive wall reinforcing for minimum vibration and solid bass. The complex enclosure shape allows for stage monitor use. Three integral handle facilitate carrying. For added resistance, a rugged steel grille protects the woofer.

MOUNTING

Nine M8 rigging points are built into the enclosure, allowing for comprehensive flying and mounting options. An integral 35 mm socket can be used for tripod use.

A range of optional accessories is available: adjustable wall mounting brackets, tripods and hanging rings provide flexible mounting options.



FEATURES

- » Biamplified 2-way vented loudspeaker system
- » 15" Neodymium cone speaker
- » 1" Neodymium compression driver
- » 300 W + 100 W power amplifier
- » Polypropylene enclosure

SPECIFICATIONS

Nominal Low Frequency Amplifier [Class]:	300 W [D]
Nominal High Frequency Amplifier [Class]:	100 W [AB]
Input Type:	Balanced Differential
Input Impedance:	20 k Ω
Sensitivity:	Line mode: 1.23 V (+4 dBu)
On-axis Electro-Acoustical Freq. Range ^f :	45 Hz - 15 kHz
Rated Maximum Peak SPL at 1 meter:	130 dB
HF Horn Coverage Angles ^{HF} :	90° Horizontal x 45° Vertical (nominal)
Average Beamwidths ^B :	100° Horizontal
(500 Hz to 8 kHz)	70° Vertical
Speech Coverage Angles ^C :	105° Horizontal x 75° Vertical
Enclosure Material:	Mineral loaded polypropylene
Color:	Anthracite grey
Transducers/Replacement Parts:	LF: 15LN4/GM 15LN4; HF: M-5N/GM M-5
Connectors:	INPUT: Female XLR LOOP THRU: Male XLR AC INPUT: Male IEC
AC Power Requirements:	115 V, 50 Hz/60 Hz 230 V, 50 Hz/60 Hz
Dimensions (H x W x D):	71 x 46 x 42 cm (28 x 18 x 16.5 in)
Weight:	22.1 kg (48.5 lbs)
Shipping Weight:	24.5 kg (54 lbs)
Accessories (optional):	TRD-2 adjustable tripod ANL-1, 4-piece M8 eyebolt/carabiner set AX-115 wall mounting bracket

^f -10 dB, Half space anechoic.

^{HF} -6 dB, ^B -6 dB angle, average of one-third octave band measures.

^C There is currently no standard method of averaging the beamwidth with frequency characteristics into a single meaningful figure, which impedes comparisons across manufacturers and very often even product lines. This, our own, criterion weighs the -6 dB coverage angles from one-octave bands according to their contribution to speech intelligibility.

One and one-third octave bands comply to ANSI S1.11-1986.



FREQUENCY RESPONSE

Figure 1 shows the frequency response at 1 m of a unit radiating to a half space anechoic environment and driven by a -24.4 dBm swept sine signal.

DISTORTION

Figure 2 shows the Second Harmonic Distortion (grey) and Third Harmonic Distortion (dotted) curves for a unit driven at 10% of its nominal power handling rating.

BEAMWIDTH

Figure 3 shows the -3, -6 and -10 dB horizontal (solid) and vertical (dashed) beamwidth with frequency curves. -6 dB ones are shown with thicker traces for clarity.

AXIAL DIRECTIVITY $Q(R_0)$ AND D_I

Figure 4 shows the above characteristics with frequency. Thin continuous and dashed lines show partial horizontal and vertical, respectively, characteristics.

POLAR RESPONSE

Figure 5 shows the one octave band horizontal (solid) and vertical (dashed) polars for the indicated frequencies. Full scale is 50 dB, 5 dB per division.

NOTES. 1.Frequency response: referred to 1 m; low end obtained through the use of near field techniques; one-third octave smoothed for correlation with human hearing. 3.Harmonic distortion components are not plotted beyond 20 kHz; near-field techniques used. 4.Directivity characteristics plotted with respect to frequency are the average within the one-third octave bands of center frequencies noted by the marks at the bottom of the graphs, but are joined up for display purposes. All other characteristics plotted vs. frequency use 1/24th octave resolution. Regions of less than 1 dB below goal level and sharp notches may be ignored when calculating beamwidths. 5.Directivity factor and index were computed from two degree resolution vertical and horizontal polars using sinusoidal weighting. 6.Polars were acquired by placing the unit on a computer controlled turntable inside our anechoic chamber. Measurement distance was 4 m.

Product improvement through research and development is a continuous process at D.A.S. Audio. All specifications subject to change without notice.

