

DS-15A

Dynamics series



FEATURES

- » Bi-amplified 2-way system
- » 150 W low frequency power amplifier
- » 50 W high frequency power amplifier
- » 15" cone speaker
- » 1" compression driver

SPECIFICATIONS

Low Frequency Power Amplifier^F:	150 W _{RMS}
High Frequency Power Amplifier^F:	50 W _{RMS}
Input Type:	Balanced Differential for Line and Mic
Input Impedance:	Line: 20 k Ω ; Mic: 2 k Ω
Sensitivity:	Line: 0.75 V (-0.28 dBu) Mic: [3 mV, 150 mV] (-48 dBu, -14 dBu)
On-axis Acoustical Frequency Range^F:	60 Hz - 15 kHz
Rated Maximum Peak SPL at 1 meter:	127 dB
Nominal -6 dB Beamwidths^B:	90° Horizontal 70° Vertical
Speech Coverage Angles^C:	95° Horizontal x 75° Vertical
Enclosure Material:	Mineral loaded polypropylene
Color:	Black or white
Transducers/Replacement Parts:	LF: P-15/GM P-15; HF: M-3/GM M-5
Connectors:	Female XLR for MIC IN. 1/4" phone jack for LINE IN, LINE OUT and INSERT.
AC Power Requirements:	115 V, 50 Hz/60 Hz 230 V, 50 Hz/60 Hz
Dimensions (H x W x D):	70 x 45 x 36 cm (28 x 18 x 15 in)
Weight:	23.4 kg (51.5 lbs)
Shipping Weight:	26 kg (57 lbs)
Accessories (optional):	TRD-2 adjustable tripod ANL-1 4-piece hanging eyebolt/carabiner set FUN-15A padded transport cover

^F 8 ohm load @ 1% THD.

^F As per IEC 268-5 (1989), re. a two octave band centred at 500 Hz. Half space anechoic.

^B 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.

INTRODUCTION

The DS-15A is a versatile bi-amplified two-way vented loudspeaker system.

APPLICATIONS

The DS-15A is an ideal system for solo musicians and keyboard based groups providing a complete sound reinforcement solution in a single package. PA applications such as recitals, conferences, receptions, or any event that requires a system that is easy to use and transport, will benefit from the DS-15A.

DESCRIPTION

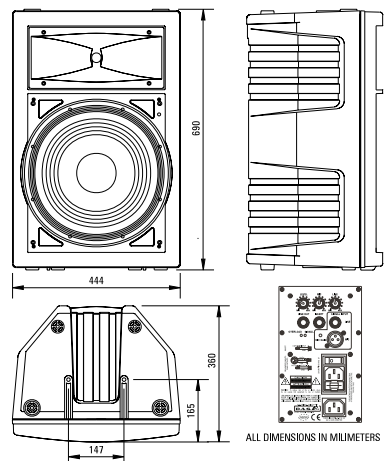
The DS-15A incorporates a 150 W amplifier for the low frequency transducer and a 50 W amplifier for the high frequency driver. Both are protected against overvoltage, undervoltage, overloads, including shorts to the supplies, thermal runaway, and instantaneous temperature peaks.

The DS-15A has a built-in two channel mixer with a microphone input and a line input with independent level controls. A master volume control is also provided.

The low frequency section utilizes a high efficiency 15" low frequency speaker with 3" voice coil. The high frequency section makes use of a 1" exit compression driver with 2" titanium diaphragm, coupled to a constant directivity horn.

Full use of high pressure injection moulding techniques has achieved a mineral loaded polypropylene cabinet of a very high density with minimum vibration. An integral handle facilitates carrying. A rugged steel grill protects the cone speaker.

Two M8 flying points on the top and bottom of the enclosure allow flying. An integral 35 mm socket can be used for tripod mounting.



ALL DIMENSIONS IN MILLIMETERS



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 swept sine wave signal (-18dBm input).

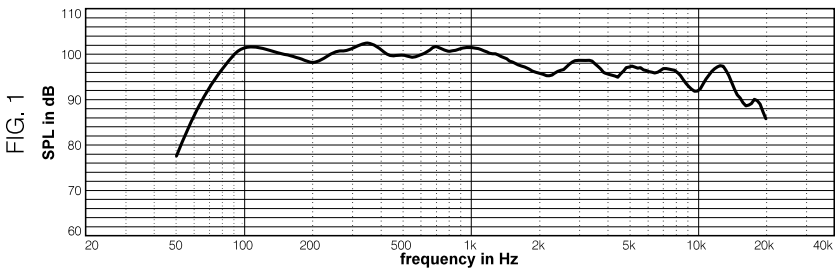


FIG. 1

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.

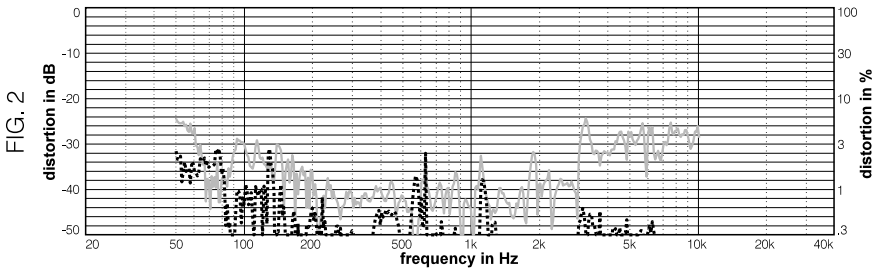


FIG. 2

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.

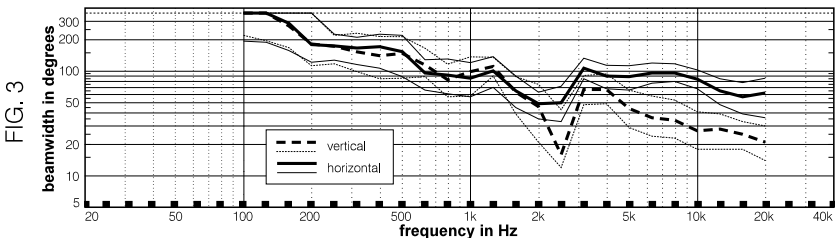


FIG. 3

AXIAL DIRECTIVITY $Q(R_0)$ AND D_1

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

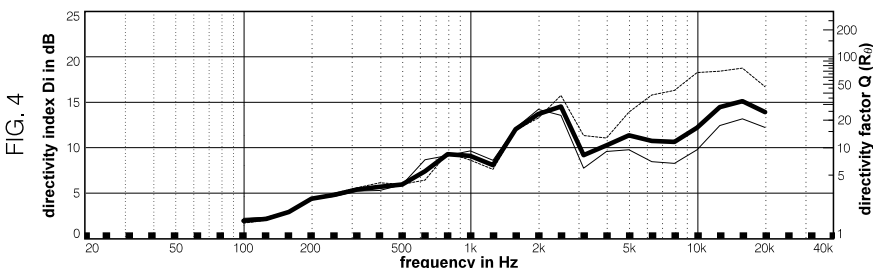


FIG. 4

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. 2.Harmonic distortion components are not plotted beyond 20 kHz; near-field techniques used. 3.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. 4.Directivity factor and index were computed from two degree resolution vertical and horizontal polars using sinusoidal weighting. 5.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.

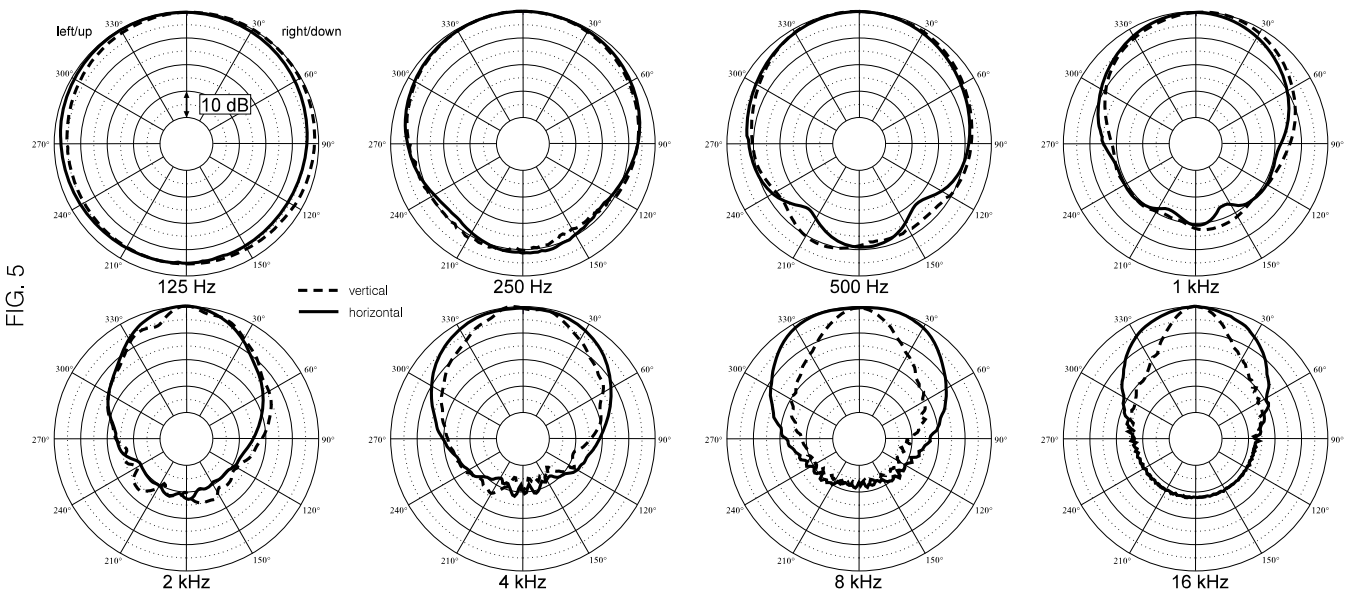


FIG. 5

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