ST-218 Sound Touring series

Introduction

The ST-218 is a high efficiency horn loaded band pass system designed for sound reinforcement applications where high sound pressure levels of bass response are required. The ST-218 is part of the ST-2000 system.

Applications

The horn loaded band pass configuration of the ST-218 provides enhanced acoustic coupling and efficiency as compared to traditional band pass systems. The hard hitting bass response makes it ideal for live systems.

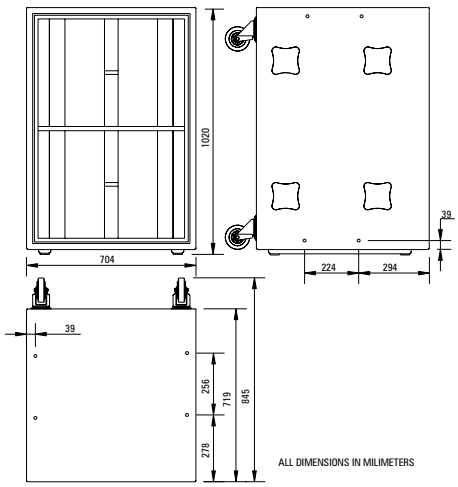
Description

The ST-218 houses two D.A.S. G-45 18" cone transducers. This long excursion driver features a 4" edgewound coil, massive magnet structure and carefully engineered cooling schemes, resulting in high power handling and low power compression.

The ultra-compact enclosure is manufactured from Wisa® Birch plywood and is finished with a durable catalyzed polyurethane paint. 16 integrated rigging points that accept 10M forged steel eyebolts make suspension in either the horizontal or vertical positions safe and simple. The ST-218 has a fabric covered steel grille to protect the loudspeaker components. The fabric covering is resistant to wear and tear, provides protection from dust and dirt, and is both acoustically transparent and flame retardant.

Placement

As with any bass unit, the ST-218's low frequency output will benefit from placement against walls and/or floors.



Features

- **High efficiency horn loaded low frequency system**
- **2 x 18" speaker**
- **1200 W power handling**
- **Rugged steel grille with filter foam sheet**

Specifications

RMS (Average) Power Handling[R]:	1200 W
Program Power Handling[P]:	2400 W
Peak Power Handling[K]:	4800 W
On-axis Frequency Range[F]:	40 Hz - 750 Hz
Usable Frequency Range:	35 Hz - 300 Hz
Nominal Impedance:	4 Ω
Minimum Impedance[I]:	3.8 Ω (at 73 Hz)
On-axis Sensitivity 1W / 1 m[S]:	102 dB SPL
Rated Peak SPL at Full Power:	139 dB SPL at 1m
Nominal -6 dB Beamwidths[B]:	360° Horizontal
(100 Hz octave)	360° Vertical
Enclosure Material:	Wisa® Birch plywood
Finish:	Durable Catalyzed Polyurethane Paint
Transducers/Replacement Parts:	G-45/GM G-45
Connector:	2 paralleled NL8 Speakon, wired to ±1
Dimensions (H x W x D):	102 x 70 x 84 cm (40.2 x 27.6 x 33 in)
Weight:	82 kg (180.8 lbs)
Shipping Weight:	90 kg (198.4 lbs)

[R] Corresponds to the AES power handling rating for the component, based on a 2 hour test using a 6 dB crest factor bandlimited pink noise signal.
[P] Conventionally 3 dB higher than the RMS measure, although this already utilizes a program signal.
[K] Corresponds to the signal crests for the test described in[R].
[F] As per IEC 268-5 (1989), re. a one octave band centred at 125 Hz. Half space anechoic.
[I] In practice cable and connector impedance has to be added to all impedance values.
[S] For the 125Hz one octave band.
[B] Average of one-third octave band measures.
One and one-third octave bands comply to ANSI S1.11-1986.

D.A.S. SOUND PRODUCTS

ST-218

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 1 W (2 V) swept sine signal.

Impedance
Figure 2 shows impedance with frequency.

Distortion
Figure 3 shows the Total Harmonic Distortion Plus Noise (solid), Second Harmonic Distortion (grey) and Third Harmonic Distortion (dotted) curves for a unit driven at 10% of its nominal power handling rating.

Beamwidth
Figure 4 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_θ) and D_I
Figure 5 shows the above characteristics with frequency. Thin continuous and dashed lines show partial horizontal and vertical, respectively, characteristics.

Polar Response
Figure 6 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.In practice, cable and connector impedance need to be added. 3.Low frequency 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. Interpolation was used below 100 Hz. 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.

FIG. 1

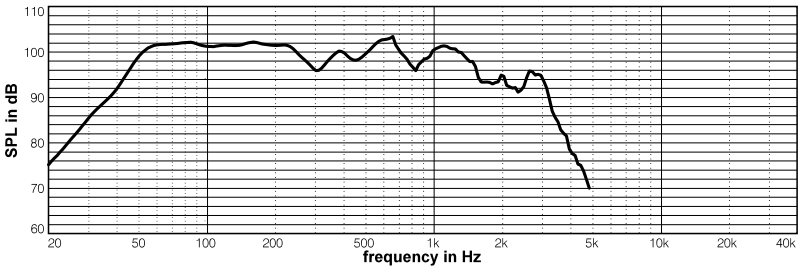


FIG. 2

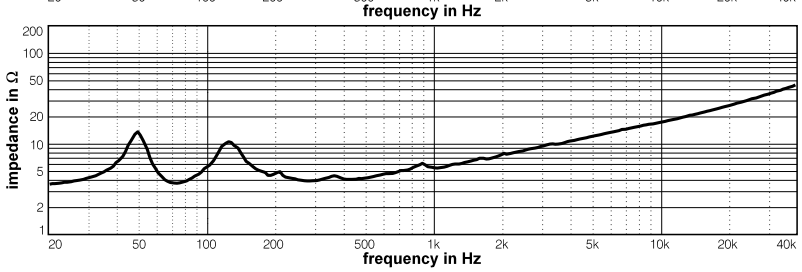


FIG. 3

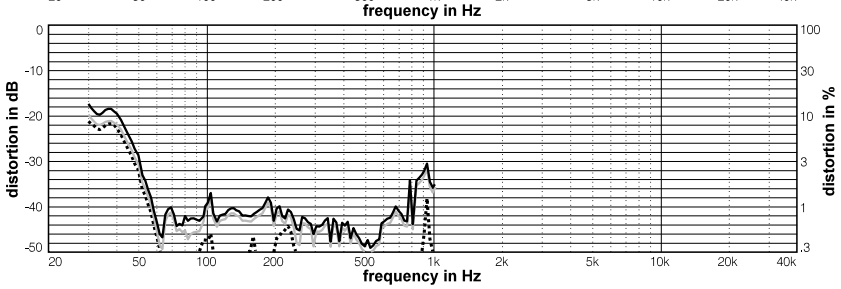


FIG. 4

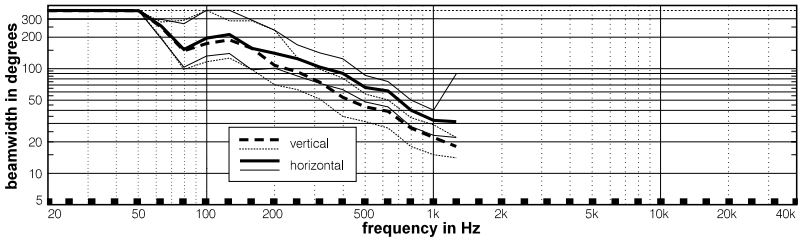


FIG. 5

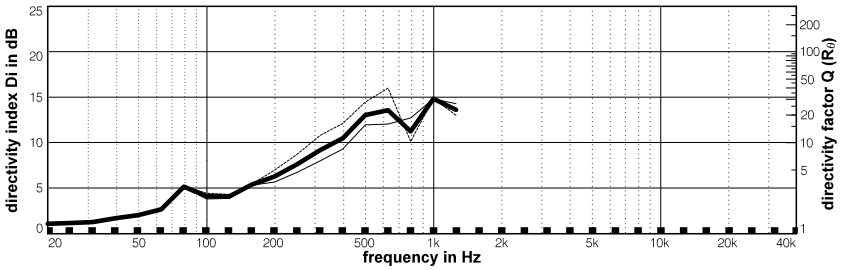
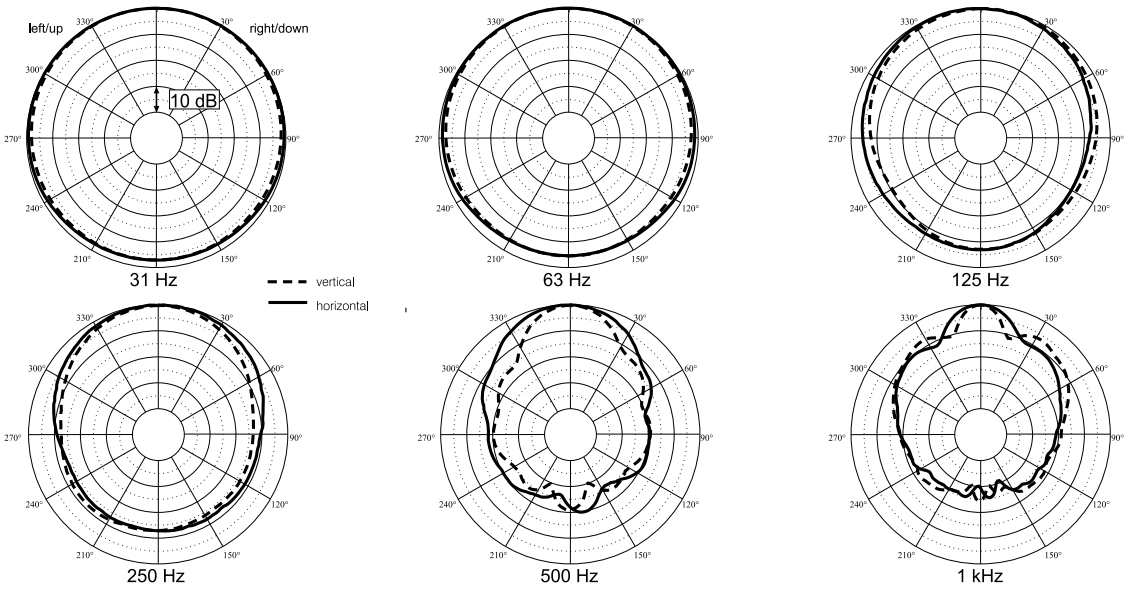


FIG. 6



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