Sub-15

Pf series

Introduction

The D.A.S. SUB 15 is a bass-reflex sub-woofer system for use in active systems where bass reinforcement is required.

Applications

The SUB 15 is intended for applications where high sound pressure levels of bass frequencies are required such as fixed and portable sound reinforcement, musical instruments, discos and clubs.

Description

The SUB 15 houses a D.A.S. P-15 15" speaker used as a direct radiator. This cone driver features a 3" coil and carefully engineered venting schemes, resulting in high power handling and low power compression.

D.A.S. uses CAB (Complex Aggregate Board) to build roadworthy enclosures for the Pf series. CAB is a high density, hardwood aggregate board, thermo-fused in 10 ton presses.

The speaker is protected by a resilient steel grille. Bar handles are provided at the sides for ease of transport.

Placement

As any bass unit, the SUB 15 low frequency response will benefit from placement against walls and/or floors.

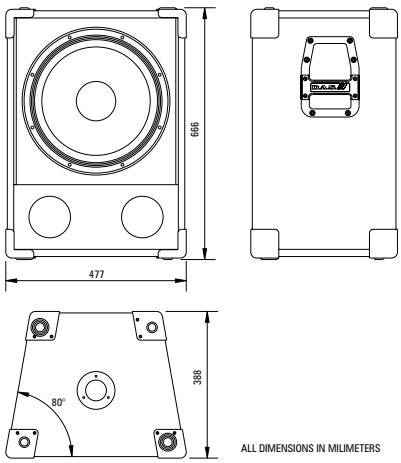
The top panel contains a standard 35 mm diameter pole mount socket for use with metal posts for mounting full-range D.A.S. systems to the SUB-15 sub-woofer unit.

Features

- **Direct radiator sub-woofer**
- **15" low frequency speaker**
- **400 W power handling**
- **Rugged steel grille**

Specifications

RMS (Average) Power Handling[R]:	400 W
Program Power Handling[P]:	800 W
Peak Power Handling[K]:	1600 W
On-axis Frequency Range[F]:	50 Hz - 3.6 kHz
Usable Frequency Range:	35 Hz - 1 kHz
Nominal Impedance:	8 Ω
Minimum Impedance[I]:	7 Ω (at 49 Hz)
On-axis Sensitivity 1W / 1 m[S]:	100 dB SPL
Rated Peak SPL at Full Power:	131 dB SPL at 1m
Nominal -6 dB Beamwidths[B]:	360° Horizontal
(100 Hz octave)	360° Vertical
Enclosure Material:	Complex Aggregate Board
Finish:	Gray carpet
Transducers/Replacement Parts:	P-15/GM P-15
Connector:	2 paralleled NL4 Speakon, wired to ±1
Dimensions (H x W x D):	67 x 48 x 39 cm (26.5 x 19 x 15.4 in)
Weight:	26 kg (57.2 lbs)
Shipping Weight:	27.5 kg (60.5 lbs)



ALL DIMENSIONS IN MILIMETERS

[R] Based on a 2 hour test using a 6 dB crest factor pink noise signal bandlimited according to IEC 268-1 (1985). All power ratings are referred to the nominal impedance.
[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 125 Hz one octave band.
[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.

D.A.S. SOUND PRODUCTS

Sub-15

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 (2.83 V) swept sine signal.

Impedance
Figure 2 shows impedance with frequency.

Distortion
Figure 3 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 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 Di
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.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.

FIG. 1

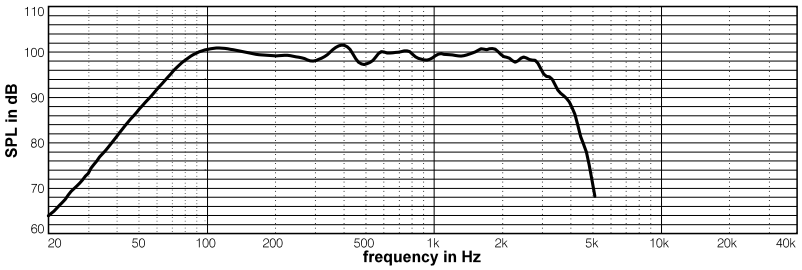


FIG. 2

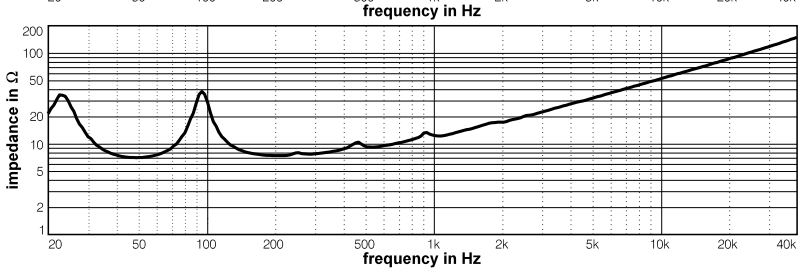


FIG. 3

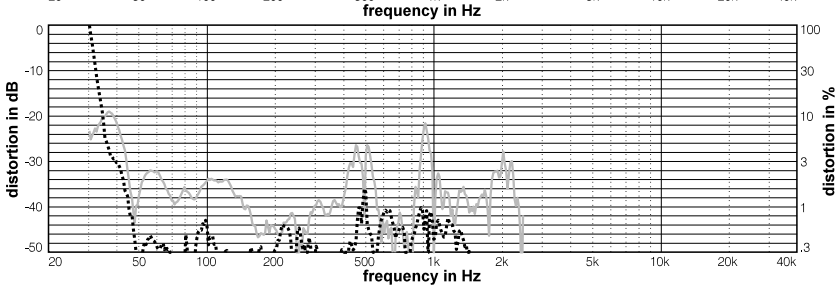


FIG. 4

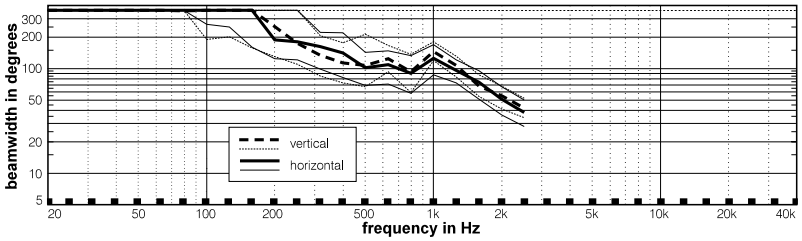


FIG. 5

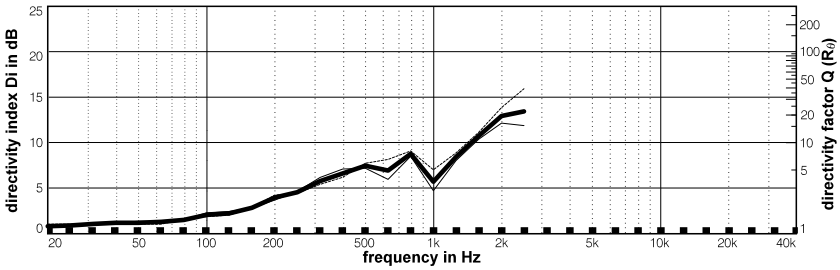
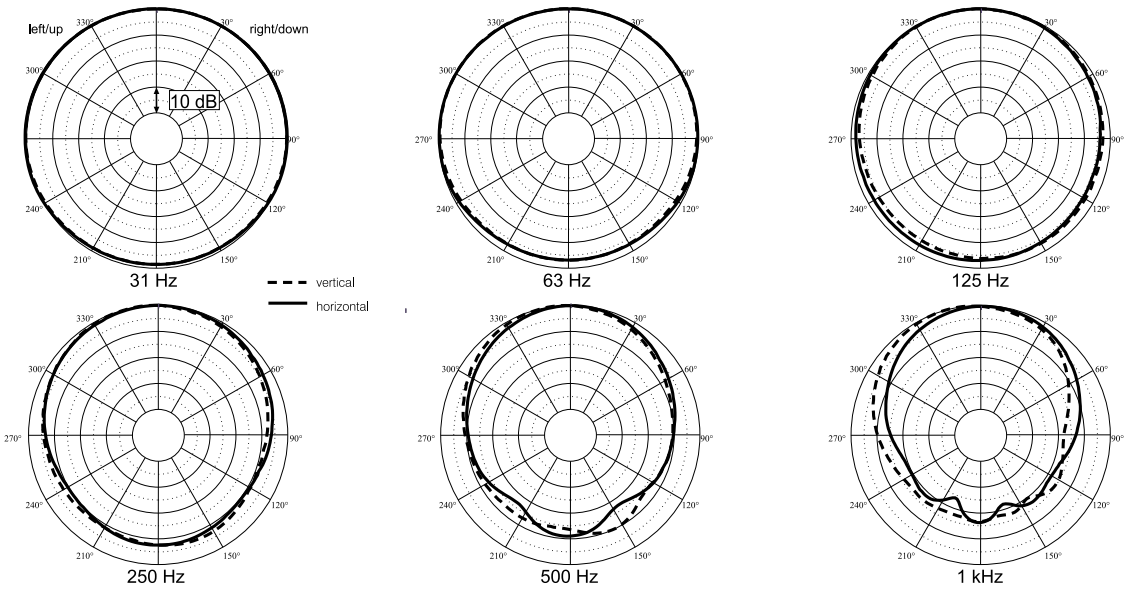


FIG. 6



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