

# Sub-18A



## FEATURES

- » Self-powered direct radiator sub-woofer system
- » 500 W power amplifier
- » 18" low frequency speaker

## SPECIFICATIONS

<b>Nominal Amplifier Power<sup>F</sup>:</b>	500 W <sub>RMS</sub> , class D
<b>Input Type:</b>	Balanced Differential for Line
<b>Input Impedance:</b>	Line: 23 kΩ
<b>Sensitivity:</b>	Line: 0.775 V (0 dBu)
<b>On-axis Electro-acoustical Frequency Range:</b>	38 Hz - 135 Hz
<b>Rated Maximum Peak SPL at 1 meter:</b>	131 dB
<b>Built-in crossover frequency:</b>	100 Hz, 24 dB/oct
<b>Nominal -6 dB Beamwidths<sup>B</sup>:</b>	360° Horizontal
(100 Hz octave)	360° Vertical
<b>Enclosure Material:</b>	MDF
<b>Finish:</b>	Black Catalyzed Polyurethane Paint
<b>Transducers/Replacement Parts:</b>	18H/GM 18G
<b>Connectors:</b>	INPUT: Female XLR LOOP THRU: Male XLR SATELLITE OUTPUT: Male XLR AC INPUT: PowerCon NAC 3
<b>AC Power Requirements:</b>	115 V, 50 Hz/60 Hz 230 V, 50 Hz/60 Hz
<b>Dimensions (H x W x D):</b>	64 x 55 x 53 cm (25.5 x 22 x 21 in)
<b>Weight:</b>	42.7 kg (94 lbs)
<b>Shipping Weight:</b>	45.7 kg (101 lbs)

## INTRODUCTION

The D.A.S. Sub-18A is a self-powered bass-reflex sub-woofer system.

## APPLICATIONS

The Sub-18A is designed for applications where subwoofer reinforcement is required such as fixed and portable sound reinforcement, musical instruments, and clubs.

## DESCRIPTION

The Sub-18A incorporates a 500 watt class D switching amplifier powering the low frequency transducer.

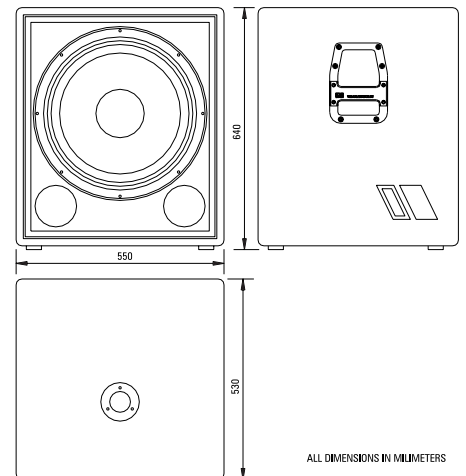
The unit utilizes a high efficiency 18" low frequency speaker with 4" voice coil configured as a direct radiator. Pole piece, side slot and direct convection cooling provide high power handling and low power compression.

The enclosure is manufactured from MDF and is finished with a hard wearing catalyzed polyurethane paint that permits color adaptations and provides weather resistance. Loudspeaker components are protected by a heavy-duty steel grille sealed against corrosion using a polyamide powder coat finish.

## PLACEMENT

As with any bass unit, the Sub-18A's low frequency output 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 above the SUB-18A sub-woofer unit.



ALL DIMENSIONS IN MILLIMETERS

<sup>F</sup> As per IEC 268-5 (1989), re. a one octave band centred at 80 Hz. Half space anechoic. Acoustical -10 dB point is 32 Hz.

<sup>B</sup> Average of one-third octave band measures.

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 swept sine wave signal (-18 dBm input).

**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  $Q(R_{\theta})$  AND  $D_i$**

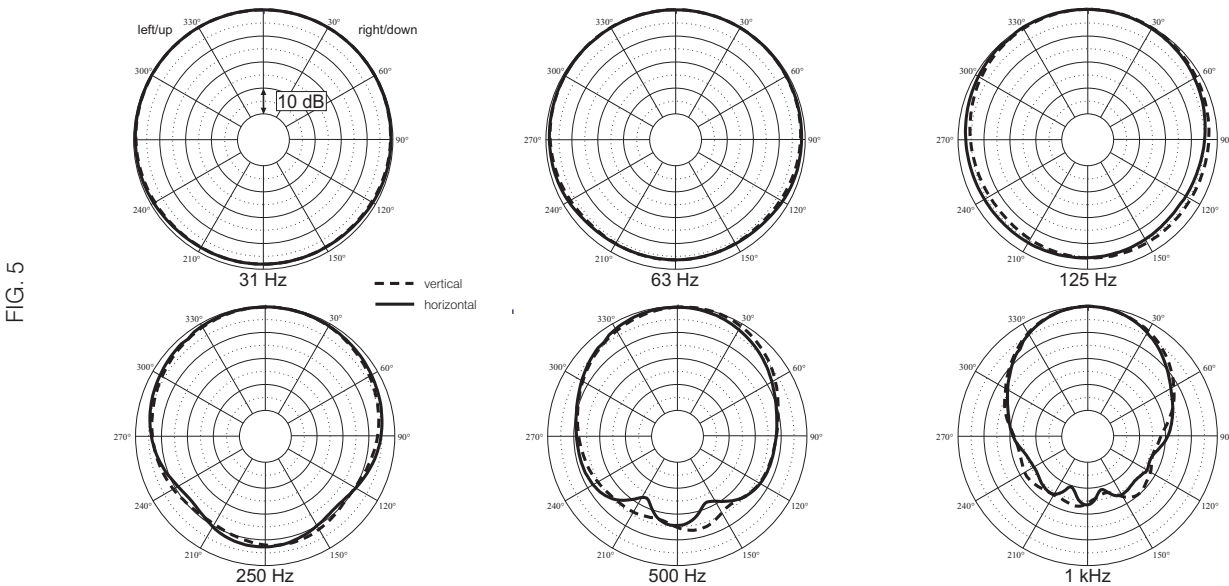
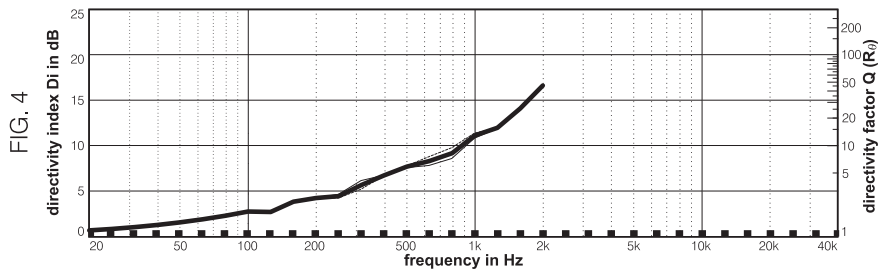
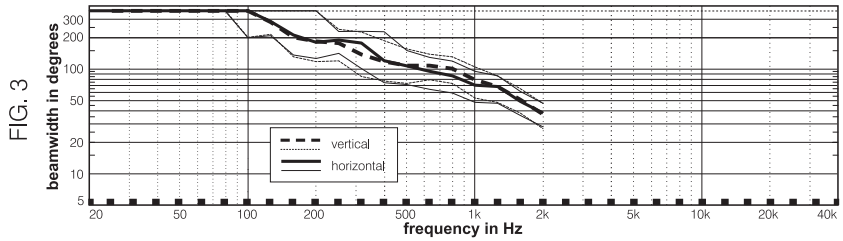
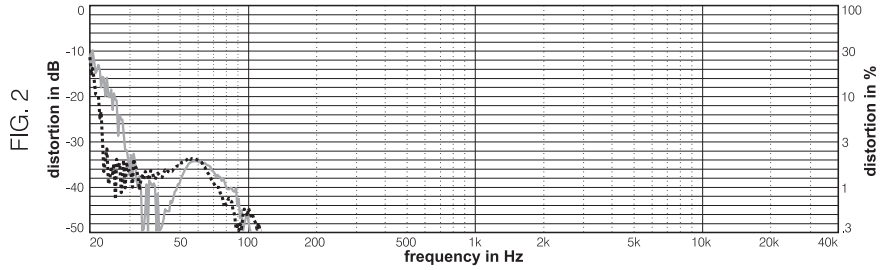
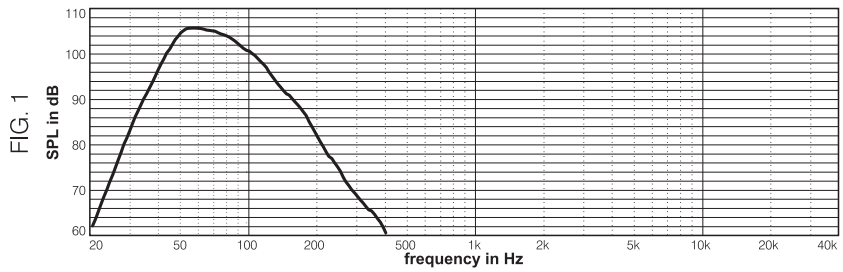
Figure 4 shows the above characteristics with frequency. Thin continuous and dashed lines show partial horizontal and vertical, respectively, characteristics.

**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. 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.



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