

CA-28/CA-28B/CA-28A

aero
series



DESCRIPTION

The CA-28 and derivatives are compact line array modules in full-range (CA-28), bi-amplication (CA-28B) and self-powered (CA-28A) versions.

Mid frequency reproduction is handled by two 8MN16 8" cone loudspeakers that feature unprecedented flux density and a conjugation of side slot and direct voice coil cooling schemes for low power compression.

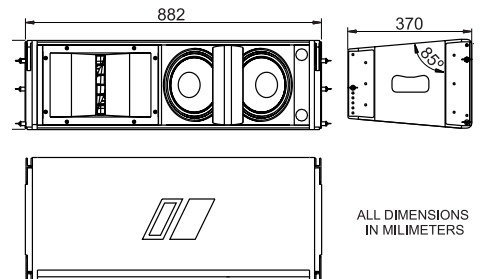
The transducer handling high frequency reproduction is the M-10N driver, which utilizes a neodymium magnet structure, 1.5" exit and a 3" titanium diaphragm. The driver is coupled to a Serpis cast aluminium wave adapter which provides plane wave performance and additional heat sinking for the driver, and is followed by a horn.

The CA-28A system incorporates a 350W class D switching amplifier for the low-frequency section and a 100W class AB amplifier for the high frequency driver.

The compact trapezoidal enclosure is manufactured from Wisa® plywood and is finished with a catalyzed polyurethane paint that provides protection against the elements and abrasion.

The unit 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.

Flying hardware is integral to the box and provides for splay angles from 0 to 10 degrees in 2.5 degree increments, hinge points being located on the front for seamless arraying.



FEATURES

- » 2-way compact line array module
- » Full-range, bi-amp and self-powered versions
- » High efficiency dual 8" Neodymium cone speakers
- » 1.5" exit Neodymium HF compression driver

SPECIFICATIONS

CA-28/CA-28B/CA-28A

Nominal On-axis Acoustical Frequency Range:	80 Hz - 20 kHz
Rated Maximum Peak SPL at 1m:	131 dB SPL
Enclosure Material and Finish:	Wisa® Plywood, Black Catalyzed Polyurethane
Transducers/Replacement Parts:	MF: 8MN16/GM 8MN16; HF: M-10N/GM M-10
Dimensions (H x W x D):	26.5 x 88.2 x 40 cm (10.4 x 34.7 x 15.8 in)

CA-28/CA-28B

RMS (Average) Power Handling:	350 W (CA-28) 350 W/100W (CA-28B MF/HF)
Program Power Handling [†] :	700 W (CA-28) 700 W/200W (CA-28B MF/HF)
Peak Power Handling [‡] :	1400 W (CA-28) 1400 W/400W (CA-28B MF/HF)
Nominal Impedance:	CA-28: 8 Ω CA-28B: MF: 8 Ω, HF: 8 Ω
Minimum Impedance [§] :	CA-28: 7.9 Ω (355 Hz) CA-28B: MF: 7.1 Ω (375 Hz), HF: 8.1 Ω (4 kHz)
Nominal On-axis Sensitivity 1W / 1 m:	CA-28: 100 dB SPL CA-28B: MF: 100 dB SPL, HF: 110 dB SPL
-6 dB Beamwidths:	Horizontal: see curve overleaf Vertical: Splay angle dependent
Input Connection:	2 x NL4 Speakon, CA-28: wired to ±1, CA-28B: wired to ±1 MF ±2 HF
Weight:	28.5 kg (62.8 lbs)

CA-28A

Nominal Mid Frequency Amplifier Power:	350W
Nominal High Frequency Amplifier Power:	100W
Input Type:	Balanced Differential
Sensitivity:	1.2V (+4 dBu)
Input Impedance:	20 kΩ
Connectors:	INPUT: Female XLR, LOOP THRU: Male XLR AC INPUT, AC LOOP THRU: PowerCon NAC 3
Weight:	36.5 kg (80.5 lbs)

[†] Conventionally 3 dB higher than the RMS measure, although this already utilizes a program signal.

[‡] Corresponds to the signal crests.

[§] In practice cable and connector impedance has to be added to all impedance values.

IMPEDANCE

Figure 1 shows impedance with frequency for the CA-28 (solid black) as well as CA-28B's mid (dotted) and high (grey) frequency sections.

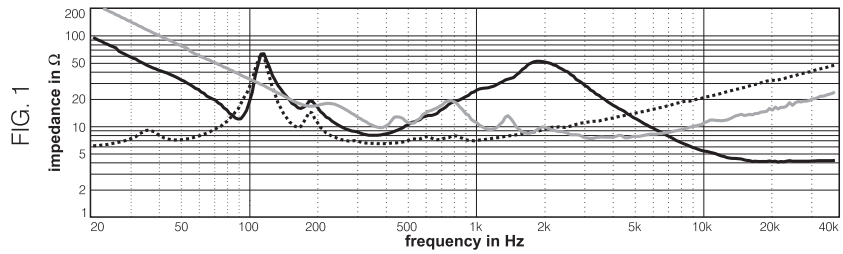


FIG. 1

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.

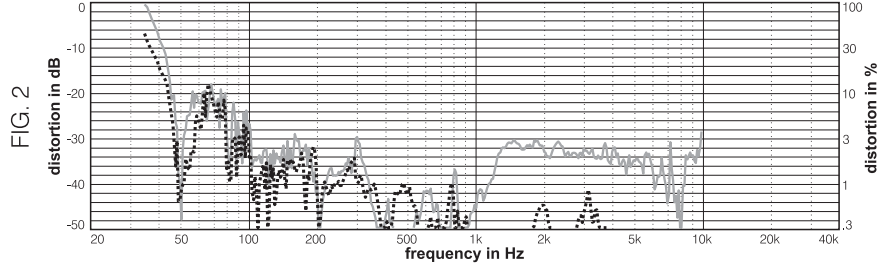


FIG. 2

AXIAL DIRECTIVITY Q(R₀) AND DI
Figure 3 shows the above characteristics with frequency for a single box. Thin continuous and dashed lines show partial horizontal and vertical, respectively, characteristics.

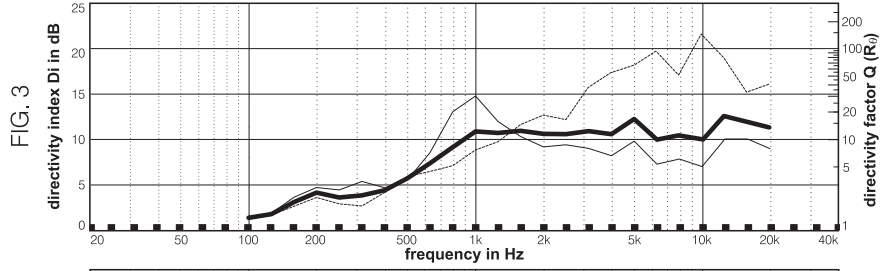


FIG. 3

BEAMWIDTH

Figure 4 shows -3, -6 (thicker trace) and -10 dB horizontal (solid) beamwidth with frequency curves for a single box.

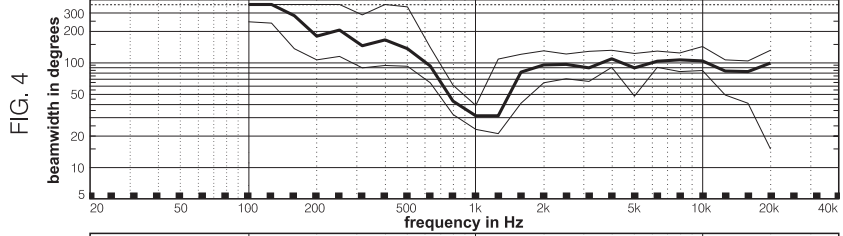


FIG. 4

Figure 5 shows -6 vertical beamwidth with frequency curves for arrays of 2 (black), 4 (dashed) and 8 (grey) units with a splay angle of 10 degrees.

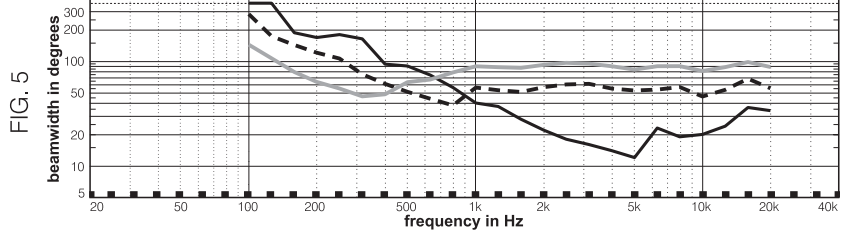


FIG. 5

POLAR RESPONSE

Figure 6 shows the one octave band horizontal (solid) and vertical (dashed) single box polars for the indicated frequencies. Full scale is 50 dB, 5 dB per division.

NOTES. Curves correspond to B version with recommended controller unless specified. In practice, cable and connector impedance need to be added. Harmonic distortion components are not plotted beyond 20 kHz; near-field techniques used. 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. Enveloping may also be used. Beamwidths applicable to 25 metre distance. Directivity factor and index were computed from two degree resolution vertical and horizontal polars using sinusoidal weighting. Product improvement through research and development is a continuous process at D.A.S. Audio. All specifications subject to change without notice.

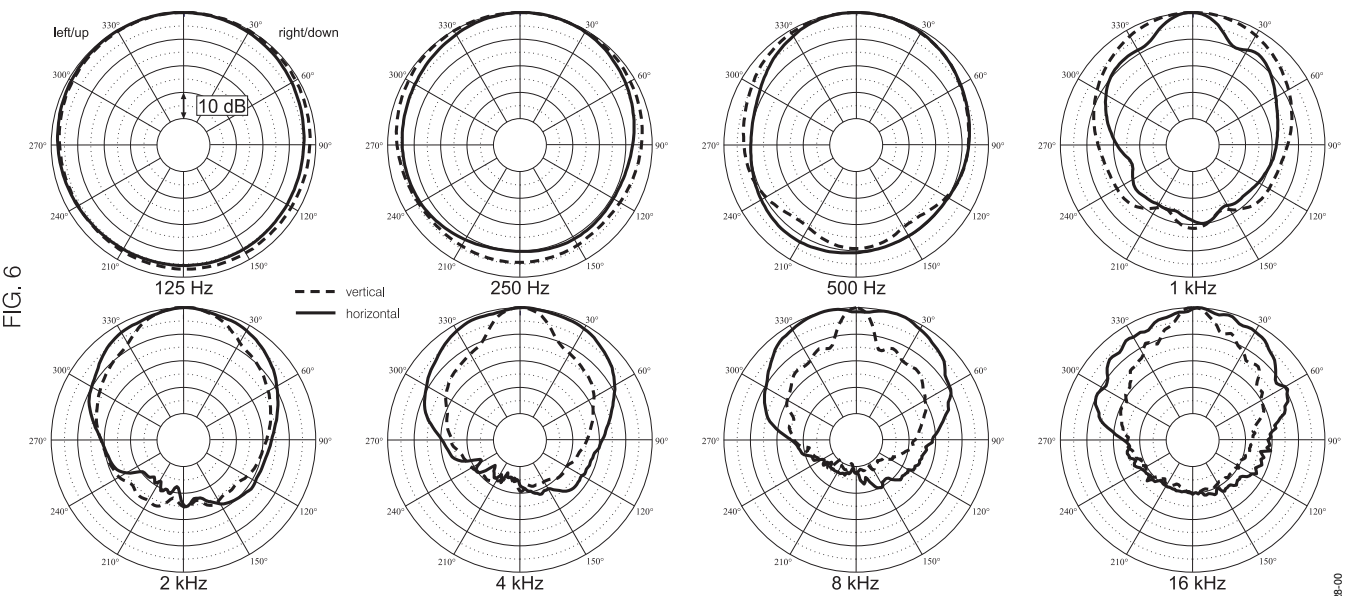


FIG. 6

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