beyma
PROFESIONAL LOUDSPEAKERS

12CX

Coaxial

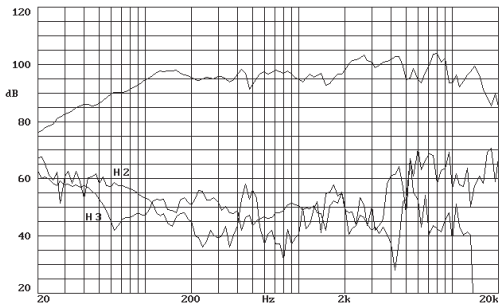
KEY FEATURES

- Considerable power handling: 100 w AES (low frequencies) and 15 w AES (high frequencies)
- Combination of a 12" bass loudspeaker and a compression tweeter
- L.F. unit: 2" (52 mm) copper voice coil
- H.F. unit: 1" (25.8 mm) copper voice coil
- Aluminium diaphragm tweeter
- The concentric mounting reduces phasing problems in the crossover region
- Linear and coherent response

GENERAL DESCRIPTION

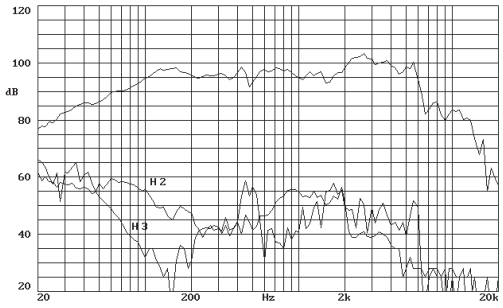
This dual loudspeaker includes, in a single unit, a 12” bass driver and a concentrically mounted compression tweeter. This provides a single point source and reduces phasing problems in the crossover region. The bass driver features a 2” (52 mm) voice coil diameter, attached to a lightweight curvilinear cone, and shows a smoothly extended frequency response up to 7 kHz. The tweeter has excellent efficiency and fast response to transient attacks.

FREQUENCY RESPONSE AND DISTORTION CURVES

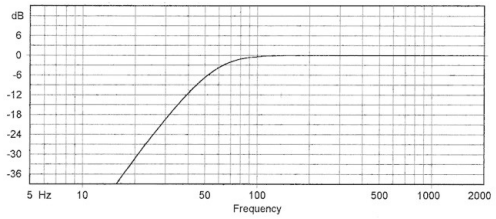


Note: on axis frequency response measured with loundspeaker standing on infinite baffle in anechoic chamber, 1w @ 1m.

FREQUENCY RESPONSE AND DISTORTION CURVES, L.F. UNIT

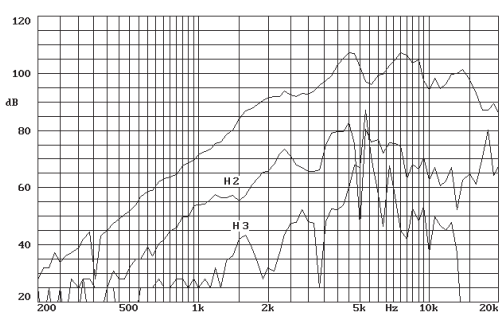


PREDICTED LOW FREQUENCY RESPONSE



Note: Bass-reflex cabinet, Vb=50 l, fb=50 Hz

FREQUENCY RESPONSE AND DISTORTION CURVES, H.F. UNIT



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TECHNICAL SPECIFICATIONS

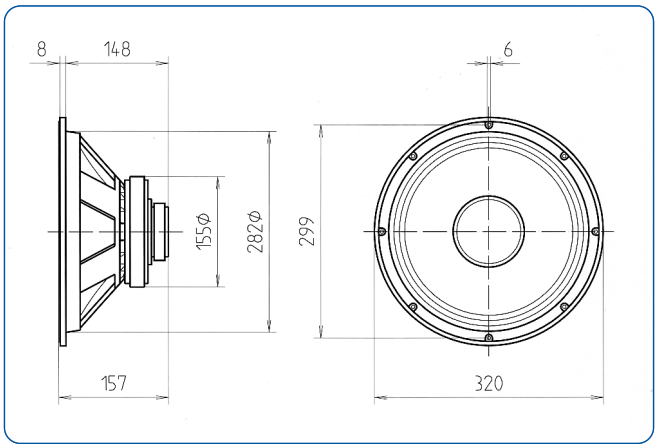
L.F. UNIT	
Nominal diameter	300 mm. 12 in.
Rated impedance	8 ohms.
Minimum impedance	7.8 ohms.
Power capacity*	100 w AES
Program Power	200 w
Sensitivity	104 dB 2.83v @ 1m @ 2π
Frequency range	45-7000 Hz
Recom. enclosure vol.	30 / 100 l 1.06 / 3.53 ft.³
Voice coil diameter	52 mm. 2 in.
Magnetic assembly weight	3.85 kg. 8.5 lb.
BL factor	13 N/A
Moving mass	0.039 kg.
Voice coil length	11 mm.
Air gap height	7 mm.
X damage	16 mm.
H.F. UNIT	
Rated impedance	8 ohms.
Minimum impedance	8.2 ohms. @ 7kHz
Power capacity	15 w AES
Frequency range	3500 - 20000 Hz
Sensitivity 1w @ 1m	154 dB
Voice coil diameter	25.8 mm. 1 in.
Flux density	1.45 T
BL factor	4 N/A
Dispersion	90°

THIELE-SMALL PARAMETERS**

Resonant Frequency, fs	42 Hz
D.C. Voice Coil Resistance, Re	6.22 ohms.
Mechanical Quality Factor, Qms	3.5
Electrical Quality Factor, Qes	0.38
Total Quality Factor, Qts	0.34
Equivalent Air Volume to Cms, Vas	146.4 l
Mechanical Compliance, Cms	373 µm/N
Mechanical Resistance, Rms	2.91 kg/s
Efficiency, ηo (%)	2.65
Effective Surface Area, Sd (m²)	0.053 m²
Maximum Displacement, Xmax	2 mm.
Displacement Volume, Vd	106 cm.³
Voice Coil Inductance, Le@ 1kHz	0.7 mH

Notes:
* The power capacity is determined according to AES2-1984 (r2003) standard. Program power is defined as the transducer's ability to handle normal music program material.

DIMENSION DRAWINGS



MATERIALS

L.F. UNIT
- **Basket:** Die cast aluminium
- **Cone:** Paper
- **Surround:** Plasticised cloth
- **Voice coil:** Copper
- **Magnet:** Ferrite

H.F. UNIT
- **Diaphragm:** Aluminium
- **Voice coil:** Copper
- **Voice coil former:** Kapton

MOUNTING INFORMATION

Overall diameter	320 mm. 12.6 in.
Bolt circle diameter	299 mm. 11.77 in.
Baffle cutout diameter:	
-Front mount	282 mm. 11.10 in.
-Rear mount	280 mm. 11.02 in.
Depth	157 mm. 6.18 in.
Volume displaced by driver	5.5 l 0.16 ft.³
Net weight	5.26 kg. 11.57 lb.
Shipping weight	5.9 kg. 13 lb.

** T-S parameters are measured after an exercise period using a preconditioning power test. The measurements are carried out with a velocity-current laser transducer and will reflect the long term parameters (once the loudspeaker has been working for a short period of time).

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