**DALI**

Danish Audiophile Loudspeaker Industries

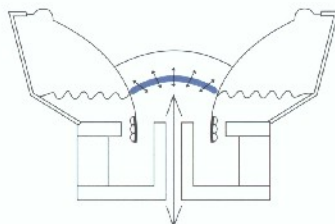
TIMING

Key word for the Dali 107 is timing, the feeling of engagement created by the fast and precise reproduction of the beat in music. Even though the Dali 107 incorporates three drive units, hours of intensive listening sessions has made timing one of its major fortes. The advanced technical solutions in the Dali 107 includes such essential DALI technology as our special low-loss surround, and our Linear Directivity crossover. The low-loss surround enables the reproduction of the tiny details that are of crucial importance, if the speaker is to visualise the realistic sound-stage. The Linear Directivity crossover ensures linear frequency response even at extreme angles off-axis for the optimum speaker/room interface.

Drivers

One of the ways of achieving the spectacular quality of timing, is to design the diaphragms from materials of similar acoustic character. The diaphragm material used in the bass and midrange units is a specially coated paper type, well known for its speed and timing qualities. The 12" woofer incorporates a special four-layer voice coil which has a 50% higher utilisation ratio compared to conventional voice coils, offering the best possible use of the magnet system.

Studying the behaviour of the inevitable Helmholtz resonance under the bass units large centre cap resulted in a new way of designing this essential part. As shown in the illustration, the technique used to minimize the resonance is a double centre cap. The inner cap is transparent, and helps damping the resonance. At the same time it minimizes the compression created under the outer cap resulting in very low distortion and linear frequency response up to 3000 Hz. This assures seamless integration with the midrange which is a custom designed 4" unit. The unique coated paper diaphragm combines high



The Double Center Cap

inner damping with low moving mass. The low-loss surround and the low weight of the voice coil enables the unit to reproduce linear, articulate music from 100Hz to 10kHz with no suppression of even the finest detail.

Our 1" tweeter incorporates a carefully designed magnet system and a ferrofluid cooled and damped voice coil, resulting in high power handling, smooth frequency response and extremely low distortion. The front-plate is optimized to offer

linear frequency response both on-axis and in the listening position at 30 degrees off-axis, making the speaker system very tolerant with regard to positioning.

Crossover

Only the finest components are used in the signal path such as Solen polypropylene capacitors and air-core inductors. Linear impedance makes the DALI 107 an easy load for any amplifier. Research has shown that as impedance varies with frequency, most amplifiers tend to sound aggressive and edgy. The crossover in the Dali 107 is optimized for an even frequency-independent impedance curve which allows any amplifier to perform at its best.

Enclosure

Extensive use of modal analysis in the DALI laboratories has documented the need for damping of panel resonances which cause sound radiation from enclosure surfaces. One important factor is the rigidity of the front baffle. For this reason the Dali 107 has the narrowest possible front and employs 19mm particleboard for maximum rigidity. The inevitable diffraction effects that do arise are effectively absorbed by a layer of felt. The absence of diffraction allows a significant improvement in the stability and focus of the stereo image.

For listeners who prefer to use the Dali 107 with the front grilles in place, the frames are carefully designed to minimise any diffraction. The gold-plated terminals of the DALI 107 accept banana plugs as well as heavy-gauge bare wire.

Specifications:

Cabinet type.....Bass reflex
Crossover frequency.....530 Hz, 3,200 Hz
Nominal impedance.....4 ohms
System resonance.....35 Hz
Frequency response +/- 3dB...42-18,000 Hz

Continuous power handling.....100 Watt
Peak power handling.....150 Watt
Sensitivity.....92dB(2.83V/1m)
Dimensions (HxWxD).....96x28x30 cm
Weight.....23 kgs/50 lbs



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