ENGINEERING NOTES
EPOS ES-7N

Concept

The EPOS ES-7N was developed as a compact two-way loudspeaker that combines classic EPOS design principles with modern loudspeaker engineering. The goal was to achieve a direct and natural musical presentation without unnecessary design complexity.

The loudspeaker is suitable both for free-space placement on stands and for integration into typical living environments or shelving systems. Despite its compact dimensions, the ES-7N delivers a remarkably mature and dynamic sound presentation.

Driver Concept

At the heart of the design is a 130 mm bass/midrange driver, covering both the midrange and bass region.

The cone has been designed to combine stiffness with low moving mass, enabling precise and dynamic reproduction while maintaining a natural presentation of voices and instruments.

High frequencies are reproduced by a high-resolution tweeter, delivering clear and detailed treble performance.

The drivers are arranged in an asymmetrical layout on the front baffle. The two speakers of a stereo pair are mirror-imaged. For the best stereo performance, the speakers should be positioned with the tweeters facing inward, allowing the soundstage to develop precisely between the loudspeakers.

Crossover and Placement Adjustment

The crossover network has been developed to ensure coherent integration of the two drivers and consistent dispersion behaviour.

In addition, the ES-7N features a switch on the rear panel, allowing the user to select between two different crossover alignments.

One position is optimised for free-space placement or stand mounting, while the second position compensates for wall-near placement or bookshelf installation, where room boundaries increase bass energy.

This adjustment ensures a balanced and controlled sound even when the loudspeaker is positioned close to walls or inside shelving systems.

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Cabinet Construction

The cabinet uses a sandwich construction of two 8 mm MDF panels, separated by a high-loss damping layer. This construction effectively reduces unwanted cabinet resonances.

An additional wooden block mounted at the top of the cabinet improves structural stability and contributes to precise stereo imaging. Only a single internal brace is required to keep the cabinet mechanically quiet.

Four threaded inserts on the underside accept 4 mm mounting screws. The loudspeakers are supplied with silicone rubber spikes, providing effective isolation between the speaker and the supporting surface.

Bass Reflex System

The bass reflex system uses an unusual but carefully engineered design. The port begins on the side of the cabinet, but is internally routed so that the outlet is positioned between the two side panels.

The curved port includes selectively damped ventilation openings, which help control unwanted resonances in the mid-frequency region.

This design reduces the influence of internal standing waves while maintaining clean and controlled bass reproduction.

Placement

For optimal performance, the loudspeaker should be used on stands approximately 70 cm high.

At this height, the tweeter will be positioned close to ear level, ensuring accurate stereo imaging and a stable soundstage.