musikelectronic geithain

ME 803K

STUDIO MONITORING SYSTEMS

HIGHEND LOUDSPEAKER

SOUND REINFORCEMENT SYSTEMS

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With the launch of the new 800 line, Musikelectronic Geithain opens a new chapter in the history of development of its studio and high-end loudspeakers. The new high-performance systems set sound and technology standards for both studio application and home audio. The experience from three decades of loudspeaker making was incorporated into the development of these products, applying well-proven and consequently refined solutions such as our *MCDS Coax (Minimum Colouration Directivity Steering Coax)* and our *K Technology (K = "Kardioid")*. Top-level quality is guaranteed due to complete fabrication in our Saxon manufacture.

The 3-way concept of the ME 803K consists of two 10-inch woofer system, a 6.5-inch high-performance midrange system and a tweeter array with three vertically arranged 1-inch tweeter calottes. The directivity of the system has been optimised for listening distances of between three and six metres, rendering a natural sound image in stereo and multichannel operation. One 1000 W and two 500 W amplifier modules supply the bass, mid and treble channels with sufficient power. The resulting overload safety ensures that even signals with highest peak levels are not limited. Also, sound pressure levels of up to 122 dB can be performed without audible distortions throughout the effective frequency range. A room compensation network, integrated into the amplifier electronics, allows control of the room-dependent frequency response.

The vertical arrangement of the 10-inch woofers provides a directivity index that ensures realistic bass presence even at listening distances of up to six metres. Our reliable *K Technology* minimises rearward-directed room reflections in the bass range and simplifies the positioning of the ME 803K in the listening room.

The low-discolouration and low-distortion characteristics of the 6.5-inch high-performance midrange system result from the intelligent combination of several construction details. The cone loudspeaker, for example, runs without contact to the enclosure, thus avoiding the problem of cabinet resonances. Instead the midrange system is operated with a rearward-directed acoustic flow resistor in order to achieve the desired directivity.

Frequently used wave guides in front of tweeter systems make directivity control easy. However, they tend to produce unavoidable discolourations due to short-time reflections on the inner horn surface. We take a different approach by using a tweeter array and doing without horn loudspeaker systems for sound level enhancement. The tweeter unit that is arranged coaxially in front of the midrange system guarantees the trademark low-colouration reproduction of sound events by our loudspeakers.

All these features make the ME 803K so unique in the loudspeaker market. It has been optimised for large listening distances and for acoustically less attenuated rooms.

TECHNICAL PROPERTIES

GENERAL	Active 3-way High-Performance-Loudspeaker for hearing distances between 3 and 6 m
MAXIMUM SPL TO IEC 268-1 PROGRAMME MATERIAL	≥ 117 dB 122 dB peak / r = 1 m (3.3 ft)
BANDWIDTH	25 Hz ... 22 kHz - 6 dB
CALIBRATION: ACOUSTIC OUTPUT LEVEL / P_E = - 14 dBu	90 dB / r = 1 m (3.3 ft)
DIRECTIVITY INDEX FROM 100 Hz ... 10 kHz	increasing from 4 to 10 dB
INHERENT NOISE SOUND LEVEL	≤ 10 dB (A) / r = 1 m (3.3 ft)
TOTAL HARMONIC DISTORTION MEASURED AT 100 dB / r = 1 m (3.3 ft) FROM 100 Hz ... 10 kHz	≤ - 45 dB
NOMINAL INPUT LEVEL	+ 6 dBu adjustable
INPUT IMPEDANCE	≥ 10 kOhm RC symmetrically
ELECTRONIC CROSSOVER FREQUENCIES	680 Hz and 2 kHz
OUTPUT POWER PWM-AMPLIFIER LF MF HF	 max. 1000 Watt / 4 Ohm max. 500 Watt / 4 Ohm max. 500 Watt / 4 Ohm
POWER REQUIREMENTS	90 ... 132 V, 55 ... 65 Hz; 190 ... 265 V, 45 ... 55 Hz
POWER CONSUMPTION	30 VA at standby; max. 1000 VA at full load
MAINS CONNECTION	Euro cold-unit connector with HF-filter
OPERATION AND CLIPPING INDICATOR	LED on front side
INPUT CONNECTOR	XLR 3F (programme input)
OUTPUT CONNECTOR	XLR 3M (bass expansion)
LOUDSPEAKER SYSTEMS WOOFER MID-RANGE UNIT TWEETER	 2x 260 mm (10") cone 1x 160 mm (6") cone 3x 25 mm (1") dome
DIMENSIONS (H x W x D)	772 x 366 x 423 mm (30.4 x 14.4 x 16.7 in)
WEIGHT	71 kg (156.2 lbs)
TEMPERATURE REQUIREMENTS FOR USE FOR STORAGE HUMIDITY	 + 15°C ... + 35°C (59°F ... 95°F) - 25°C ... + 45°C (- 13°F ... 113°F) 45 ... 75 %
DESIGN OF THE CABINET	MDF-wood in cherry veneered and stained SU38, MDF-wood in ash black veneered, different veneers or colors optional

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SYSTEMS

Nikolaistraße 7
04643 Geithain / Germany

Tel: +49 (0) 34341 3110
Fax: +49 (0) 34341 31144

E-Mail: info@me-geithain.de

www.me-geithain.de

Acoustic diagrams