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The Martin Experience



This equipment conforms to the requirements of the EMC Directive 89/336/EEC, amended by 92/31/EEC and 93/68/EEC and the requirements of the Low Voltage Directive 73/23/EEC, amended by 93/68/EEC.

Standards Applied	EMC Emission	EN55103-1:1996
	Immunity	EN55103-2:1996
	Electrical Safety	EN60065:1993

1 INTRODUCTION

Thank you for purchasing a Martin Audio LE Series monitor. LE Series monitors have always set the industry standard for touring and stage applications. All LE Series monitors except the LE400C utilise differential dispersion horn technology to define a high frequency coverage footprint that is particularly useful for stage monitor applications.

2 UNPACKING

Each Martin Audio loudspeaker is built to the highest standard and thoroughly inspected before it leaves the factory. After unpacking the system, examine it carefully for any signs of transit damage and inform your dealer if any such damage is found. It is suggested that you retain the original packaging so that the system can be repacked at a future date if necessary. Please note that Martin Audio and its distributors cannot accept any responsibility for damage to any returned product through the use of non-approved packaging.

3 OVERVIEW

The LE12JB is a two-way active/passive switchable, multi-angled enclosure fitted with a high sensitivity 12" (305mm) / 3" (75mm) coil driver handling low frequencies up to the 1.3kHz crossover point. High frequencies are reproduced by a 1.4" (35mm) exit titanium diaphragm compression driver loaded by a proprietary differential dispersion 50°-100° horizontal x 70° vertical horn.

The differential dispersion horn varies its horizontal dispersion from wide to narrow as the performer moves back from the monitor. This narrowing dispersion effectively changes the forward gain of the horn which enables the horn to throw further, increasing the operating range of the monitor and reducing excess spill. As the performer moves closer to the monitor the dispersion widens giving the performer the ability to hear themselves clearly even when positioned directly above or to the left or right of the monitor.

The multi-angled enclosure is of multi-laminate birch ply construction and is available in left and right-handed versions. Incorporating a tough punched

steel grille and recessed side handles, the cabinet is finished in black textured paint.

When operated in passive mode the LE12JB can be used without a controller. Used actively the LE12JB is best operated with DX1 or MX5 controllers to provide crossover, limiting and eq functions. In either mode sound quality is consistent, enabling mixing of configurations on stage, without the need to compensate for differing tonal balance. When using the LE12JB in active mode performance is identical to its predecessor, the LE12J. A retro-fit kit is available to upgrade this model.

4 AMPLIFICATION

The LE12JB is designed to be used with professional power amplifiers capable of producing 500-700W into 4 ohms:

Care should be taken to avoid amplifier clipping. It is important to understand that a low power amplifier driven into clipping is more likely to damage a loudspeaker than a higher power amplifier used within its ratings. This is because music signals have a high peak-to-average "crest" factor. When an amplifier is severely overdriven, its output waveform is clipped (its peaks are squared off) – reducing the crest factor. In extreme cases, the waveform can approach that of a square wave. An amplifier is normally capable of producing far more power under these conditions than its undistorted rated power output.

The use of very high power amplifiers with outputs greater than those recommended is discouraged.

Care should be taken to avoid switch-on surges, which can result in momentary power peaks in excess of specified ratings. When powering up a sound system it is important to switch on the amplifiers after the mixer and control electronics have stabilised. When powering down the system, reverse the sequence and switch off the amplifiers first.

5 CONNECTIONS

The LE12JB is fitted with two Neutrik Speakon NL4 connectors wired in parallel. Do not make a connection to +2, -2 when using the LE12JB in passive mode.

NL4	LE12JB Passive	LE12JB Active
-1	Input -	LF -
+1	Input +	LF +
-2	N/C	HF -
+2	N/C	HF +

6 CABLE LENGTHS

When connecting loudspeaker systems to an amplifier, it is recommended that the return resistance of the cable used is less than one tenth of the nominal impedance of the system or systems in parallel. The table below gives an indication of the maximum permissible cable runs for various conductor cross-sectional areas.

<u>Conductor CSA</u>	<u>Maximum Cable Run</u>		
	4 ohms	8 ohms	16 ohms
1.0mm ²	11m	22m	44m
1.5mm ²	17m	34m	68m
2.0mm ²	22m	44m	88m
2.5mm ²	29m	58m	116m
4.0mm ²	44m	88m	176m
6.0mm ²	66m	132m	264m

7 WARRANTY

Martin Audio LE12JB monitors are warranted against manufacturing defects in materials or craftsmanship over a period of 5 years from the date of original purchase. During the warranty period Martin Audio will, at its discretion, either repair or replace products which prove to be defective provided that the product is returned in its original packaging, shipping prepaid, to an authorised Martin Audio service agent or distributor.

Martin Audio Ltd. cannot be held responsible for defects caused by unauthorised modifications, improper use, negligence, exposure to inclement weather conditions, act of God or accident, or any use of this product that is not in accordance with the instructions provided by Martin Audio. Martin Audio is not liable for consequential damages.

This warranty is exclusive and no other warranty is expressed or implied. This warranty does not affect your statutory rights.

8 TECHNICAL SPECIFICATIONS

LE12JB

TYPE	Two-way reflex enclosure with differential dispersion HF horn
FREQUENCY RESPONSE (1)	65Hz-18kHz \pm 3dB
DRIVERS	12" (305mm) dia. 3" (75mm) voice coil 1.4" (35mm) exit compression driver
RATED POWER (2)	FR/LF: 300W AES, 1200W peak. HF: 75W AES, 300W peak.
RECOMMENDED AMPLIFIER SENSITIVITY (3)	500-700W into 4 ohms FR: 97dB 1 Watt/1 metre LF: 98dB 1 Watt/1 metre HF: 106dB 1 Watt/1 metre
MAXIMUM SPL (4)	FR: 120dB continuous, 126dB peak LF: 121dB continuous, 127dB peak HF: 124dB continuous, 130dB peak
IMPEDANCE	FR: 8 ohms nominal LF: 8 ohms nominal HF: 16 ohms nominal
CROSSOVER	1.3 kHz passive/active
DISPERSION (-6dB)	50°-100° horizontal, 70° vertical
ENCLOSURE	38 litre (1.3cu foot) multi-laminate birch ply
FINISH	Textured black paint
PROTECTIVE GRILLE	Black perforated steel
CONNECTORS	2 x Neutrik NL4
FITTINGS	2 x recessed side handles
DIMENSIONS	(W) 607mm x (H) 343mm x (D) 434mm (W) 23.9ins x (H) 13.5ins x (D) 17.1ins
WEIGHT	27.5kg (60lbs)
SHIPPING DIMENSIONS	(W) 710mm x (H) 420mm x (D) 510mm (W) 28ins x (H) 16.5ins x (D) 20.1ins
SHIPPING WEIGHT	29.8kg (66lbs)

Notes

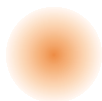
1. Measured on-axis in half space at 2 metres, then referred to 1 metre.
2. AES Standard ANSI S4.26-1984.
3. Measured in half space conditions at 2 metres with 1 watt input, using band limited pink noise, then referred to 1 metre.
4. Measured in half space conditions at 2 metres using band limited pink noise, then referred to 1 metre.

Due to our policy of continuous improvement all specifications are subject to change without notice.

LE12JB Series Monitor



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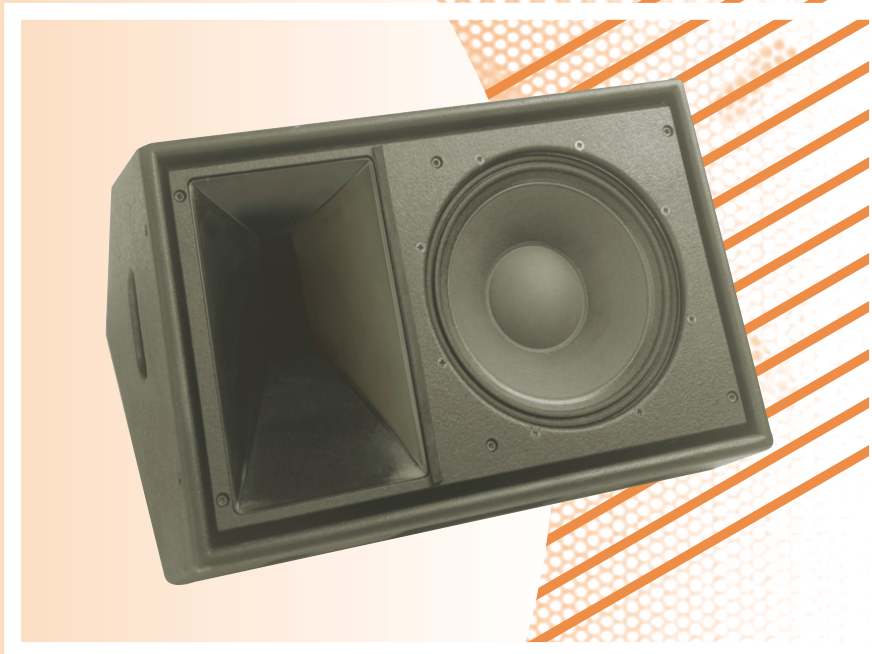
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LE12JB Series Monitor

User's Guide



ENGLISH



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