

WPM

Optimised Line Array – Two-way, passive line array element



Features

- Ultra-compact line array
- Scalable resolution for advanced array control
- External, dedicated, multi-channel Class D amplification
- Industry-leading DISPLAY software interacts with DSP for highly-accurate results
- Fast, integral 3-point flying systems for up to 16 enclosures
- Side and rear handles for ease of handling and setting splay angles
- 100° horizontal constant directivity pattern control



Applications

- Touring sound reinforcement for small and medium-size venues
- Fixed installations in concert halls, theatres, ballrooms and HoW
- Sports stadium and arena installations
- Corporate AV events

The scalable resolution of WPM offers greatly improved coverage consistency and control compared to a standard line array and provides a flexible pathway to advanced array optimisation.

WPM is incredibly versatile. Its very small footprint and light weight make it the system of choice for smaller venues which require superb fidelity, coverage consistency and control from an ultra-compact line array. With a peak SPL of 130dB peak, it is also very powerful — a 12-box array will throw beyond 35 metres (115ft) and produce live music at high levels in up to 3000-seat venues. It embodies the very latest acoustic technology in an ultra-compact enclosure and is the ideal system for small-to-medium scale theatres and live music venues, AV events and installations in concert halls, ballrooms and HoW.

A passive 2-way system with an impedance of 16 ohms, it can be driven in blocks of 1, 2, 3 or 4 resolution configuration. With a complement of 2 x 6.5" (165mm) LF drivers and a vertical column of 3 x 1.4" (35mm) aluminium dome HF drivers, the acoustic design of WPM is uniquely innovative. The LF drivers are located in the side walls of the HF horn — an arrangement which would introduce acoustic cavities which would degrade the horizontal dispersion if conventional cone drivers were used. WPM's drivers adopt an elegant solution by having solid moulded diaphragms which match the contours of the horn walls and maintain the continuity of the horn profile. Each



Updated Q2 2026

LF driver also features a demodulation ring in the neodymium motor system to minimize distortion and maximise mid-band output.

In the triple-driver HF section, each individual HF waveform is precisely coupled to the horn throat via a short waveguide for faultless 100° horizontal constant directivity coverage.

From Q2 2026, Wavefront Precision enclosures have an IP54 rating and feature improved construction methods, paint and metalwork to make them more hardwearing. They also feature an LED indicator that can be illuminated via VU-NET software to identify each enclosure location on the circuit.



Martin Audio Ltd

Century Point, Halifax Road, High Wycombe
Buckinghamshire HP12 3SL, England

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Telephone: +44 (0) 1494 535 312
Email: info@martin-audio.com

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Technical Specifications From Q2 2026

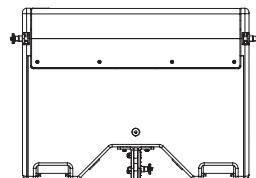
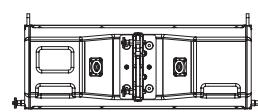
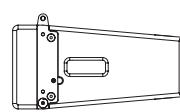
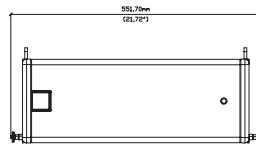
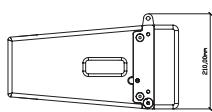
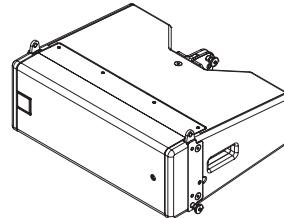
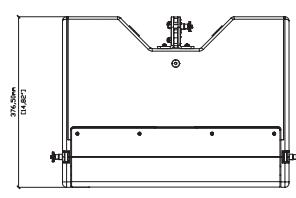
TYPE	Two-way, passive line array element
FREQUENCY RESPONSE (5)	76Hz-18kHz ± 3dB
DRIVERS	LF: 2 x 6.5" (165mm) contoured-diaphragm /2" (50mm) edge-wound CCAW voice coil, neodymium magnet drivers, reflex loaded HF: 3 x 1.4" (35mm) aluminium dome /1.4" (35mm) voice coil, neodymium magnet compression drivers on constant-directivity waveguide
SYSTEM AMPLIFIER	iKON iK41, iK42 or iK81
SYSTEM RESOLUTION	1 to 4 enclosures per amplifier channel
RATED POWER (2)	300 W AES, 1200 W peak
MAXIMUM SPL (9)	130dB peak (1 cabinet)
NOMINAL IMPEDANCE	16 ohms
DISPERSION	100° horizontal (-6dB), 125° horizontal (-10dB) 10° vertical
CROSSOVER	1.2kHz passive
ENCLOSURE	Vertical trapezoid with 5° wall angle, Multi-laminate birch and poplar-ply construction
FINISH	Black or white hardwearing paint
PROTECTIVE GRILLE	Black or white HEX perforated steel with network LED
ENVIRONMENTAL TESTING (11)	IP 54
	MIL-STD-810H
	ISO 4892-2 Solar Radiation
	ISO 12944-6 Category C3 Corrosion resistance
CONNECTORS	2 x NL4 type
PIN CONNECTIONS (INPUT)	1+/-
FITTINGS	Integral 3-point rigging system 2 x side pocket handles 2 x rear grip handles
FLOWN ARRAY MAXIMUM	16 enclosures in single array
DIMENSIONS	(W) 500mm x (H) 185mm x (D) 377mm (W) 19.7in x (H) 7.3in x (D) 14.8in
WEIGHT	14kg (30.9lbs)
ACCESSORIES	Touring flying frame Install flying frame Dolly for 4 enclosures Ground stack outrigger Flying Pin



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2021

Notes

- (1) Measured on-axis in half (2pi) space at 2 metres, then referred to 1 metre.
- (2) AES Standard ANSI S4.26-1984.
- (3) Measured in half (2pi) space at 2 metres with 1 watt input, using band limited pink noise, then referred to 1 metre.
- (4) Measured in half (2pi) space at 2 metres using band limited pink noise, then referred to 1 metre.
- (5) Measured on-axis in open (4pi) space at 2 metres, then referred to 1 metre.
- (6) Measured in open (4pi) space at 2 metres with 1 watt input, using band limited pink noise, then referred to 1 metre.
- (7) Measured in open (4pi) space at 2 metres using band limited pink noise, then referred to 1 metre.
- (8) Measured in open (4pi) space at 2 metres with 2.83V input, using band limited pink noise, then referred to 1 metre.
- (9) Calculated at 1 metre with 6dB crest factor.
- (10) Measured in half (2pi) space at 2 metres with 2.83V input, using band limited pink noise, then referred to 1 metre.
- (11) Please refer to dedicated Environmental Testing page within datasheet or martin-audio.com/environmentaltesting



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SPL Comparisons Vs Competitors

- The core measurement of SPL is measured differently by manufacturers
- Simply put, many competitors now quote figures based upon a crest factor of 4 (12dB peak vs continuous) and often use the highest sensitivity frequency band (typically HF) to derive their figures given that at LF, where the most power is required, even large amplifiers can't swing twice the peak output volts demanded by a doubling in crest factor from 2 to 4.
- Martin Audio quotes the AES industry standard crest factor of 2 (6dB peak vs continuous) and we ensure our partnering amplifiers are capable of delivering the volts and power to achieve our specs.
- If you don't understand how SPL is measured, you might wrongly assume that some competitors' loudspeakers have significantly higher SPL.
- While absolute comparable data is not available, some element of logic can be applied for the following products to bring a more realistic comparison.

Product	Peak at Crest factor 2 (6dB)	Peak at Crest factor 4 (12dB)
Martin Audio WPM broadband	130dB*	136dB**
Martin Audio WPM HF band	130dB*	136dB**
d&B T10	124/126**	130 (LF) / 132dB (HF)*
Adamson S7 (2x7")	132dB**	138dB*
L-Acoustics KIVAll	132dB**	138dB*

*Manufacturer quoted

**calculated

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Environmental Testing

IEC 60529 Ingress Protection

This standard defines the IP rating system, which classifies the degree of protection an enclosure provides against the ingress of solid objects (dust) and liquids (water).

Rating Scale

FIRST DIGIT (Solid Object Protection): Scale 0-6

- 0 No protection
- 1 Objects >50mm (hands)
- 2 Objects >12.5mm (fingers)
- 3 Objects >2.5mm (tools, wires)
- 4 Objects >1mm (small wires)
- 5 Dust protected (limited ingress)
- 6 Dust-tight (no ingress)

SECOND DIGIT (Liquid Protection): Scale 0-8

- 0 No protection
- 1 Dripping water (vertical)
- 2 Dripping water (15° tilt)
- 3 Spraying water (60° angle)
- 4 Splashing water (all directions)
- 5 Water jets (low pressure)
- 6 Powerful water jets
- 7 Temporary immersion (1m, 30 min)
- 8 Continuous immersion (depth specified)

MIL-STD-810H

This U.S. Department of Defense standard specifies environmental tests to evaluate the ability of equipment to withstand harsh environmental conditions.

What it Tests

Temperature:

- Low temperature (storage and operation)
- High temperature (storage and operation)
- Temperature shock

Humidity:

- Constant and cyclic humidity testing

Solar Radiation:

- UV exposure testing at high intensity

Salt Fog/Salt Spray:

- Corrosion resistance testing

Rain & Water:

- Rain (blowing and dripping)

Dust & Sand:

- Particle resistance

Vibration & Shock:

- Mechanical stress testing

ISO 4892-2 Solar Radiation

This standard defines laboratory methods for exposing plastics and other materials to xenon arc lamps to simulate the effects of natural sunlight (UV radiation and visible light).

What it Tests

- Colour fading/change
- Gloss loss
- Surface cracking
- Material degradation
- Physical property changes

ISO 12944-6 Corrosion Resistance

This standard outlines laboratory test methods for assessing the performance of protective paint systems against corrosion in various atmospheric environments.

Category	Exterior Environment	Interior Environment
C1 (Very Low)	Not Applicable	Heated buildings with clean atmospheres (e.g. offices, shops, schools, hotels)
C2 (Low)	Atmospheres with low pollution (mostly rural areas)	Unheated buildings where condensation can occur (e.g. depots, sports halls)
C3 (Medium)	Urban/industrial atmospheres with moderate SO_2 pollution; coastal areas with low salinity	Production rooms with high humidity and some pollution (e.g. food plants, laundries)
C4 (High)	Industrial/coastal areas with moderate salinity	Chemical plants, swimming pools, coastal shipyards