

OPTIMISED LINE ARRAYS WITH SCALABLE RESOLUTION



WAVEFRONT
PRECISION

WPC
WPM

Unite Your Audience
The Martin Audio Experience





WAVEFRONT PRECISION

In recent years, Martin Audio's award-winning MLA systems have raised the expectations of audiences, sound engineers and promoters worldwide. With independent drive of individual acoustic cells controlled by industry-leading DISPLAY™ optimisation software, MLA technology delivers unmatched sound quality and coverage consistency while reducing sound-spill.

Drawing on the research and technology behind MLA, the Wavefront Precision Series is a new generation of multi-purpose line arrays designed to bring Martin Audio's legendary sound, coverage consistency and control to a broader range of touring applications, installations and budgets. Comprising the WPC and WPM, Wavefront Precision line arrays are designed as complete systems with external iKON® multi-channel amplifiers and optimised by automated DISPLAY software. Their bigger brother, WPL, is also available and information on this can be found in its own dedicated brochure.

Adopting the principle of scalable resolution, with external, dedicated multi-channel amplifiers, Wavefront Precision line arrays are uniquely flexible, upgradeable and financially accessible.





WPC



WPM



iKON



SCALABLE RESOLUTION

With exceptional line array performance guaranteed by the acoustic design itself, scalable resolution unlocks the full potential of a Wavefront Precision array and provides an adaptable pathway into the world of advanced optimisation.

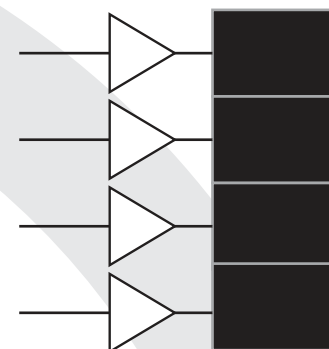
The greater the resolution of the array in terms of individually driven enclosures, the more precisely DISPLAY can fine-tune audience coverage and hold the frequency response and SPL's throughout the venue within a tight window specified by the user.

For the first time in the marketplace the decision on the level of resolution and control that is right for the install, client, event or budget is yours.

With scalable resolution, the commercial advantages are clear:

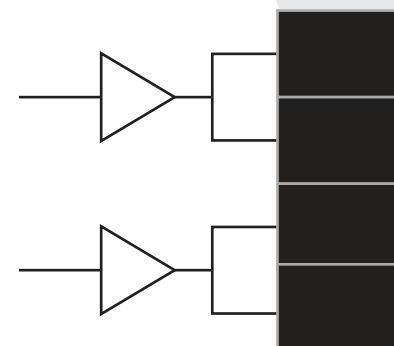
- Design systems to better suit project budget targets.
- Ability to increase resolution over time by buying more amps at later stage.
- Dynamic deployment within a venue or site where the main PA could be driven by enclosures with more dedicated amp channels than may be necessary for delays.
- Adaptable rental pricing based on event dynamics and clients' resources.

Wavefront Precision: Scalable resolution – the choice is yours



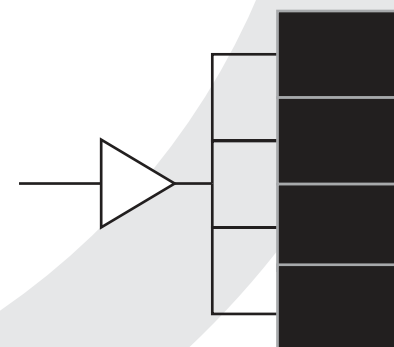
One Box Resolution

1 Top Box to 1 Amp Channel



Two Box Resolution

2 Top Boxes to 1 Amp Channel



Four Box Resolution

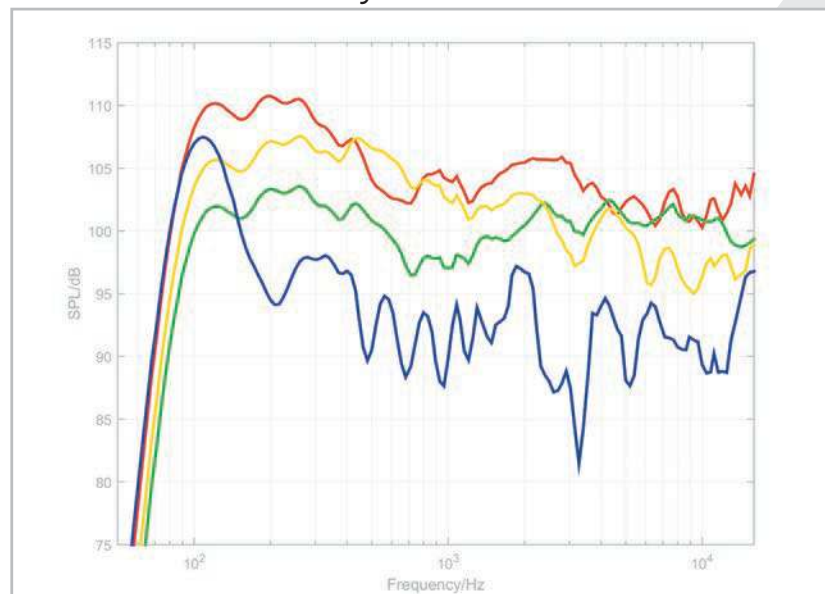
4 Top Boxes to 1 Amp Channel

INCREASING RESOLUTION

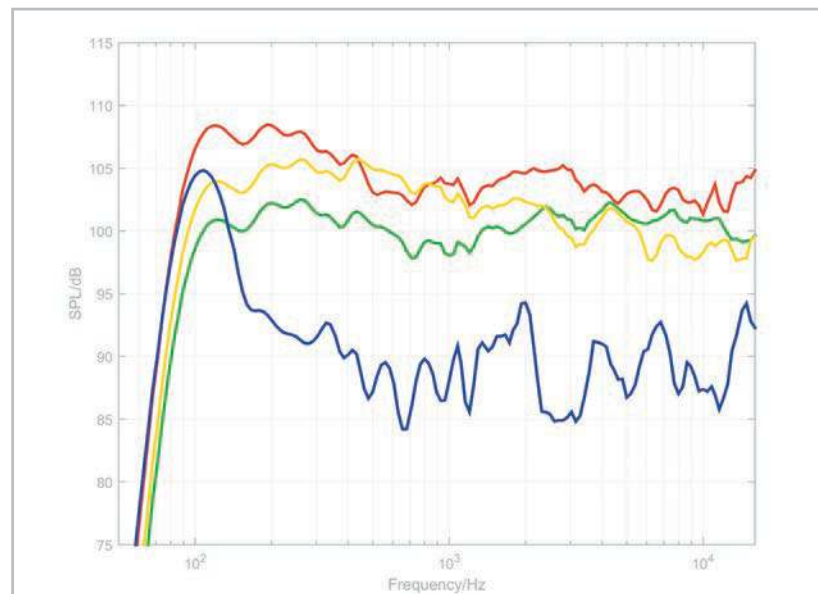
STANDARD LINE ARRAY RESULTS VS. SCALABLE RESOLUTION

Standard 8 box line array Vs WPM 8 box array with scalable resolution. Mic positions within venue. SPL and Frequency Response.

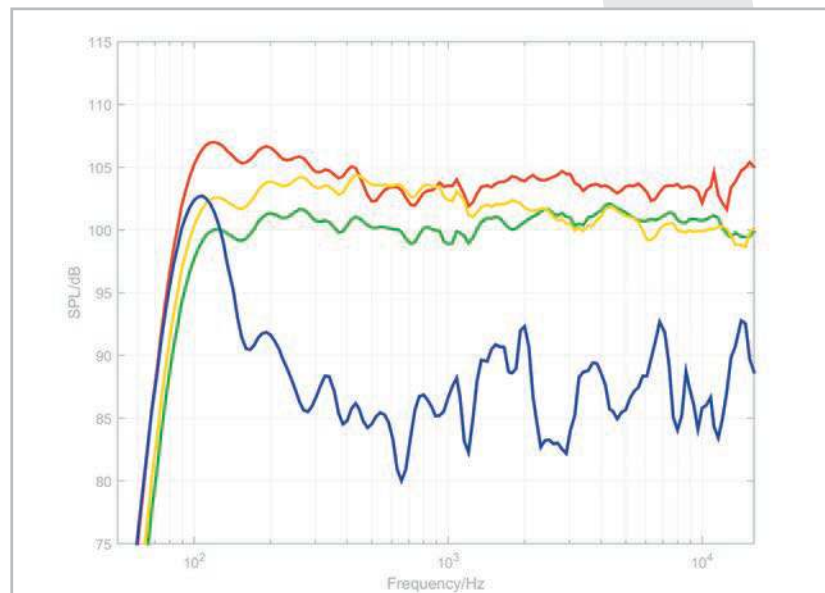
A. Standard Line Array



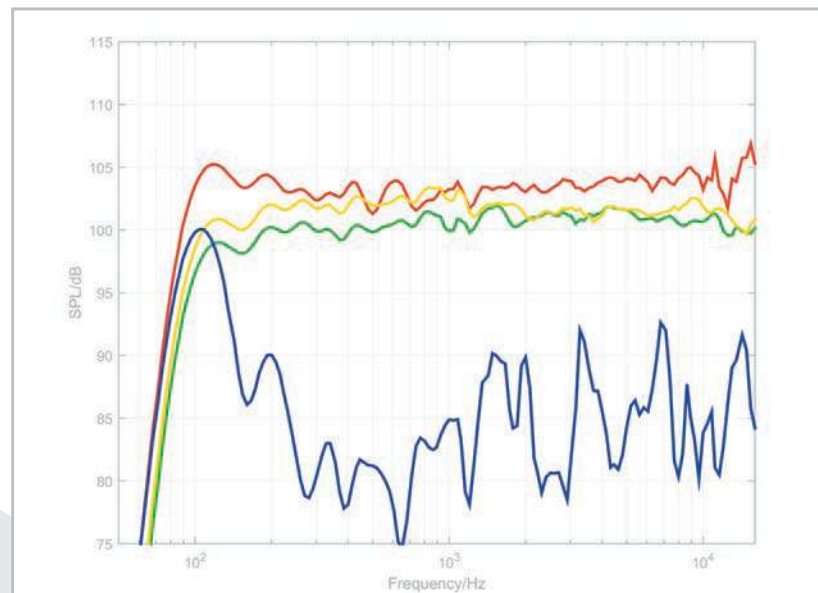
B. WPM – 4 Box Resolution



C. WPM – 2 Box Resolution



D. WPM – 1 Box Resolution



Rejection behind speaker

Front Row

Mix Position

Back row

DESIGN AND MATERIALS

It's not only the consistent coverage, flexibility and scalable resolution that set Wavefront Precision line arrays apart. Their exceptional sonic performance and exemplary horizontal pattern control are born from Martin Audio's trademark, innovative approach to high-efficiency acoustic design.

Wavefront Precision enclosures are constructed from plywood and finished in durable, easy-to-maintain textured paint, with fabric-backed protective steel grilles. Discreet side pocket handles and rear grips are provided to assist handling and splay-angle adjustment, while integrated three-point rigging systems assure efficient and safe construction of arrays of up to 16 enclosures.





• WPC



• WPM

FEATURES

- Compact and ultra-compact line arrays
- 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

BENEFITS

- Consistent coverage achieved 'straight-out-of-the-box'
- DISPLAY intelligent software reduces set-up time and eliminates trial-and-error
- Improved audience coverage with reduced sound-spill

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

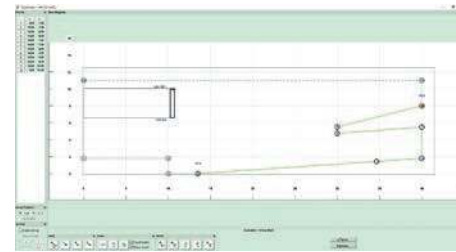


DISPLAY OPTIMISATION

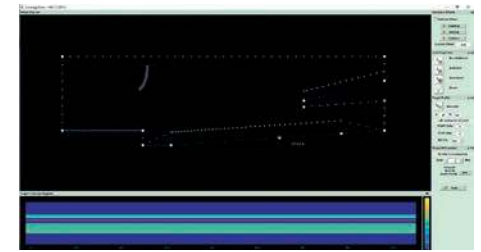
DISPLAY is incredibly powerful. Based on an acoustic model accurate to within $\pm 1\text{dB}$ of measured data, it provides a virtual environment in which arrays can be configured and optimised and delivers unrivalled coverage consistency over the audience — right from switch-on. Also, by reducing sound impacting non-audience areas, rear walls and ceilings, the detrimental influence of the room can be significantly ‘dialled-out’ — increasing clarity and intelligibility in challenging acoustic environments.

DISPLAY leaves nothing to chance and takes the guesswork out of array design and deployment — generating predicted frequency responses throughout the venue and providing comprehensive rigging information, including mechanical safety analysis.

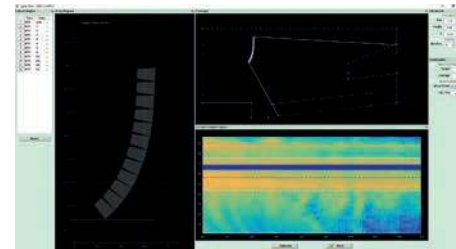
Array DSP parameters calculated by DISPLAY are easily uploaded to the iKON amplifiers via Ethernet, using Martin Audio’s VU-NET™ real-time control and monitoring software.



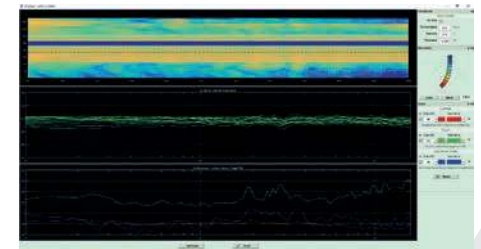
Step 1: Venue entry



Step 2: Set coverage parameters



Step 3: Calculate splay angles



Step 4: Optimisation and upload



AMPLIFICATION, DSP AND NETWORKING

Wavefront Precision line arrays are designed as complete systems with dedicated, high-performance iKON multi-channel Class D amplifiers. Both the iK42 4-channel amplifier and iK81 8-channel amplifier are capable of very high power outputs and feature high-speed Ethernet communication for system control and monitoring via VU-NET, plus Dante™ digital audio networking. With the option to transmit digital audio over a single CAT5 cable, quality is maintained over long cable runs and integration with other devices in the sound system is straightforward.

Because the amplifiers are external to the loudspeaker enclosures, the resolution of the array can be increased as required by simply adding more amplifier channels to drive more array enclosures independently — increasing the level of control available to DISPLAY to fine-tune coverage and reduce room influence. External amplifiers also facilitate ease-of-servicing in fixed installations.

Both the iK42 and iK81 provide powerful DSP processing of up to 1000 FIR filter taps @ 48kHz on each output channel. This high number of taps is essential to implement DISPLAY'S wide bandwidth optimisation capabilities.

The complete system approach not only guarantees that Wavefront Precision arrays perform repeatedly and effortlessly to their design maximum, but also that they are compatible worldwide.

iK42/iK81 FEATURES

- Four/eight channels of Class D amplification
- Onboard DSP on all inputs and outputs
- FIR filtering on each output
- Switch mode, global voltage power supply
- 20,000 watts (iK42)/10,000 watts (iK81) total RMS output
- Intuitive front panel user interface
- Ethernet network for system operation and monitoring via VU-NET
- Analogue, AES3 and Dante™ digital network audio inputs
- Extensive protection and monitoring



iKON



While Martin Audio's multi-cellular MLA technology represents the ultimate in coverage control, with individually powered and processed cells within each enclosure, the scalable resolution of WPC offers greatly improved coverage consistency and control compared to a standard line array and provides a flexible pathway to advanced array control.



WPC RESOLUTION MATRIX

	Benefits	Competitors	WPC	MLA Compact
Multi-Cellular Display Optimised	Hard avoid feature, ultimate consistency, electronically adjustable coverage, fully active system			✓
1-box Resolution Display Optimised	Improved audience coverage consistency over 2- box resolution		✓	
2-box Resolution Display Optimised	Significantly improved audience coverage consistency over splay angles only, offering a compelling performance & price ratio		✓	
3-box Resolution Display Optimised	Improved audience coverage consistency over mechanical optimisation		✓	
Mechanical Optimisation via Display	Splay angles optimised using highly-accurate acoustic model; more consistent and faster than standard line array using basic geometric model		✓	✓
Standard line array	Splay angles chosen by the user or calculated using basic geometric model	✓	✓	✓

The WPC is a new breed of medium-format optimised line array which brings innovative acoustic design, ultra-high performance and coverage consistency to a wider range of users, applications and budgets than previously possible. A three-way, bi-amp system, it features horn-loaded low-frequency, mid and HF sections to raise efficiency and increase output. Its high efficiency acoustic design can equal or outperform larger, direct radiator systems — a 12-box array will throw beyond 60 metres (200ft) and deliver impressive rock levels to a 5000-seat venue, saving on truck space and weight.

The WPC's low frequency section consists of 2 x 10" (250mm) neodymium drivers in a Hybrid® configuration which marries the benefits of horn and reflex loading. Each driver is slot-loaded into a short horn to give a high sensitivity of 103dB @ m/2.83V, while the rear of the driver is reflex-loaded to extend the LF output. The punch and low-frequency extension produced from such a small enclosure volume are remarkable.

Mid and HF horns are physically separate — a key factor in the WPC's exemplary 100° horizontal constant directivity dispersion pattern. The midrange horn design utilises 2 x 5" (125mm) neodymium drivers to produce a high SPL of 109dB @ 1m/2.83V, while the HF section employs 4 x 0.7" (19mm) exit neodymium compression drivers which feed 4 individual horns. Use of multiple small HF drivers instead of a more traditionally-used large format compression driver results in less distortion and a more extended HF response.





While Martin Audio's multi-cellular MLA technology represents the ultimate in coverage control, with individually powered and processed cells within each enclosure, 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 RESOLUTION MATRIX

	Benefits	Competitors	WPM	MLA Mini
Multi-Cellular Display Optimised	'Hard avoid' capability, ultimate consistency, electronically adjustable coverage with highest fidelity and headroom delivered via a bi-amped, fully active system			✓
1 box Resolution Display Optimised	'Hard avoid' capability, high consistency, electronically adjustable coverage		✓	
2 box Resolution Display Optimised	Significantly improved audience coverage consistency over splay angles only, offering a compelling performance & price ratio		✓	
4 box Resolution Display Optimised	Improved audience coverage consistency over splay angles only		✓	
Mechanical Optimisation via Display	Splay angles optimised using highly-accurate acoustic model; more consistent and faster than standard line array using basic geometric model		✓	✓
Standard line array	Splay angles chosen by the user or calculated using basic geometric model	✓	✓	✓

The 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. It is also very powerful — 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 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 wavefront is precisely-coupled to the horn throat via a short waveguide for faultless 100° horizontal constant directivity coverage.



RECOMMENDED SUBWOOFERS

SXF115

The SXF115 is a passive subwoofer designed to extend the performance of WPM down to 42Hz. Featuring a powerful, long-excursion 15" (380mm)/4" (100mm) voice coil driver in a very compact bass reflex enclosure, it can be flown as part of a WPM array, or ground-stacked separately. Cardioid operation can be achieved by arranging the SXF115 in forward and rear-facing pairs.

The design of the 15" driver maximises output while minimising power compression and distortion, and four reflex ports reduce air noise at very high output levels. The SXF115 enclosure is constructed from multi-laminate birch ply, finished with a durable polyurethane coating and equipped with a perforated steel grille, skids and twin bar handles. An M20 threaded fitting in the top surface facilitates pole-mounting of up to 4 WPM enclosures.



SX118

The SX118 is a compact, high performance subwoofer that extends the low frequency operating range of the system to 47Hz and provides exceptional low frequency output for such a compact enclosure. An ideal partner for the WPM, it features a long-excursion 18" (460mm)/4" (100 mm) voice coil driver with a water-resistant cone and triple roll surround in a compact reflex enclosure.

The design of the 18" driver maximises output while minimising power compression and distortion, and the four reflex ports have a large frontal area to reduce turbulent air noise at very high levels. The enclosure is constructed from multi-laminate birch ply, finished with a durable polyurea coating and equipped with a Zintec grille, twin grab handles, skids, flying inserts for installation and a threaded pole socket for pole mounting up to 4 WPM enclosures as a simple plug-and-play system.



SX218

The SX218 achieves the ultimate in subwoofer performance for the most demanding applications – delivering very high output levels and superb transient performance with minimal distortion it is the perfect partner to WPC, with one subwoofer to every 2 top boxes required. With an operating range of 35Hz-150Hz \pm 3dB, it houses dual 18" long excursion (460mm)/4" (100mm) voice coil drivers with water-resistant cones and triple roll surrounds. Each driver is rated to handle 1000 watts AES, and has a magnet structure and suspension engineered for maximum linear excursion.

The enclosure is constructed from multi-laminate birch ply and coated with hard-wearing polyurea coating. Eight reflex ports provide a large frontal area to reduce turbulent air noise, and a perforated steel grille protects the drivers from damage.



SXH218

The SXH218 is an extremely powerful subwoofer capable of producing 148dB peak output at 1m. It is the ideal partner for WPC arrays where maximum low frequency output is required. Cardioid operation can be achieved by arranging the subwoofers in forward and rear-facing pairs.

Its Hybrid® horn/reflex loading combines the acoustic efficiency and impact of bass horn technology with the low frequency extension of a reflex design, enabling it to produce significantly higher output levels than a traditional reflex-loaded subwoofer.

With an operating range of 32-150Hz + 3dB, it features dual long-excursion 18" (460mm)/4.5" (115mm) voice coil neodymium drivers, with water resistant cones and triple roll surrounds.

The enclosure is constructed from multi-laminate plywood and coated with hard-wearing textured black polyurea. A rigid perforated steel grille protects the front of the enclosure, while interlocking skids protect the top and bottom surfaces and prevent movement when stacked.





WPC – SYSTEM EXAMPLE WITH VARIABLE RESOLUTION

	WPC S36 1 Box Resolution	WPC S36 2 Box Resolution	WPC S36 3 Box Resolution
Top Box	WPC	WPC	WPC
Quantity	24	24	24
Subwoofer	SX218	SX218	SX218
Quantity	12	12	12
Amp	iK42	iK42	iK42
Quantity	15	9	7





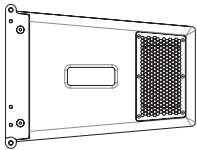
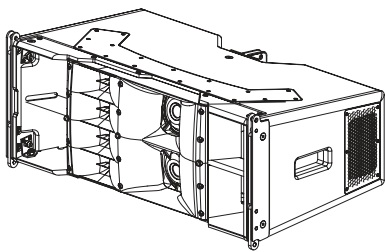
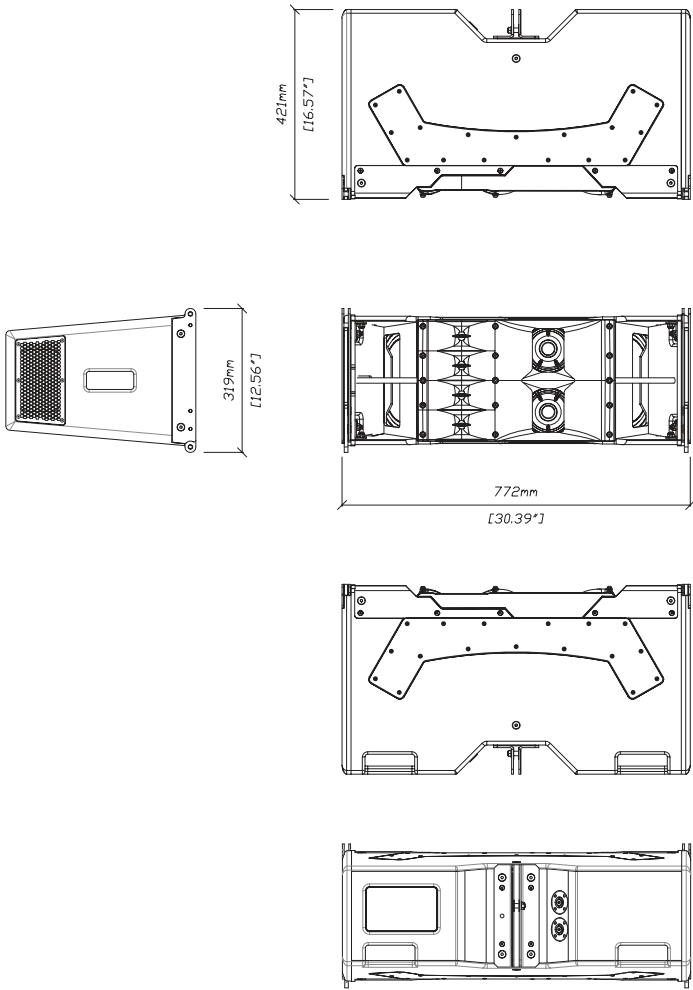
WPM – SYSTEM EXAMPLE WITH VARIABLE RESOLUTION

	WPM S20 1 Box Resolution	WPM S20 2 Box Resolution	WPM S20 4 Box Resolution
Top Box	WPM	WPM	WPM
Quantity	16	16	16
Subwoofer	SX118	SX118	SX118
Quantity	4	4	4
Amp 1	iK81	iK81	iK81
Quantity	2	1	1
Amp 2*	iK42	iK42	-
Quantity	1	1	-

*Amp2 is for efficiency/value in amp channel requirements



TECHNICAL SPECIFICATIONS



WPC

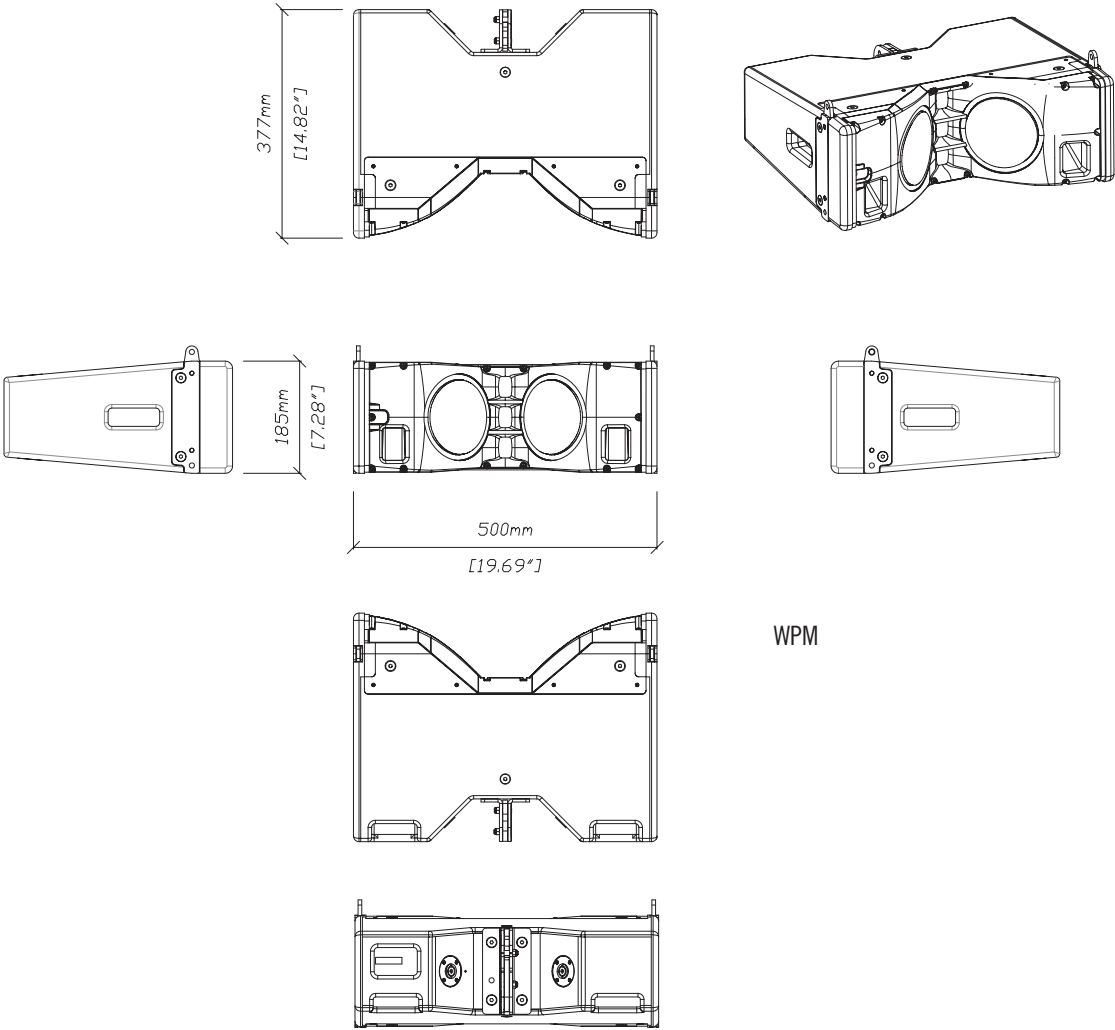
WPC

TYPE	Three-way, bi-amp line array element
FREQUENCY RESPONSE (5)	65Hz-18kHz \pm 3dB
DRIVERS	
LF	2 x 10" (250mm)/2.5" (63mm) voice coil, long excursion, vented pole, neodymium magnet drivers, Hybrid® slot-horn loaded
MF	2 x 5" (125mm)/1.5" (38mm) coil, neodymium magnet drivers, horn loaded
HF	4 x 0.7" (19mm) exit neodymium magnet compression drivers, horn loaded
SYSTEM AMPLIFIER	iKON iK42
SYSTEM RESOLUTION	1 to 3 enclosures per amplifier channel
MAXIMUM SPL (9)	135dB peak
NOMINAL IMPEDANCE	LF: 8 ohms, MF + HF: 8 ohms
DISPERSION	100° horizontal (-6dB), 130° horizontal (-10dB) 10° vertical
CROSSOVER	440Hz active, 4.4kHz internal passive
ENCLOSURE	Vertical trapezoid with 5° wall angle, multi-laminate birch and poplar-ply construction
FINISH	Black textured paint
PROTECTIVE GRILLE	Black HEX perforated steel
CONNECTORS	2 x NL4 type
PIN CONNECTIONS	LF: 1+/1-, MF + HF: 2+/2-
FITTINGS	3-point rigging system 2 x side pocket handles 2 x rear grip handles
FLOWN ARRAY MAXIMUM	16 enclosures in single array
DIMENSIONS	(W) 772mm x (H) 319mm x (D) 421mm (W) 30.4in x (H) 12.6in x (D) 16.6in
WEIGHT	35kg (77.1lbs)
ACCESSORIES	Install flying frame Touring flying frame Flying Pin

WPM

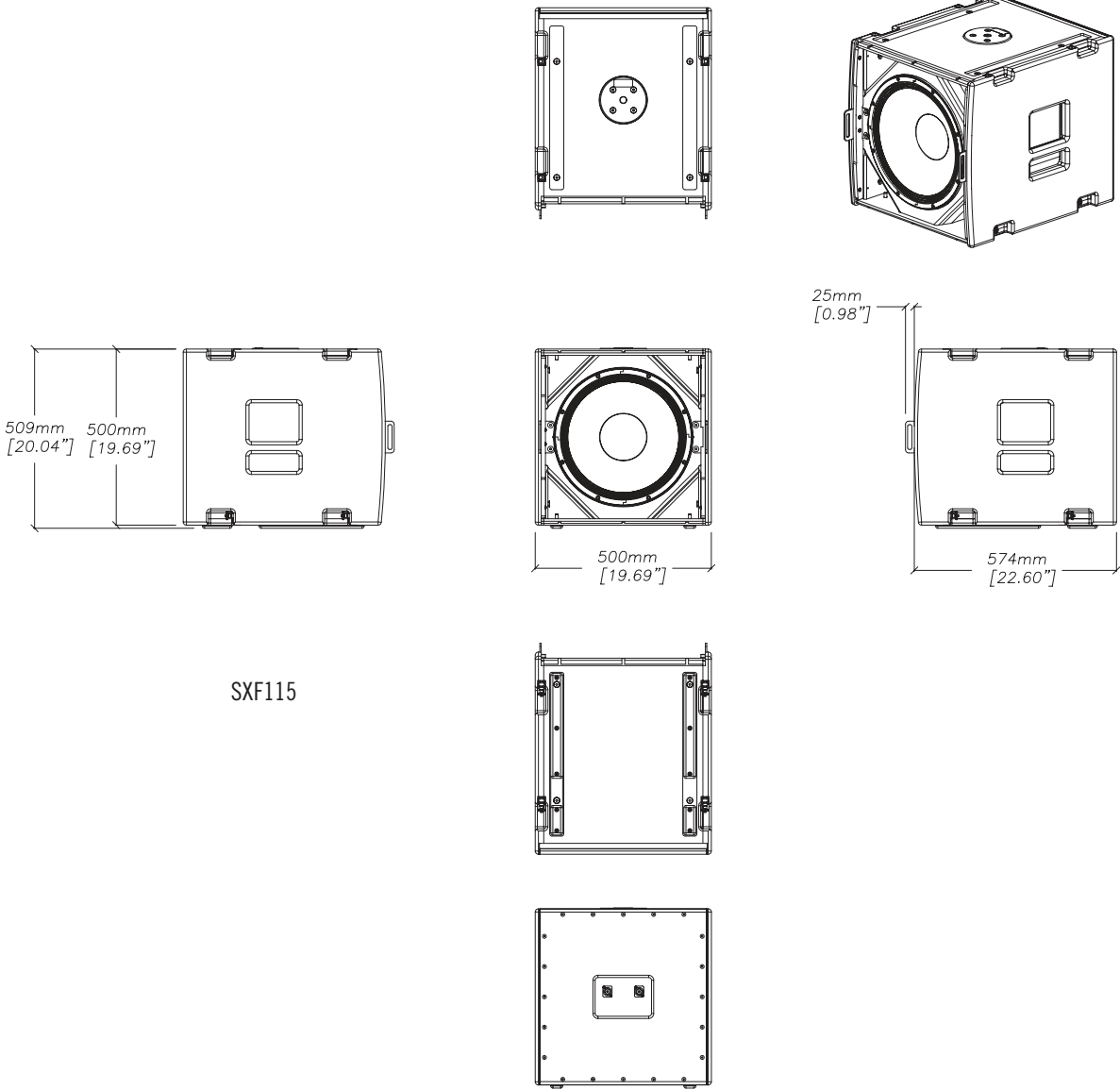
TYPE	Two-way, passive line array element
FREQUENCY RESPONSE (5)	76Hz-18kHz ± 3dB
DRIVERS	
LF	2 x 6.5" (165mm) contoured-diaphragm /2" (50mm) edge-wound CCAW voice coil, neodymium magnet drivers, reflex loaded
HF	3 x 1.4" (35mm) aluminium dome /1.4" (35mm) voice coil, neodymium magnet compression drivers on constant-directivity waveguide
SYSTEM AMPLIFIER	iKON iK42, iK81
SYSTEM RESOLUTION	1 to 4 enclosures per amplifier channel
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 textured paint
PROTECTIVE GRILLE	Black HEX perforated steel
CONNECTORS	2 x NL4 type
PIN CONNECTIONS (INPUT)	1+/1-
FITTINGS	Integral 3-point rigging system 2 x side pocket handles 2 x rear grip handles
FLOWN ARRAY MAXIMUM DIMENSIONS	16 enclosures in single array (W) 500mm x (H) 185mm x (D) 377mm (W) 19.7in x (H) 7.3in x (D) 14.8in
WEIGHT	14kg (30.9lbs)
ACCESSORIES	Install flying frame Touring flying frame Flying Pin

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.
 (10) Measured in half (2pi) space at 2 metres with 2.83V input, using band limited pink noise, then referred to 1 metre.



WPM

TECHNICAL SPECIFICATIONS



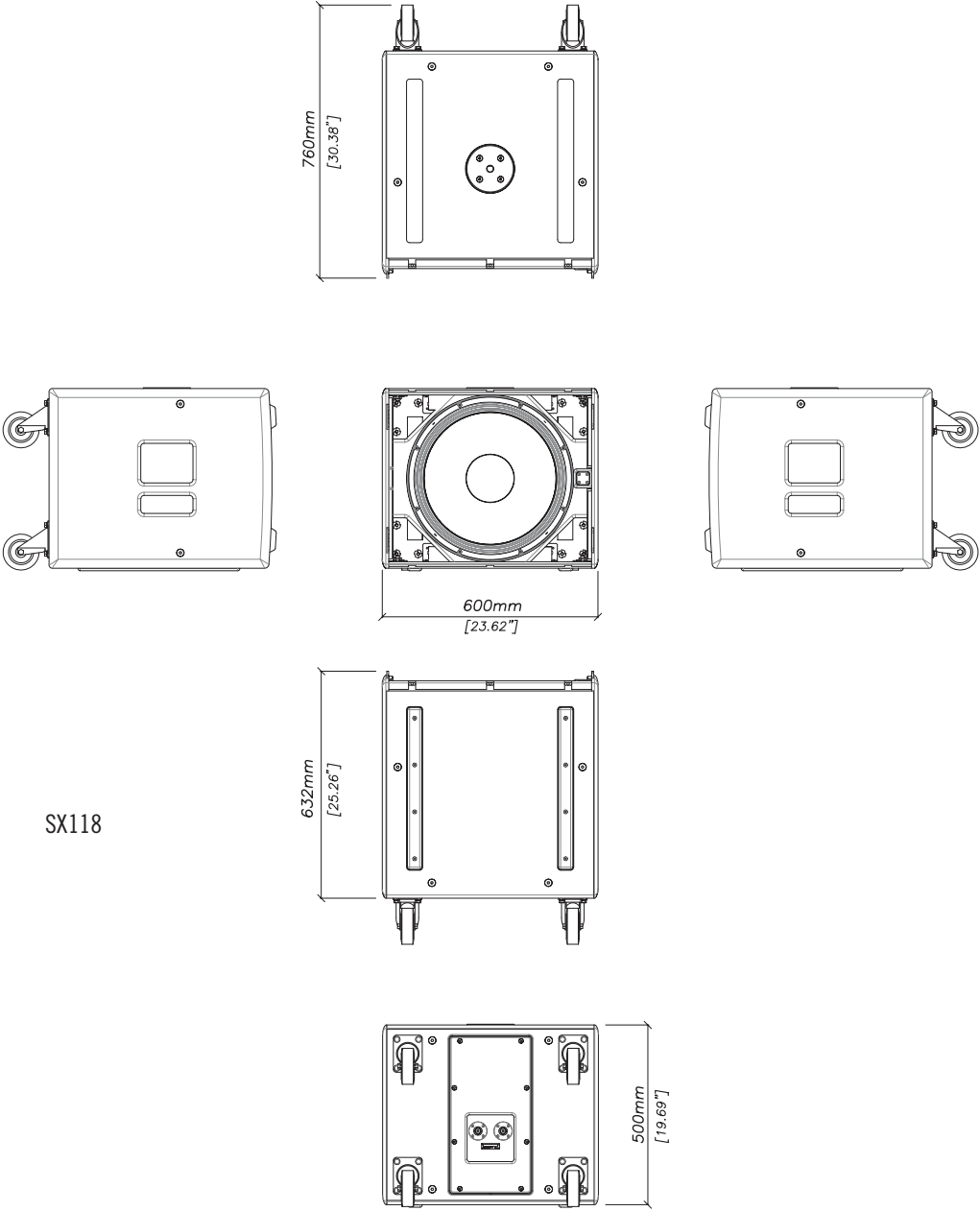
SXF115

SXF115

TYPE	Compact, direct radiating subwoofer
FREQUENCY RESPONSE (1)	50Hz – 150Hz ±3dB, -10dB @ 42Hz
DRIVER	15" (380mm)/4" (100mm) voice coil, ultra-long excursion, ferrite magnet
RATED POWER (2)	800W AES, 3200W peak
SYSTEM AMPLIFIER	iKON iK42, iK81
SENSITIVITY (10)	103dB
MAXIMUM SPL(9)	136dB peak
NOMINAL IMPEDANCE	4 ohms
DISPERSION	Omnidirectional/or Cardioid (paired)
ENCLOSURE	Multi-laminate birch ply
FINISH	Textured black PU coating
PROTECTIVE GRILLE	Black HEX perforated steel
CONNECTOR	2 x NL4
PIN CONNECTIONS (INPUT)	LF: +1, -1 Link through: +2, -2
PIN CONNECTIONS (LINK)	LF: +1, -1 Link through: +2, -2
FITTINGS	Two skids on base, with mating channels on top
	M20 top-mounted thread plate for pole mounting
	Integral flyware for suspension of up to 4 SXF115
	Large bar handle on each side
	Two front-mounted latch plates for wheelboard
DIMENSIONS (INCL SKIDS)	(W) 500mm x (H) 510mm x (D) 575mm (725mm incl wheelboard)
	(W) 19.7in x (H) 20.1in x (D) 22.6in (28.5in incl wheelboard)
WEIGHT	45kg (99lbs)
	52kg (115lbs) incl wheelboard
ACCESSORIES	Wheelboard
	Transit cover

SX118

TYPE	Compact, direct radiating subwoofer
FREQUENCY RESPONSE (1)	47Hz – 150Hz ±3dB, -10dB @ 41Hz
DRIVER	18" (460mm)/4" (100mm) voice coil, long excursion, ferrite magnet, waterproof cone
RATED POWER (2)	1000W AES, 4000W peak
SYSTEM AMPLIFIER	iKON iK42, iK81
SENSITIVITY (10)	102dB
MAXIMUM SPL(9)	138dB peak
NOMINAL IMPEDANCE	8 ohms
DISPERSION (-6dB)	Omnidirectional/or Cardioid (paired)
ENCLOSURE	Multi-laminate birch/poplar ply
FINISH	Durable polyurea coating
PROTECTIVE GRILLE	Black perforated Zintec
CONNECTORS	2 x NL4
PIN CONNECTIONS (INPUT)	LF: +1, -1 Link through: +2, -2
PINS CONNECTIONS (LINK)	LF: +1, -1 Link through: +2, -2
FITTINGS	Two skids on base, with mating channels on top
	Four rear-mounted 100mm (4in) castors
	M20 top-mounted thread plate for pole mounting
	16 x M10 mounting points
	2 x bar handles, 1 on each side
DIMENSIONS (INCL SKIDS)	(W) 600mm x (H) 509mm x (D) 632mm
	(760mm including castors)
	(W) 23.62in x (H) 20.04in x (D) 24.86in
	(29.90in including castors)
WEIGHT	43.5kg(96lbs) w/o castors, 47kg(104lbs) with castors
ACCESSORIES	Wheel Kit (Four 100mm (4in) castors), Input Board Cover, Transit Cover



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.

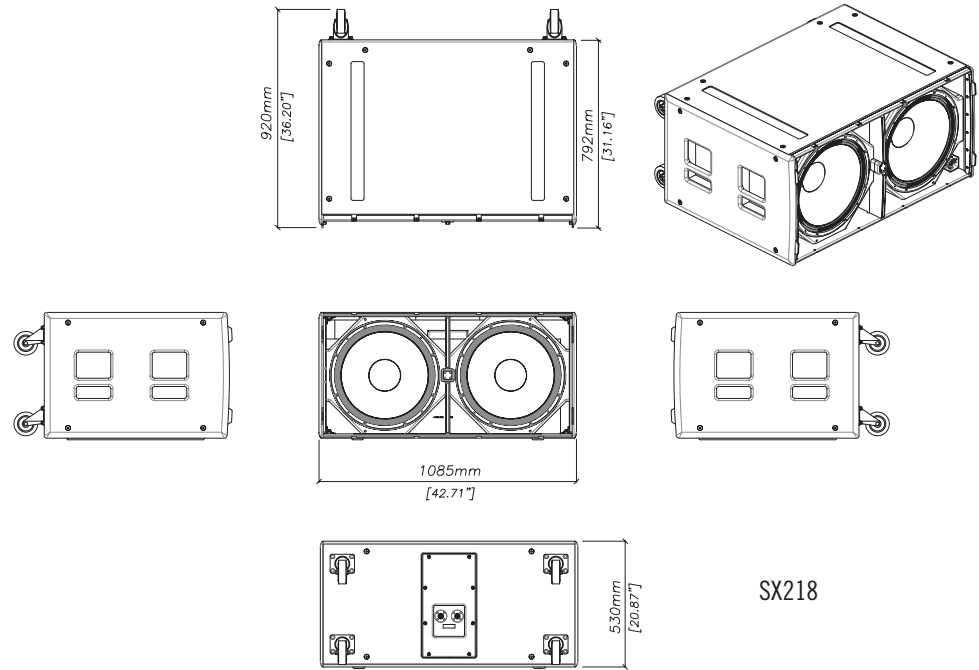
(8) Measured in open (4pi) space at 2 metres with 2.83v input, using band limited pink noise, then referred to 1 metre.

(9) Calculated at 1 metre.

(10) Measured in half (2pi) space at 2 metres with 2.83V input, using band limited pink noise, then referred to 1 metre.

SX218

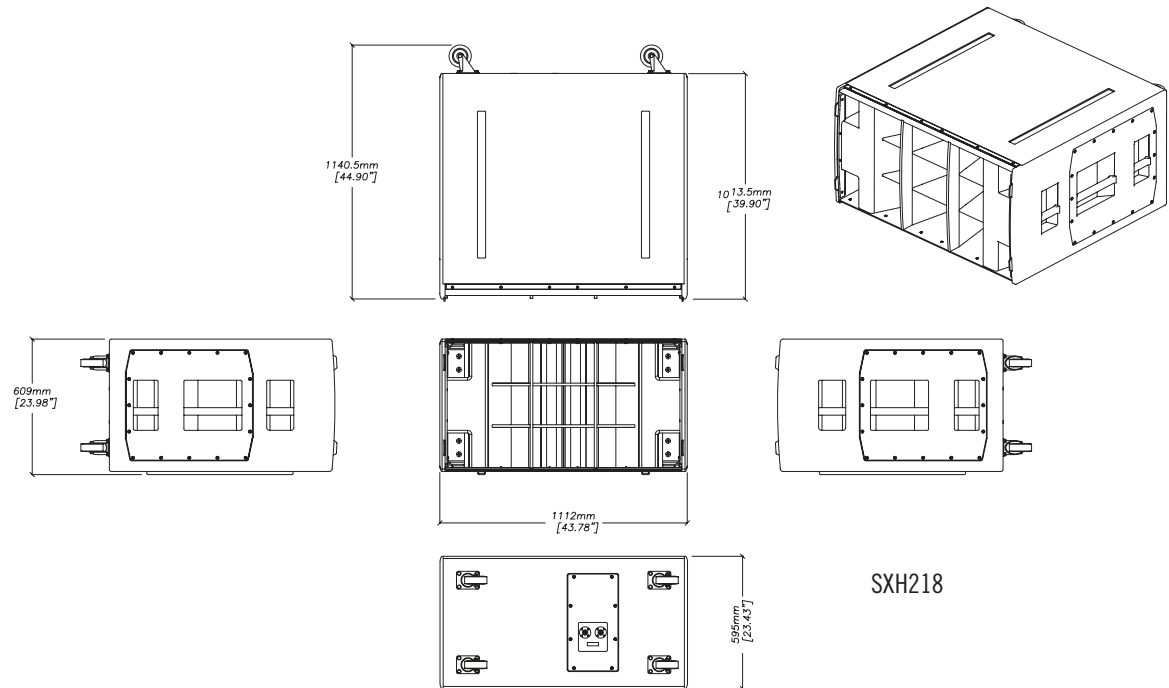
TYPE	Dual-driver, direct radiating subwoofer
FREQUENCY RESPONSE (1)	35Hz – 150Hz ± 3 dB, -10dB @ 30Hz
DRIVER	2 x 18" (460mm)/4" (100mm) voice coil, long excursion, ferrite magnet, waterproof cone
RATED POWER (2)	2000W AES, 8000W peak
SYSTEM AMPLIFIER	iKON iK42, iK81
SENSITIVITY (10)	105dB
MAXIMUM SPL(9)	144dB peak
NOMINAL IMPEDANCE	2 x 8 Ohms
DISPERSION (-6dB)	Omnidirectional/or Cardioid (paired)
ENCLOSURE	Multi-laminate birch/poplar ply
FINISH	Durable polyurea coating
PROTECTIVE GRILLE	Black perforated Zintec
CONNECTORS	2 x NL4
PIN CONNECTIONS (INPUT)	LF1: 1+, 1- LF2: 2+, 2-
PINS CONNECTIONS (LINK)	LF1: 1+, 1- LF2: 2+, 2-
FITTINGS	Two skids on base, with mating channels on top
	Four rear-mounted 100mm (4in) castors
	24 x M10 mounting points
	4 x bar handles, 2 on each side
DIMENSIONS (INCL SKIDS)	(W) 1085mm x (H) 537mm x (D) 792mm
	(920mm including castors)
	(W) 42.7in x (H) 21.1in x (D) 31.2in
	(36.2in including castors)
WEIGHT	98.5kg (217lbs) w/o castors 102kg (225lbs) with castors
ACCESSORIES	Wheel Kit (Four 100mm (4in) castors), Input Board Cover, Transit Cover



SX218

SXH218

TYPE	Hybrid® horn/reflex subwoofer
FREQUENCY RESPONSE (1)	32Hz – 150Hz ± 3 dB, -10dB @ 27Hz
DRIVERS	2 x 18" (460mm)/4.5" (115mm) voice coil, long excursion, neodymium magnet, waterproof cone
RATED POWER (2)	3000W AES, 12000W peak
RECOMMENDED AMPLIFIER	iKON iK42
SENSITIVITY (10)	107dB
MAXIMUM SPL(9)	148dB peak (at 1m half space)
NOMINAL IMPEDANCE	4 Ohms
DISPERSION (-6dB)	Omnidirectional/or Cardioid (paired)
ENCLOSURE	Multi-laminate birch/poplar ply
FINISH	Textured Black Polyurea
PROTECTIVE GRILLE	Black perforated steel
CONNECTORS	2 x NL4
PIN CONNECTIONS	Input: +1/-1, refer to input panel for four-core cable link diagram
FITTINGS	Two skids on base, with mating channels on top
	Four rear-mounted 100mm (4in) castors
	6 x bar handles, 3 on each side
	4 x fittings for optional transit cover
DIMENSIONS (INCL SKIDS)	(W) 1112mm x (H) 609mm x (D) 1013mm (1140mm incl. castors)
	(W) 43.8in x (H) 23.9in x (D) 39.9in (44.9in incl. castors)
WEIGHT	116kg (256lbs), with castors 120kg (265lbs)
ACCESSORIES	Transit cover



SXH218

iK42

General

TYPE	Four-channel Class D amplifier
TOTAL OUTPUT POWER	20,000 Watts RMS, all channels driven
DIGITAL SIGNAL PROCESSING	96kHz DSP on all inputs and outputs
COOLING	Dual vari-speed fans, front-to-back airflow
MAXIMUM AMBIENT TEMPERATURE	40°C (104°F)

Audio Inputs/Outputs

ANALOGUE IN/LINK (4 CHANNELS)	4 x female, 4 x male Neutrik™ XLR
ANALOGUE INPUT IMPEDANCE	20kΩ balanced to ground
MAXIMUM ANALOGUE INPUT LEVEL	+20dBu
NOMINAL SYSTEM GAIN	32dB
AES3 IN/LINK (2 CHANNELS)	1 x female, 1 x male Neutrik™ XLR, balanced
DANTE™ (4 CHANNELS)	2 x shielded RJ45, primary and secondary
AMPLIFIER OUTPUTS	4 x Neutrik Speakon™ NL4

Control and Monitoring Network

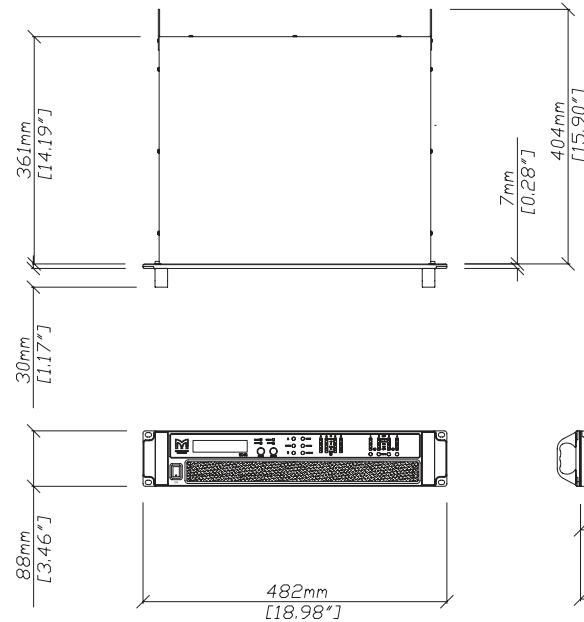
TOPOLOGY	Ethernet
CONTROL APPLICATION	Martin Audio VU-NET™

Power Supply

TYPE	High performance Series Resonant
AC INPUT OPERATING RANGE	85 – 240V ~ AC, 47 - 63Hz
MAINS INRUSH CURRENT	6A at 115V, 12A at 230V (max for <10ms)
MAINS CONNECTOR	Neutrik 32A Powercon™

Physical

DIMENSIONS	(W) 483 x (H) 2U/89mm x (D) 357mm
	(W) 19in x (H) 2U/3.5in x (D) 14.1in
	incl handles and optional rear support
WEIGHT	12.5kg (27.5lbs)



iK42

iK81

General

TYPE	Eight-channel Class D amplifier
TOTAL OUTPUT POWER	10,000 Watts RMS, all channels driven
DIGITAL SIGNAL PROCESSING	96kHz DSP on all inputs and outputs
COOLING	Dual vari-speed fans, front-to-back airflow
MAXIMUM AMBIENT TEMPERATURE	40°C (104°F)

Audio Inputs/Outputs

ANALOGUE IN/LINK (4 CHANNELS)	4 x female, 4 x male Neutrik™ XLR
ANALOGUE INPUT IMPEDANCE	20kΩ balanced to ground
MAXIMUM ANALOGUE INPUT LEVEL	+20dBu
NOMINAL SYSTEM GAIN	32dB
AES3 IN/LINK (2 CHANNELS)	1 x female, 1 x male Neutrik™ XLR, balanced
DANTE™ (4 CHANNELS)	2 x shielded RJ45, primary and secondary
AMPLIFIER OUTPUTS	4 x Neutrik Speakon™ NL4

Control and Monitoring Network

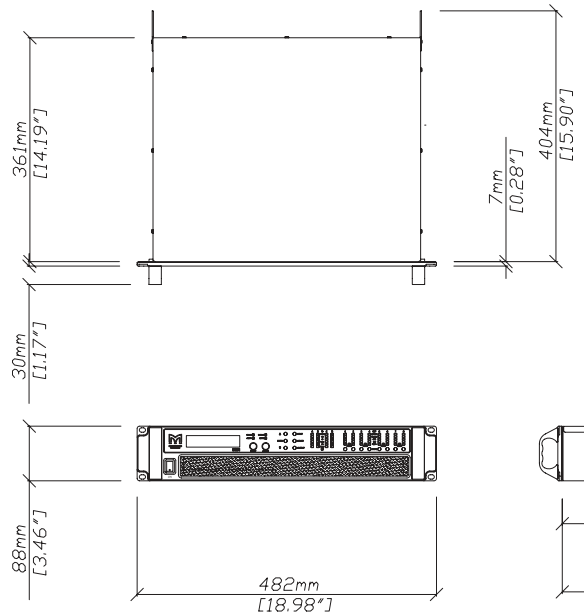
TOPOLOGY	Ethernet
CONTROL APPLICATION	Martin Audio VU-NET™

Power Supply

TYPE	High performance Series Resonant
AC INPUT OPERATING RANGE	85 – 240V ~ AC, 47 - 63Hz
MAINS INRUSH CURRENT	6A at 115V, 12A at 230V (max for <10ms)
MAINS CONNECTOR	Neutrik 32A Powercon™

Physical

DIMENSIONS	(W) 483 x (H) 2U/89mm x (D) 357mm
	(W) 19in x (H) 2U/3.5in x (D) 14.1in
	incl handles and optional rear support
WEIGHT	12.5kg (27.5lbs)



iK81



WAVEFRONT
PRECISION

WPC
WPM

Martin Audio Limited

Century Point

Halifax Road

Cressex Business Park

High Wycombe

Buckinghamshire

HP12 3SL

England

FOR SALES ENQUIRIES:

UK

Telephone: +44 (0)1494 535312

E-mail: info@martin-audio.com

NORTH AMERICA

Telephone: 818 649 7776

www.martin-audio.com

All information is Copyright © 2019 Martin Audio Ltd.

Martin Audio, the Martin Audio logo and Hybrid are registered trademarks of Martin Audio Ltd. in the United Kingdom, United States and other countries; all other Martin Audio trademarks are the property of Martin Audio Ltd.



Unite Your Audience
The Martin Audio Experience



Version 3.0



WAVEFRONT PRECISION LONGBOW
SCALABLE RESOLUTION
GOES FURTHER



Unite Your Audience
The Martin Audio Experience



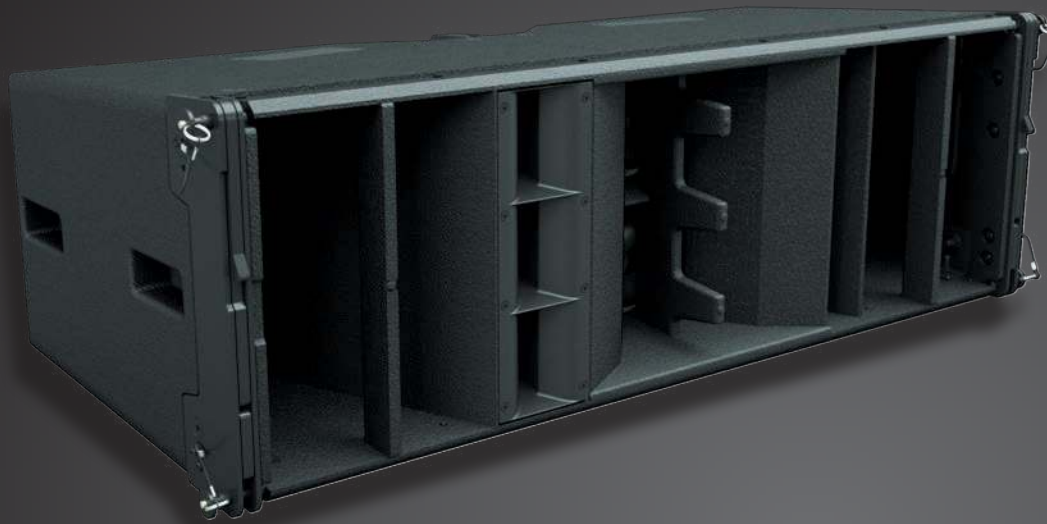


With the launch of the Wavefront Precision™ Series (WPM and WPC) the concept of scalable resolution was born — harnessing the research and technology behind Martin Audio's self-powered MLA® Series systems in a new line array format with external amplification. Delivering unmatched sound quality, coverage consistency and control in an affordable package, this uniquely flexible and upgradeable approach has been rapidly adopted by sound rental and installation companies worldwide to become the company's fastest ever selling line array series.

Wavefront Precision Longbow (WPL) now brings this high performance, control and flexibility to large-scale touring and install applications. Designed as a complete system with external iKON® multi-channel amplifiers, automated DISPLAY™ optimisation software and VU-NET™ control platform, WPL provides financial accessibility to the top echelons of touring and install sound — from prestigious stadium concert and outdoor festivals, to high-specification arena and House of Worship installations.

The complete system philosophy guarantees that WPL arrays perform predictably and effortlessly to their design maximum, as well as ensuring that they are compatible with other WPL systems throughout the world.





FEATURES

- High-performance large format line array
- All-horn, maximum-efficiency design
- Exceptional signature sonic performance
- Exemplary 90° horizontal constant directivity pattern control
- External, dedicated, multi-channel Class D amplification
- Scalable resolution for flexible optimisation of coverage, consistency and control
- Industry-leading DISPLAY software interacts with DSP for highly-accurate array optimisation
- Fast, integral 3-point rigging for up to 24 enclosures
- Compact and light weight design with discreet side handles for ease of handling



BENEFITS

- Consistent coverage achieved 'straight-out-of-the-box'
- DISPLAY intelligent software reduces set-up time and eliminates trial-and-error
- Improved audience coverage with reduced sound-spill

APPLICATIONS

- Touring sound reinforcement for festivals, stadiums and arenas
- Sports stadium and arena installations
- Concert hall and HoW installations

ALL-HORN ADVANTAGE



WPL is a full-scale line array which is capable of exceptionally high output for its modest size and weight. A three-way, bi-amped system, its very high output is achieved by utilising Martin Audio's trademark horn-loading technology across all frequency bands — increasing the acoustic output of the low frequency section, as well as the midrange and HF.

It incorporates 2 x 12" (300mm) drivers with Hybrid® horn/reflex loading, 2 x 6.5" (165mm) cone drivers on a midrange horn which covers the vocal frequency range from 300Hz to 4kHz, and 3 x 1" (25mm) exit HF drivers operating from 4kHz upwards. Each section features innovative horn-loading techniques and

refinements which raise the acoustic performance of WPL to a superior level — both in terms of output and smooth 90° horizontal coverage patterns of the mid and HF horns. Sonically, WPL's exemplary horizontal dispersion pattern translates to an incredibly consistent frequency response off-axis, with minimal variation from the on-axis response.

The maximum peak outputs of the LF, Mid and HF sections are 139dB, 140dB and 145dB per enclosure @1m and 6dB crest factor, respectively – ensuring that a WPL array will meet the most demanding requirements for throw and clarity in the largest venues and outdoor events.

MODERN PRACTICAL DESIGN

As well as delivering exceptional sonic performance, WPL is designed to meet the everyday practical challenges encountered by tour sound crews and installers. Its modest size and light weight - just 64kg (141lbs) - are born from detailed attention to all aspects of its physical design, and a range of accessories ensure that it is easy to transport and fast to deploy.

The WPL enclosure is constructed from plywood and finished as standard in a tour-ready heavy-duty Warnex finish (PU coated available as an option). Two side pocket handles on each side assist handling, while their discreet design is perfectly suited to installation. An integrated three-point rigging system assures efficient and safe construction of arrays of up to 24 enclosures. A rigid perforated steel grille protects the front of the enclosure.



SCALABLE RESOLUTION™ – FLEXIBLE OPTIMISATION OF COVERAGE, CONSISTENCY AND CONTROL

With unmatched line array performance inherent in the acoustic design of WPL, scalable resolution offers versatility in the way a WPL array is powered and optimised. The greater the number of individually driven enclosures, the more precisely DISPLAY can fine-tune the array's coverage, consistency and control within the venue. The advantages of higher resolution over a uniformly-driven line array are very significant — with front-to-rear frequency responses kept closely aligned and with greatly reduced output behind the array.

Bi-amped, with a passive mid/high crossover, a 12-enclosure array can be driven by either 3 x iK42 amplifiers (2-box resolution) or 6 x iK42 amplifiers (1-box resolution). With the number of amplifiers determined to suit the venue, the

application and the budget, the commercial advantages of scalable resolution are clear:

- Design systems to suit budget targets
- Dynamic deployment within a venue or site where the main PA is driven with more amplifier channels than may be necessary for delays
- Adaptable rental pricing based on event dynamics and clients' resources

For special case installations that require the ultimate resolution, it is possible to by-pass the internal passive crossover and control individual transducers independently. This maximum resolution case offers full MLA-type control, but with the external, ground-based amplification some installers prefer for large-scale fixed installations and stadiums.

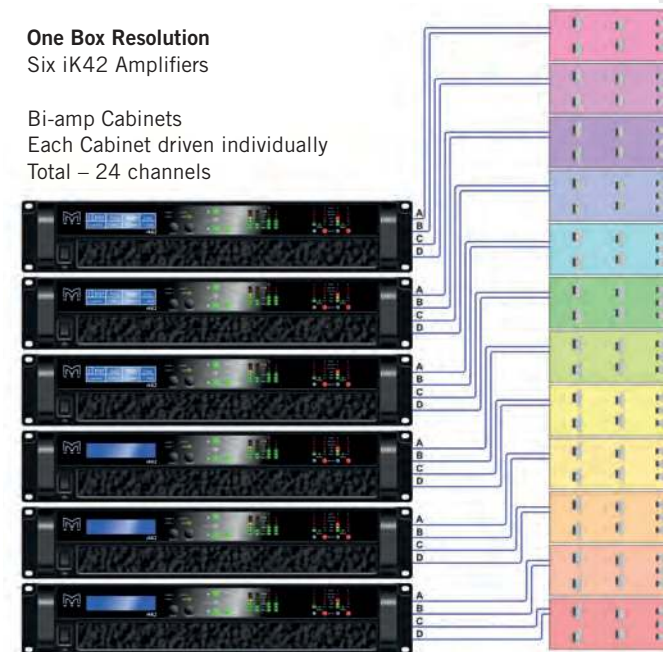
Two Box Resolution Three iK42 Amplifiers

Bi-amp Cabinets
2 Cabinets in parallel
Total – 12 channels



One Box Resolution Six iK42 Amplifiers

Bi-amp Cabinets
Each Cabinet driven individually
Total – 24 channels



INCREASING RESOLUTION FOR IMPROVED CONSISTENCY,
CONTROL & COVERAGE

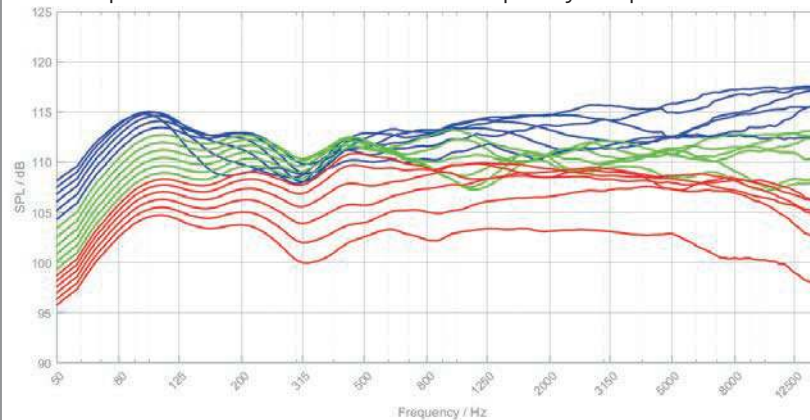
Starting with standard / uniform driven line array results:

1. Large variance in SPL between various points in venue
2. Uneven frequency response

Scalable Resolution vs Uniform Driven Array

8 WPL – Uniform Driven Array

Mic positions within venue SPL & Frequency Response



Front Row

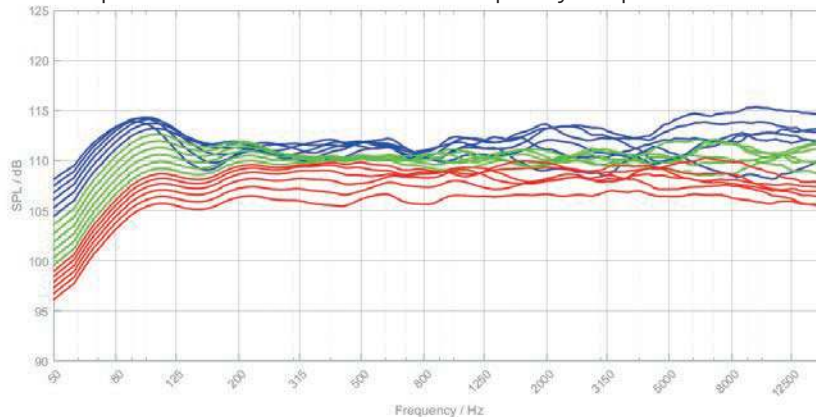
Mix Position

Back Row

Scalable Resolution – 2 Box Resolution

8 WPL Array

Mic positions within venue SPL & Frequency Response



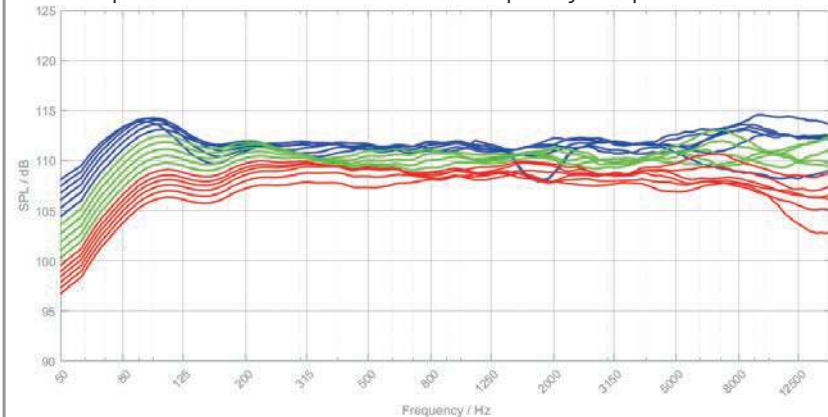
2 Box Resolution:

1. Increase in consistency in SPL measurements
2. Frequency response more consistent too

Scalable Resolution – 1 Box Resolution

8 WPL Array

Mic positions within venue SPL & Frequency Response



1 Box Resolution:

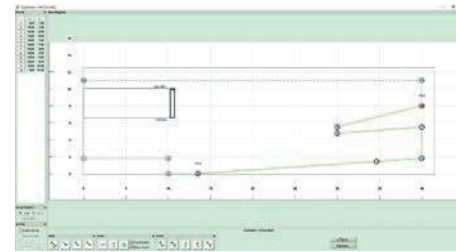
1. SPL measurements now increasingly even across the audience
2. Frequency response across audience is now very consistent

DISPLAY OPTIMISATION – ACCURATE RESULTS FROM SWITCH-ON

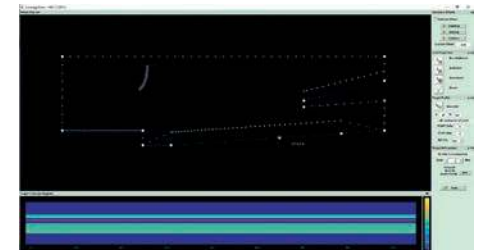
DISPLAY is an extremely powerful prediction and array configuration tool. Instead of using a standard geometric model, DISPLAY is based on an industry-leading acoustic model accurate to within $\pm 1\text{dB}$ of measured data, and delivers unrivalled coverage consistency over the audience — right from switch-on.

DISPLAY takes trial-and-error out of array deployment — generating highly-accurate SPL and frequency response predictions throughout the venue, as well as providing comprehensive rigging information, including mechanical safety analysis. DSP parameters calculated by DISPLAY are easily uploaded to the iKON amplifiers via Ethernet, using Martin Audio's VU-NET real-time control and monitoring software.

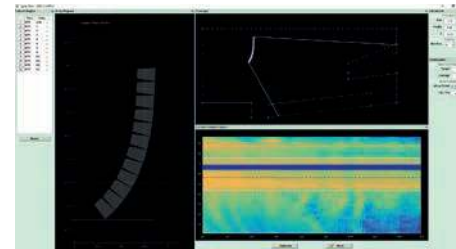
By reducing sound impacting non-audience areas, rear walls and ceilings, DISPLAY mitigates the detrimental influence of the venue acoustics — increasing clarity and intelligibility. DISPLAY's Hard Avoid® function can also be used to reduce sound-spill onto stages and rapidly reduce throw beyond a festival perimeter. Significantly, DISPLAY's ability to keep off-site sound within strict limits while maximising audience levels out-front can bring new life to previously unworkable outdoor events.



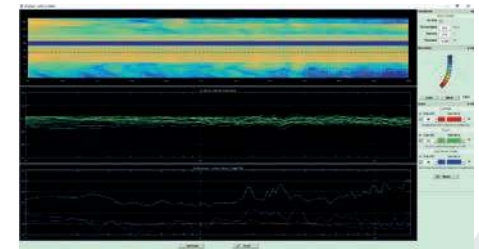
Step 1: Venue entry



Step 2: Set coverage parameters



Step 3: Calculate splay angles



Step 4: Optimisation and upload



AMPLIFICATION, DSP AND NETWORKING

WPL is designed as a complete system with dedicated, high-performance iKON multi-channel Class D amplifiers. For 1-box and 2-box resolution, the iK42 4-channel amplifier delivers very high power outputs and features high-speed Ethernet communication for system control and monitoring via Martin Audio's VU-NET software, plus Dante™ digital audio networking. With the option to transmit digital audio over a single CAT5 cable, quality is maintained over long cable runs and integration with other devices in the sound system is straightforward.

For the ultimate resolution install case, where each mid and HF transducer is driven independently, a complement of iK42 4-channel and iK81 8-channel amplifiers power the bass section, each mid and HF driver individually.

Because the amplifiers are external to the loudspeaker enclosures, the resolution of the array can be increased as required by simply adding more amplifier channels to drive more array enclosures independently — increasing the level of control available to DISPLAY to fine-tune coverage and reduce room influence. External amplifiers also facilitate ease-of-servicing in fixed installations.

iK42/iK81 FEATURES

- Four/eight channels of Class D amplification
- Onboard DSP on all inputs and outputs
- FIR filtering on each output
- Switch mode, global voltage power supply
- 20,000 watts (iK42)/10,000 watts (iK81) total RMS output
- Intuitive front panel user interface
- Ethernet network for system operation and monitoring via VU-NET
- Analogue, AES3 and Dante™ digital network audio inputs
- Extensive protection and monitoring

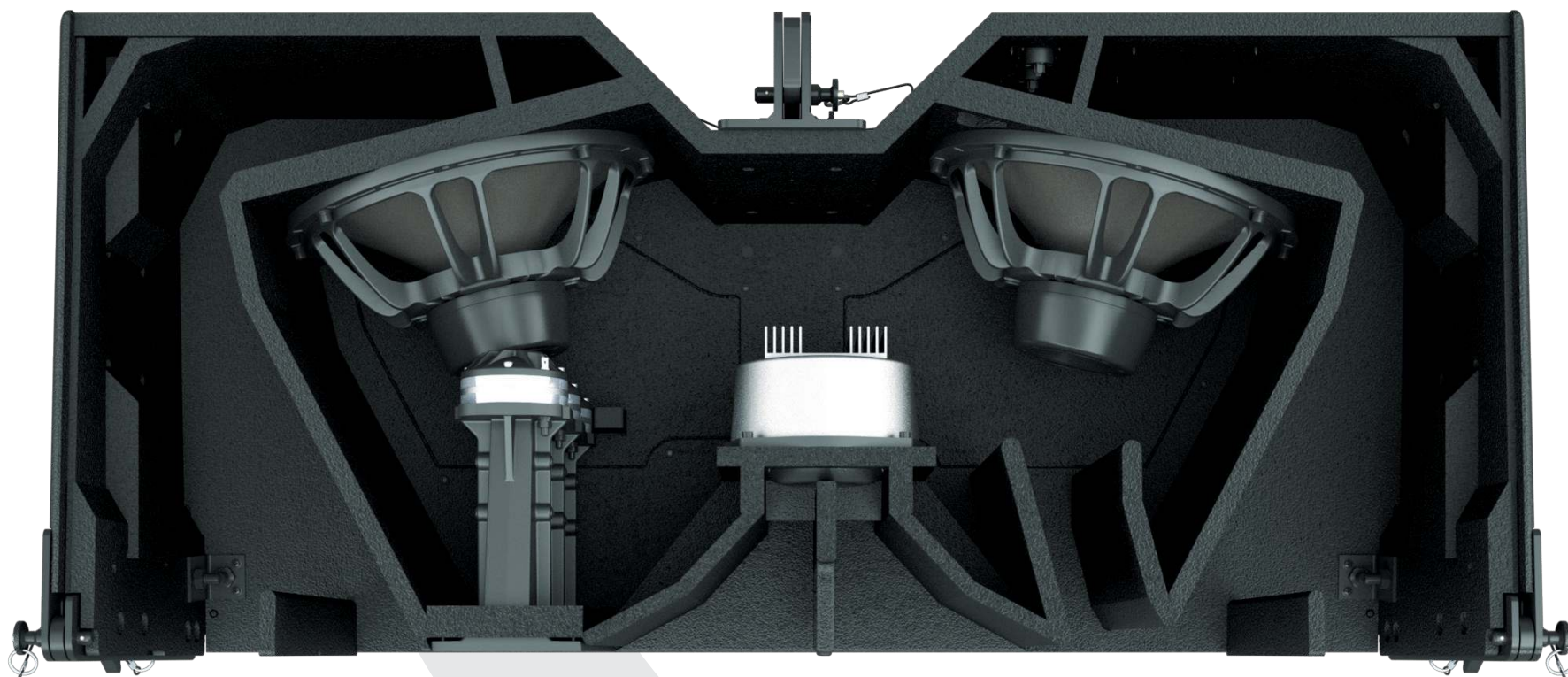


iKON

DUAL HYBRID® HORN LF SECTION – INCREASED EFFICIENCY AND OUTPUT

Hybrid technology combines the efficiency and impact of a bass horn with the low frequency extension of a bass-reflex enclosure. With a typical efficiency improvement of 4dB compared to direct radiator low-end designs of competitors, a WPL array has a noticeable advantage over direct radiator arrays when projecting maximum LF output over distance.

The LF section utilises 2 x 12" (305mm) drivers front-loaded by separate hyperbolic horns for maximum efficiency and rear-loaded by a reflex ported chamber. A differentially flared port reduces turbulence and air noise. Spacing the mouths of the twin horns as far apart as possible within the enclosure assists directivity control down to 150Hz — reducing bass mid-bass output at the sides and rear of the array. The drivers themselves are designed for very high excursion and feature 3" (75mm) voice coils, neodymium magnet structures and forced air cooling to reduce power compression.

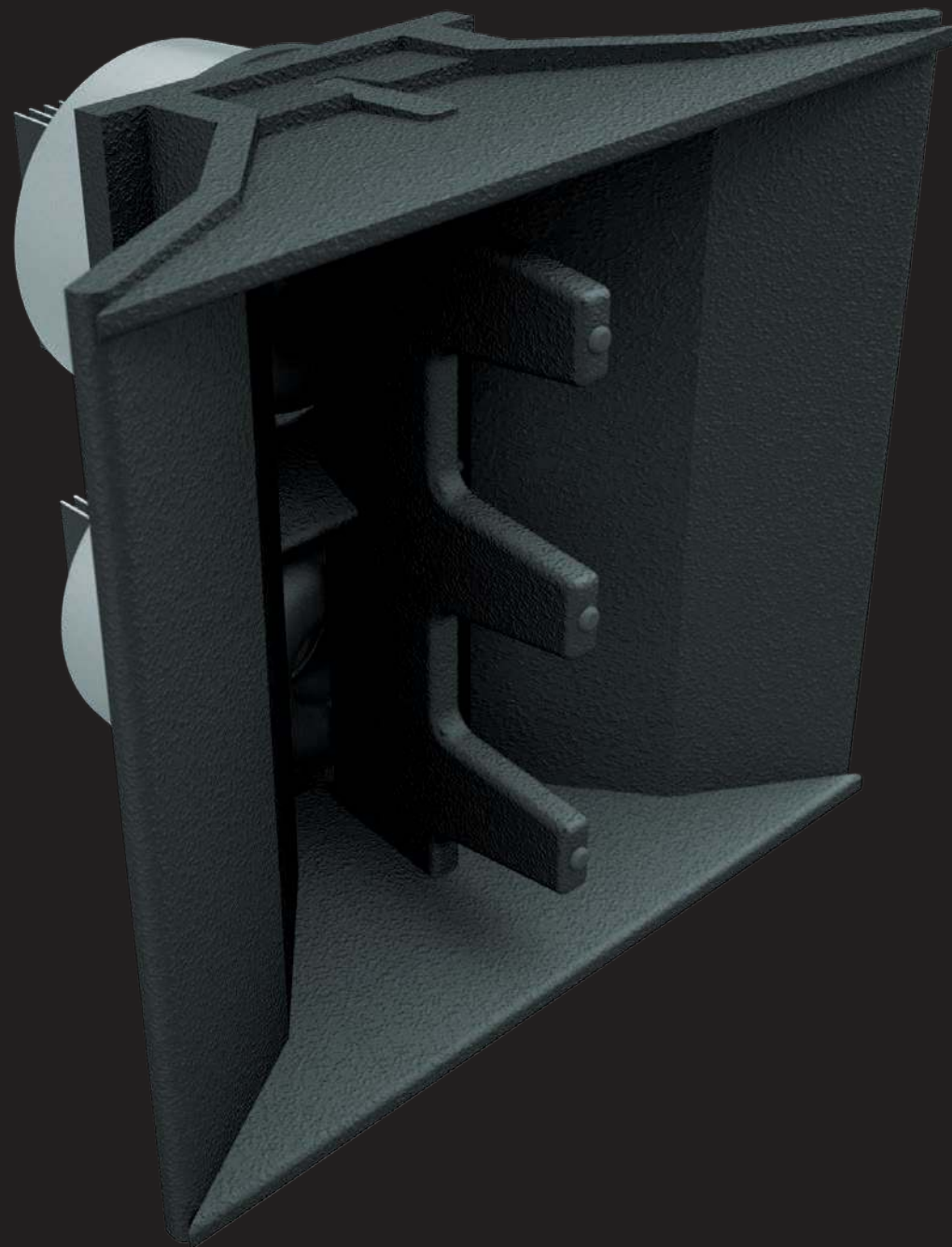


HORN-LOADED MIDRANGE – ENHANCED VOCAL CLARITY & CONSISTENCY

The patented mid-range section is central to the signature sound and superb horizontal pattern control of WPL. Compared to direct radiator midrange designs of competitors, the horn design of WPL mid has the advantages of both greater output and superior horizontal pattern control which does not vary significantly with frequency.

Featuring 2 x 6.5" (165mm) cone drivers with toroidal phase-bungs and mounted on a 90° horizontal constant-directivity horn, the midrange section covers the range from 300Hz-4kHz. Crucially, operating over an entire decade means that the fundamental frequencies of the vocal range are reproduced by a single device and a single diaphragm material, thereby offering superior consistency and clarity against competitor designs that combine different device and diaphragm material.

Additionally, the low-compression ratio in the horn throat afforded by the patented toroidal phase bungs reduces distortion compared to high-compression horn designs and the HiBlade™ waveguide smooths and improves the horizontal directivity of the horn throughout its range. The technical refinements of the midrange horn contribute to the exceptionally powerful and smooth vocal performance of WPL.



HIGH FREQUENCY SECTION – PRISTINE HIGH FREQUENCY SOUND

Operating from 4kHz upwards, the HF section of the WPL utilises 3 x 1" (25mm) exit neodymium compression drivers mounted on individual horns with true 90° horizontal constant directivity characteristics.

Competitors traditionally use large format compression drivers in line arrays which typically cross-over an octave lower, resulting in increased distortion and harsh sound just where the ear is at its most sensitive.

In contrast, the high 4kHz crossover point enabled by the midrange horn design, together with the use of smaller HF diaphragm drivers means that WPL delivers pristine high frequency sound with much lower distortion than traditional designs — with the added benefit of a more extended extreme top-end not achievable from large-format devices operating in the break-up region at the upper end of their range.

Patented kite-shaped 'wedges' in the throat of each horn flatten the curvature of the wavefront so that the HF section operates as a true line array.



FAST AND EASY RIGGING – DEPLOYMENT SPEED

Safety, simplicity and speed are essential aspects of a rigging system which the WPL three-point rigging system fully addresses. The rigging design allows for suspension of up to 24 enclosures, with DISPLAY software calculating the splay angles from 0°-7.5° needed to produce the desired vertical coverage. DISPLAY also determines the safe limits and tilt angle of an array and confirms compliance with specific safety standards, including BGV-C1, prior to deployment.

FRONT RIGGING POINTS

The front hinge points at the top of each WPL enclosure over-extend to ensure that there is plenty of ‘finger-room’ for riggers to pin enclosures together. As well safeguarding hands, this over-extension also gives useful latitude when connecting the lowermost box in an array to the uppermost box on a dolly which may not be on level ground, such as a festival site. As the hang is lowered, a second pin locks the hinge in place in its unextended position to minimise the gap between enclosures at the hinge point to just a few millimetres, ensuring vertical coverage consistency.

REAR RIGGING POINT

The rear rigging point sets the inter-cabinet splay angles determined by DISPLAY, and the design allows the angles to be easily set by a quick-release pin while enclosures are in their closed-up transport positions on the dolly. Once the uppermost enclosure on the dolly is attached to the array and the array is lifted, the dolly enclosures open up to the correct splay angles. A second pin locks each in place.





SXH218 HYBRID® SUB BASS – CHEST THUMPING EFFICIENCY

The SXH218 is a highly-powerful ground-stack subwoofer capable of producing 148dB peak output at 1m. Its Hybrid® horn/reflex loading combines the acoustic efficiency and impact of bass horn technology with the low frequency extension of a reflex design, enabling it to produce significantly higher output levels than a traditional reflex-loaded subwoofer. In most applications this means fewer subwoofers are required to achieve better results than standard reflex-loaded subwoofers. With an operating range of 32-150Hz + 3dB, it features dual long-excursion 18" (460mm)/4.5" (115mm) voice coil neodymium drivers, with water resistant cones and triple roll surrounds.

The enclosure is constructed from multi-laminate plywood and finished with a rugged polyurea coating. A rigid perforated steel grille protects the front of the enclosure, while interlocking skids protect the top and bottom surfaces and prevent movement when stacked.

SXHF218 FLOWN HYBRID® SUB BASS

The SXHF218 is a version of the SXH218 with flying hardware. It can be incorporated at the top of a WPL array, or more commonly flown as a separate array alongside. Like the ground-stack version, a combination of forward and rear-facing enclosures can be configured with specific directional properties.

The SXH218 can be powered by either a single channel of an iK42 4-channel amplifier, or a bridged pair if maximum output is required. DSP settings for each SXH218 are determined by DISPLAY™ and uploaded to the iK42 over Ethernet via the VU-NET™ real-time control and monitoring interface. A combination of forward and rear-facing enclosures can be configured by DISPLAY as a directional subwoofer array with specific directional properties, including cardioid.

ACCESSORIES – THE COMPLETE PACKAGE

TOURING FLYING FRAME AND OUTRIGGER

The WPL Touring Flying Frame is used for suspension of up to 24 enclosures with a two-point lift, or up to 10 enclosures with a single-point lift. With the addition of an outrigger, it also provides for ground stacking of WPL's up to six high. A simpler install flying frame is also available.



4-BOX DOLLY/CART

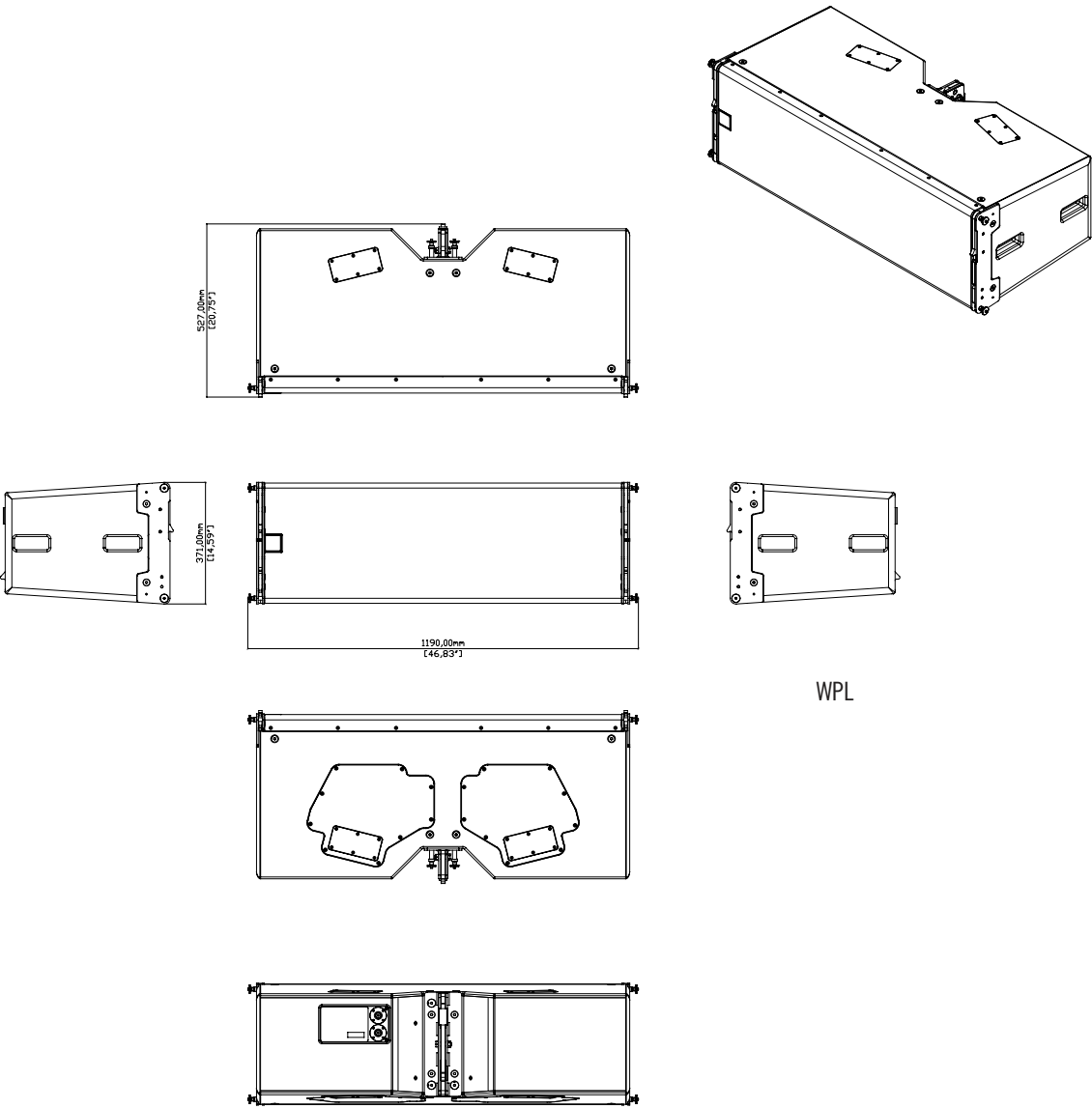
The dolly is a convenient, compact solution for transporting 4 WPL enclosures. Four dollies will fit length-wise in standard US and European trucks. The top of the dolly is load-bearing to allow stacking of other equipment within the height of the truck.



AMPLIFIER RACK

The 9U high amplifier rack for the WPL houses 3 iK42 4-channel Class D power amplifiers. This provides 12 channels of amplification to power a 12-enclosure array with 2-box resolution, while two amplifier racks will provide 24 channels of amplification to power a 12-enclosure array with 1-box resolution. Each amplifier rack is equipped with a 2U mains distro, 3 NL8 output connectors and a multiway connector that will power an array of 12 enclosures (2-box resolution) or 6 enclosures (1-box resolution) via a single multicore cable.

TECHNICAL SPECIFICATIONS



WPL

WPL

TYPE	Three-way, bi-amp line array element
FREQUENCY RESPONSE (5)	52Hz-18kHz \pm 3dB
DRIVERS	LF: 2 x 12" (300mm)/3" (75mm) voice coil, ultra-long excursion, neodymium magnet drivers, Hybrid® bass horn loaded
	MF: 2 x 6.5" (165mm)/2" (50mm) coil, neodymium magnet drivers, horn loaded
	HF: 3 x 1" (25mm) exit neodymium magnet compression drivers, horn loaded
SYSTEM AMPLIFIER	iKON iK42
SYSTEM RESOLUTION	1 or 2 enclosures per amplifier channel
MAXIMUM SPL (9)	LF: 139dB
	MF: 140dB
	HF: 145dB
NOMINAL IMPEDANCE	LF: 8 ohms, MF + HF: 8 ohms
DISPERSION	90° horizontal (-6dB), 120° horizontal (-10dB)
	7.5° vertical
CROSSOVER	320Hz active, 4kHz internal passive
ENCLOSURE	Vertical trapezoid with 3.75° wall angle, multi-laminate birch and poplar-ply construction
FINISH	Black textured paint
PROTECTIVE GRILLE	Black HEX perforated steel
CONECTORS	2 x NL4 type
PIN CONNECTIONS	LF: 1+/1-, MF + HF: 2+/2-
FITTINGS	3-point rigging system
	4 x side pocket handles
FLOWN ARRAY MAXIMUM	24 enclosures in single array
DIMENSIONS (ex. pins)	(W) 1136mm x (H) 371mm x (D) 526mm
	(W) 44.7in x (H) 14.6in x (D) 20.7in
WEIGHT	64kg (141lbs)
ACCESSORIES	Touring flying frame
	Install flying frame
	Dolly for 4 enclosures
	Ground stack outrigger
	Flying Pin

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.

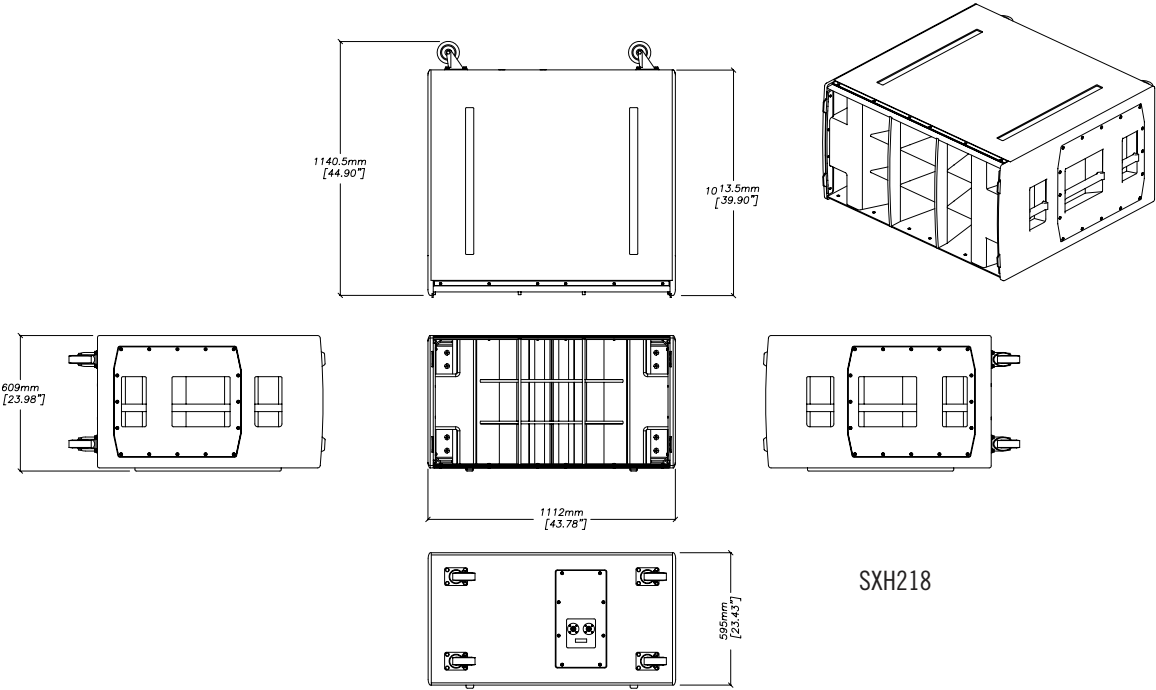
(10) Measured in half (2pi) space at 2 metres with 2.83V input, using band limited pink noise, then referred to 1 metre.

SXH218

TYPE	Hybrid® horn/reflex subwoofer
FREQUENCY RESPONSE (1)	32Hz – 150Hz ±3dB, -10dB @ 27Hz
DRIVERS	2 x 18" (460mm)/4.5" (115mm) voice coil, long excursion, neodymium magnet, waterproof cone
RATED POWER (2)	3000W AES, 12000W peak
RECOMMENDED AMPLIFIER	iKON iK42
SENSITIVITY (10)	107dB
MAXIMUM SPL(9)	148dB peak (at 1m half space)
NOMINAL IMPEDANCE	4 Ohms
DISPERSION (-6dB)	Omnidirectional/or Cardioid (paired)
ENCLOSURE	Multi-laminate birch/poplar ply
FINISH	Textured Black Polyurea
PROTECTIVE GRILLE	Black perforated steel
CONNECTORS	2 x NL4
PIN CONNECTIONS	Input: +1/-1, refer to input panel for four-core cable link diagram
FITTINGS	Two skids on base, with mating channels on top Four rear-mounted 100mm (4in) castors 6 x bar handles, 3 on each side 4 x fittings for optional transit cover
DIMENSIONS (INCL SKIDS)	(W) 1112mm x (H) 609mm x (D) 1013mm (1140mm incl. castors) (W) 43.8in x (H) 23.9in x (D) 39.9in (44.9in incl. castors)
WEIGHT	116kg (256lbs), with castors 120kg (265lbs)
ACCESSORIES	Transit cover

SXHF218

TYPE	Hybrid® horn/reflex subwoofer
FREQUENCY RESPONSE (1)	32Hz – 150Hz ±3dB, -10dB @ 27Hz
DRIVERS	2 x 18" (460mm)/4.5" (115mm) voice coil, long excursion, neodymium magnet, waterproof cone
RATED POWER (2)	3000W AES, 12000W peak
RECOMMENDED AMPLIFIER	iKON iK42
SENSITIVITY (10)	107dB
MAXIMUM SPL(9)	148dB peak (at 1m half space)
NOMINAL IMPEDANCE	4 Ohms
DISPERSION (-6dB)	Omnidirectional/or Cardioid (paired)
ENCLOSURE	Multi-laminate birch/poplar ply
FINISH	Textured Black Polyurea
PROTECTIVE GRILLE	Black perforated steel
CONNECTORS	2 x NL4
PIN CONNECTIONS	Input: +1/-1, refer to input panel for four-core cable link diagram
FITTINGS	Two skids on base, with mating channels on top Four rear-mounted 100mm (4in) castors 6 x bar handles, 3 on each side 4 x fittings for optional transit cover
DIMENSIONS (INCL SKIDS)	(W) 1152mm x (H) 609mm x (D) 1013mm (1140mm incl. castors) (W) 45.4in x (H) 23.9in x (D) 39.9in (44.9in incl. castors)
WEIGHT	138kg (304lbs), with castors 142kg (313lbs)
ACCESSORIES	Transit cover



iK42

General

TYPE	Four-channel Class D amplifier
TOTAL OUTPUT POWER	20,000 Watts RMS, all channels driven
DIGITAL SIGNAL PROCESSING	96kHz DSP on all inputs and outputs
COOLING	Dual vari-speed fans, front-to-back airflow
MAXIMUM AMBIENT TEMPERATURE	40°C (104°F)

Audio Inputs/Outputs

ANALOGUE IN/LINK (4 CHANNELS)	4 x female, 4 x male Neutrik™ XLR
ANALOGUE INPUT IMPEDANCE	20kΩ balanced to ground
MAXIMUM ANALOGUE INPUT LEVEL	+20dBu
NOMINAL SYSTEM GAIN	32dB
AES3 IN/LINK (2 CHANNELS)	1 x female, 1 x male Neutrik™ XLR, balanced
DANTE™ (4 CHANNELS)	2 x shielded RJ45, primary and secondary
AMPLIFIER OUTPUTS	4 x Neutrik Speakon™ NL4

Control and Monitoring Network

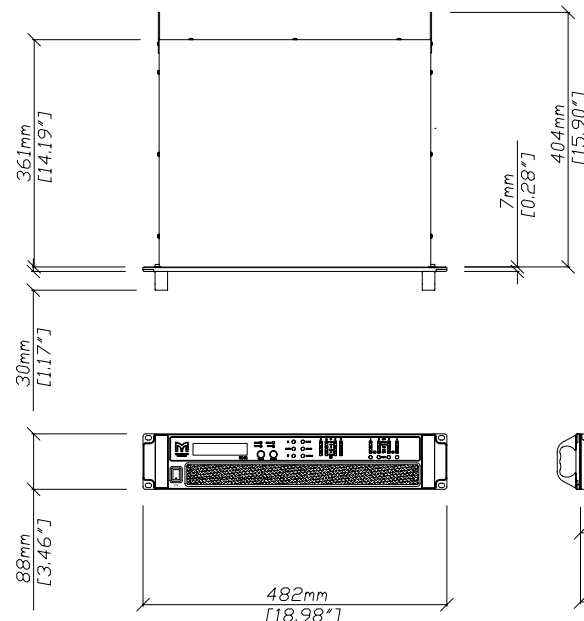
TOPOLOGY	Ethernet
CONTROL APPLICATION	Martin Audio VU-NET™

Power Supply

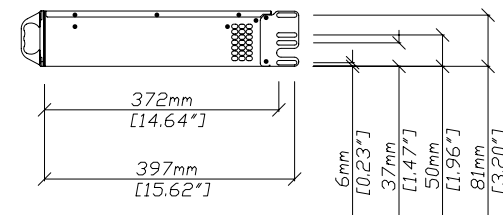
TYPE	High performance Series Resonant
AC INPUT OPERATING RANGE	85 – 240V ~ AC, 47 – 63Hz
MAINS INRUSH CURRENT	6A at 115V, 12A at 230V (max for <10ms)
MAINS CONNECTOR	Neutrik 32A Powercon™

Physical

DIMENSIONS	(W) 483 x (H) 2U/89mm x (D) 357mm
	(W) 19in x (H) 2U/3.5in x (D) 14.1in
	incl handles and optional rear support
WEIGHT	12.5kg (27.5lbs)



iK42



iK81

General

TYPE	Eight-channel Class D amplifier
TOTAL OUTPUT POWER	10,000 Watts RMS, all channels driven
DIGITAL SIGNAL PROCESSING	96kHz DSP on all inputs and outputs
COOLING	Dual vari-speed fans, front-to-back airflow
MAXIMUM AMBIENT TEMPERATURE	40°C (104°F)

Audio Inputs/Outputs

ANALOGUE IN/LINK (4 CHANNELS)	4 x female, 4 x male Neutrik™ XLR
ANALOGUE INPUT IMPEDANCE	20kΩ balanced to ground
MAXIMUM ANALOGUE INPUT LEVEL	+20dBu
NOMINAL SYSTEM GAIN	32dB
AES3 IN/LINK (2 CHANNELS)	1 x female, 1 x male Neutrik™ XLR, balanced
DANTE™ (4 CHANNELS)	2 x shielded RJ45, primary and secondary
AMPLIFIER OUTPUTS	4 x Neutrik Speakon™ NL4

Control and Monitoring Network

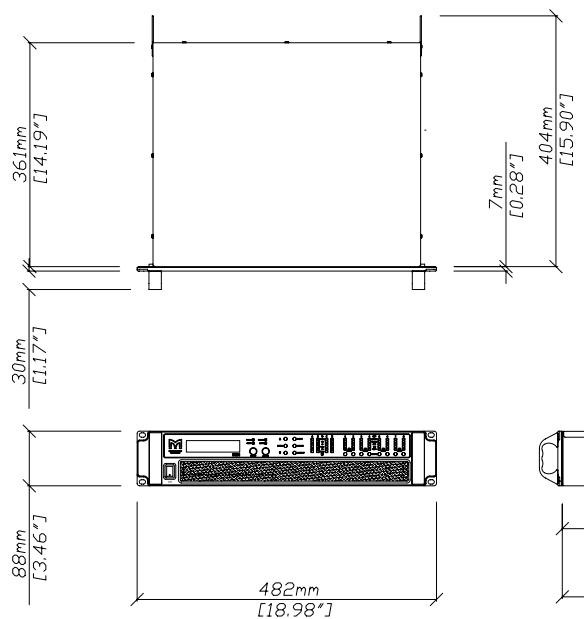
TOPOLOGY	Ethernet
CONTROL APPLICATION	Martin Audio VU-NET™

Power Supply

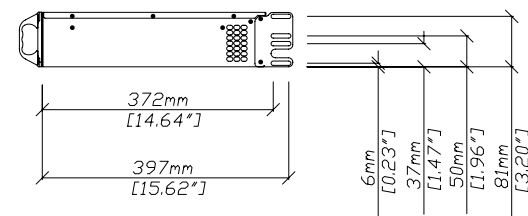
TYPE	High performance Series Resonant
AC INPUT OPERATING RANGE	85 – 240V ~ AC, 47 – 63Hz
MAINS INRUSH CURRENT	6A at 115V, 12A at 230V (max for <10ms)
MAINS CONNECTOR	Neutrik 32A Powercon™

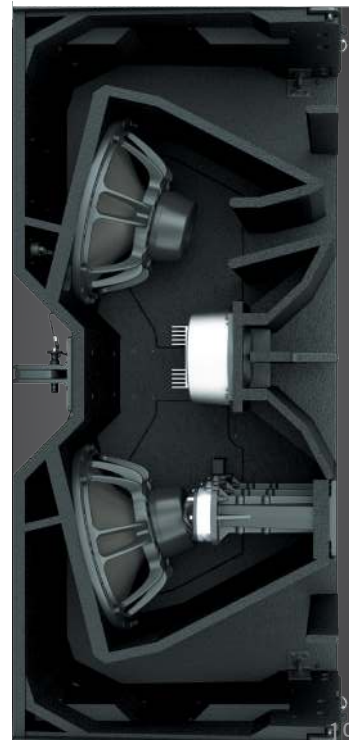
Physical

DIMENSIONS	(W) 483 x (H) 2U/89mm x (D) 357mm
	(W) 19in x (H) 2U/3.5in x (D) 14.1in
	incl handles and optional rear support
WEIGHT	12.5kg (27.5lbs)



iK81







WAVEFRONT PRECISION LONGBOW SCALABLE RESOLUTION GOES FURTHER

Martin Audio Limited

Century Point

Halifax Road

Cressex Business Park

High Wycombe

Buckinghamshire

HP12 3SL

England

FOR SALES ENQUIRIES:

UK

Telephone: +44 (0)1494 535312

E-mail: info@martin-audio.com

NORTH AMERICA

Telephone: 818 649 7776

www.martin-audio.com

All information is Copyright © 2018 Martin Audio Ltd.

Martin Audio, the Martin Audio logo and Hybrid are registered trademarks of Martin Audio Ltd. in the United Kingdom, United States and other countries; all other Martin Audio trademarks are the property of Martin Audio Ltd.



Unite Your Audience
The Martin Audio Experience



Version 1.0