Line Array Loudspeaker Module Type L208

APPLICATIONS

- Optimized for medium to long-throw applications
- Medium to large scale events
- Touring sound reinforcement
- Medium to large fixed Installations

FEATURES

- Clarity, intelligibility and precision
- Constant tonal balance
- Compact and light
- Seamless acoustic integration with other Lange Loudspeakers products
- Specifically designed wave guide, engineered by Lange Loudspeakers Ltd.
- Double 8" ND drivers with 52mm AL Voice Coil, two high efficiency 1” ND Drivers
- Easy flying system, reduces setup time to a minimum

DESCRIPTION

The L208 is a compact, extremely light weight two way speaker designed for curvilinear arraying. Each module has excellent power reserve (136 peak SPL @ 1 meter) for high impact, medium to long throw application in different venues, but especially for quick & easy touring sound reinforcement where quality reproduction is indispensable.

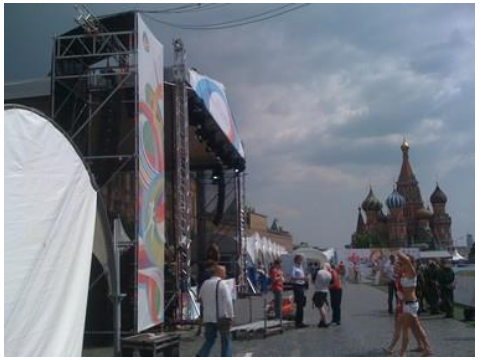
The L208 includes two 8” low-mid frequency ND drivers with 52 mm AL voice coil. The absence of resonances in the mid-bass section is an evident advantage of the L208 line array not common in other line array designs on the market.

The heart of the L208 line array is its wave guide. Lange Loudspeakers designed a specific wave guide for the L208 that emits isophase wave fronts.

The L208 line array source provides high SPL, solid LF performance thanks to the high excursion capability (Xmax) of the 8” drivers selected and constant tonal balance over distance. Frequencies above 10 KHz are smoothly reproduced morphing a cylindrical wave shape.

Careful listening tests enabled the development of a very pleasant sounding device. DSP Intervention is reduced to a minimum. After several years on the market the L208 DSP settlings has been refined and reduced to minimal interventions.

The Lange Loudspeakers L208 line array offers a very attractive price to performance ratio. Cabinets are manufactured with multi-ply Finnish Birch, the wave guide is composed by a CNC milled nylon block while the suspending system is composed by CNC milled Ergal elements, polished and anodized in black.



Moscow – Red Square – L208 & B218

Line Array Loudspeaker Module Type L208

SPECIFICATIONS

Sensitivity (1)	98dB LF, 109dB HF @ 1 Mt. with 1 watt
Frequency response (2)	75Hz to 21'000Hz
Program power (3)	800W LF, 240W HF
Continuous power rating (3)	400W LF, 120W HF
Maximum sound pressure (one module)	126 dB @ 1 meter, full power 136 dB peak
Maximum sound pressure 4 modules all 0°	138 dB @ 1 meter, full power 148 dB peak
Horizontal coverage angle (-6dB)	100° from 250Hz to 16KHz
Vertical coverage (-6dB)	Varies with array size & configuration
Power compression	Less than 3 dB
Impedance (nominal)	16 Ohms LF, 16 Ohms HF
Recommended crossover points	>90Hz 48dB Bessel, <1350Hz 48dB LR, 5900 Hz 6dB Bessel
Recommended processing	Dolby Lake® - BSS FDS366 – XTA – Xilica - DBX
Connectors	2 x Neutrik NL4MPR(+1/-1 LF & +2 &-2 HF)
Box construction	15 mm Finnish birch, 5° side angle
Horn configuration	Slightly exponential horn 100°V – 7°H
Dimension (W/H/D)	60 cm* x 27,5 cm x 33,5 cm
Weight	16,9 Kg
Shipping weight	app. 18.9Kg
Accessories	Black matted aluminum front grille, C8-MB30 flying Push KLP handle (M8x30SS)
Flying systems (4)	The systems are equipped with custom made flying hardware; Flying bar structures are available upon request

Faital LF ND Driver

Lange Wave Guide - Section

1. Sensitivity is based on a swept 100 Hz to 500 Hz signal for an input of 2.83 V @ 8 ohms or 2.0 V @ 4 ohms
2. Frequency range is defined as the frequency extremes where the response is –10dB from the rated sensitivity
3. 90 Hz High Pass Bessel type, 1350Hz Low Pass LR type
4. Lange Loudspeakers Ltd. offers upon request different types of mounting hardware intended for vertical or horizontal arrangements

All information herein is subject to change without prior notice.

L208 DSP pre-sets – 24 x L208 in conjunction with 12 x B218

The L208 line array has been intensively studied in order to avoid complicated DSP intervention. Finally, a well-made line array should work without the need of extra tuning of the high frequencies, mid frequencies and so on. Therefore the only suggested intervention point is relative to the speaker reactance at app. 340 Hz. The main DSP intervention suggested for the L208 is related to common speaker management when active driving of the system is a must. The system will perform with most quality Loudspeaker Management Systems, however good quality DSP's with 96KHz sampling AD/DA capability (or more) are suggested. All output polarities settled in normal position – See power rating of the speakers and amplifiers for proper limiter threshold match

L208 Setup Suggestion

L208 Component	Delay (mm)	Polarity	X-over point (high pass)	X-over type (high pass)	X-over point (low pass)	X-over type (low pass)	Relative Gain Settings** (dB)
2 x 8''	75 to 100	+	90Hz	48dB BW	1370Hz	48dB Bessel	+0
2 x 1''	0	+	5900Hz	6dB Bessel	OUT	OUT	-10

** Assuming amplifiers of identical input sensitivity and gain
Time delays assume fronts of enclosures aligned. Variations of delay will affect horizontal polar dispersion.
Line Array width reactance imposes one filter on the MF components . We suggest to correct as follows: 350Hz -11dB Q=0,5
This EQ and DSP settling suggestion has been tested both indoor and outdoor with a number of L208 modules comprised between 8 to 16 modules per channel. Usually the L208 is paired to B218 subwoofers in a 2/1 ratio (2 x L208 modules / 1 x B218 subwoofers).