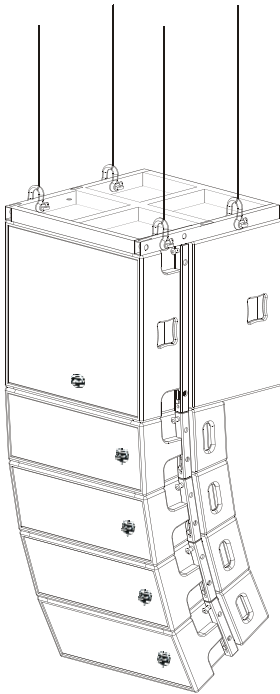




Line Array Speaker

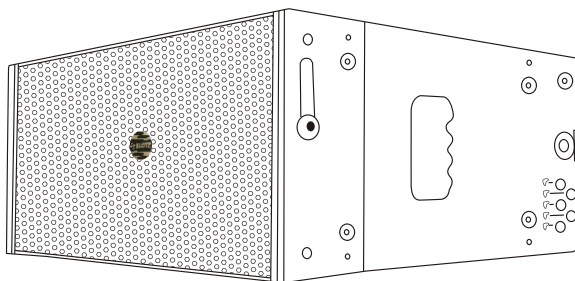


L-AY Series

USER MANUAL

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Introduction to L-AY 208



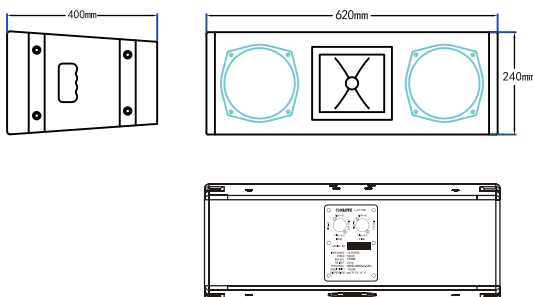
The L-AY series is a compact two-way passive, line array system, intended for use in arrays with fixed curvature, up to six cabinets of L-AY 208. L-AY series is a versatile loudspeaker system for medium & large indoor venues. It is suitable in small and medium outdoor scale application, or as a delay tower for large scale sound reinforcement system.

L-AY series was born for making a line-array with fixed curvature, with 90° horizontal & 7.5° vertical coverage pattern, aim to simulate a coherent waveguide with six enclosure.

A main frame hardware defines the tilting of the complete array system between +20°/-25°. The L-AY 208 includes a dual angle pole socket, plus the accessory for a suspension options. It is easy to use integral rigging hardware, and give the possibility to assemble a max. of 6x L-AY 208 in suspension or 1x L-AY 118/208 plus 4x L-AY 208 in the same way as a single source. A high frequency selector gives you more flexibility to define an amplitude shading of the L-AY. The 0dB position is normally used to coverage the near field audience. The +3dB position is normally used to coverage the far field audience.

The L-AY 208 is equipped with two custom high power 8" Mid-Bass of the 2" sandwich copper voice coil on fiberglass former and two 1" high frequency drivers with 1.4" voice coil of titanium diaphragm are used on double proprietary waveguide horn.

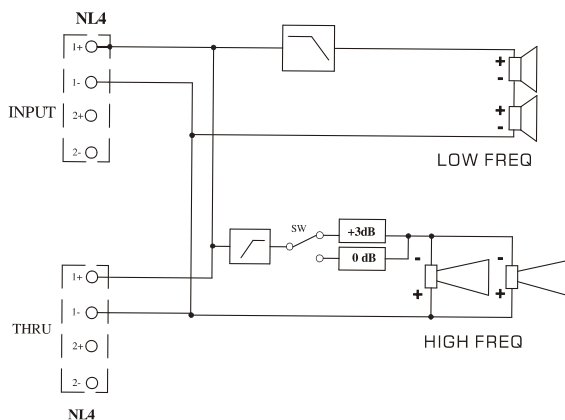
Dimension Drawings of L-AY 208



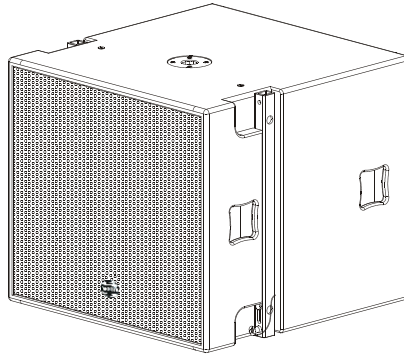
L-AY 208 Technical Specifications

Model	L-AY 208
LF Unit	2*8" Bass unit
HF Unit	2*1.4" aluminum alloy diaphragm, neodymium magnet, 1" throat.
Frequency Response	60Hz-20KHz
Rated Power	LF:400W/HF:100W
Continuous Power	LF:800W/HF:200W
Peak Power	LF:1600W/HF:400W
Impedance	LF:16Ω/HF:16Ω
Sensitivity	105dB (1w@1m)
Continuous SPL	128dB (Cmax@1m)
Max SPL	135dB (Pmax@1m)
Dispersion	90° Horx7.5° Ver (HF-Horn)
Material	18mm(0.7") PLYwood+15mm(0.6")
Connection Method	SPEAKON NL4x2
Dimension (W*D*H)	450*544*256mm
Weight	21kg

L-AY 208 Block Diagram

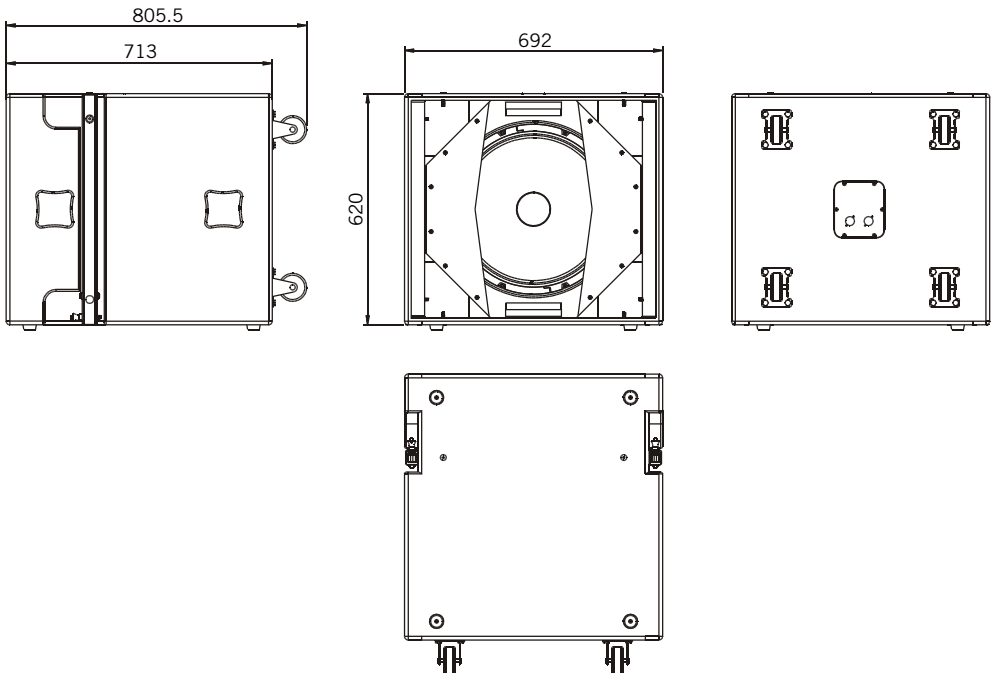


Introduction to L-AY 118/208



The L-AY 118/208 is a vented subwoofer equipped with a single custom high power 18" Subwoofer with 4" high-power sandwich copper voice coil on fiberglass former, double spider, ceramic magnet, and waterproof cone. The enclosure is made with a 18mm multi-layer plywood, finished with anti-scratch black paint, with a strong perforated metal grille, four metal handles, one pole socket for satellite and four wheels.

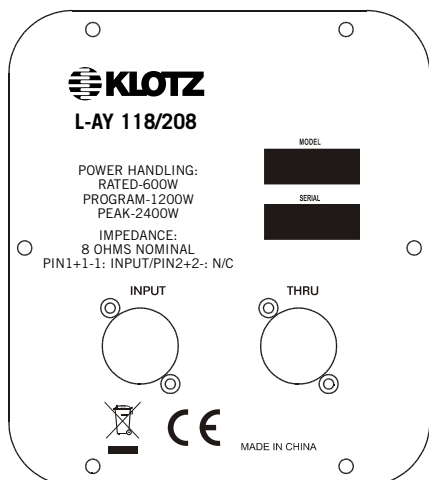
Dimension Drawings of L-AY 118/208



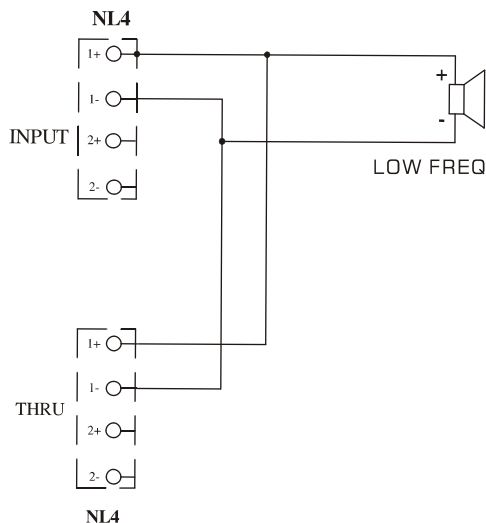
L-AY 118/208 Technical Specifications

Model	L-AY 118/208
LF Unit	1*18" Bass unit
HF Unit	--
Frequency Response	33Hz-300Hz
Rated Power	LF:600W
Continuous Power	LF:1200W
Peak Power	LF:2400W
Impedance	LF:8Ω
Sensitivity	105dB (1w@1m)
Continuous SPL	128dB (Cmax@1m)
Max SPL	134dB (Pmax@1m)
Dispersion	--
Material	18mm(0.7") PLYwood
Connection Method	SPEAKON NL4x2
Dimension (W*D*H)	610*574*488mm
Weight	37kg

Rear Panel



L-AY 118/208 Block Diagram

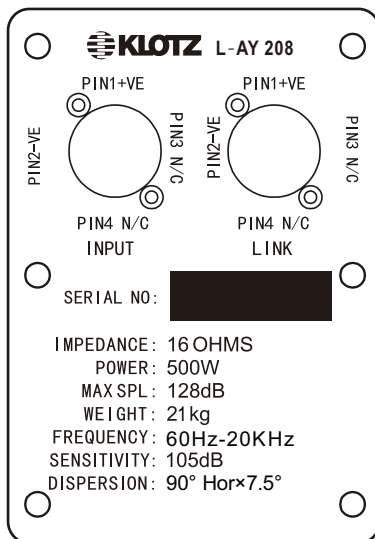


Layout of the Connector Panel L-AY

1. High Frequency Configurator(HFC)

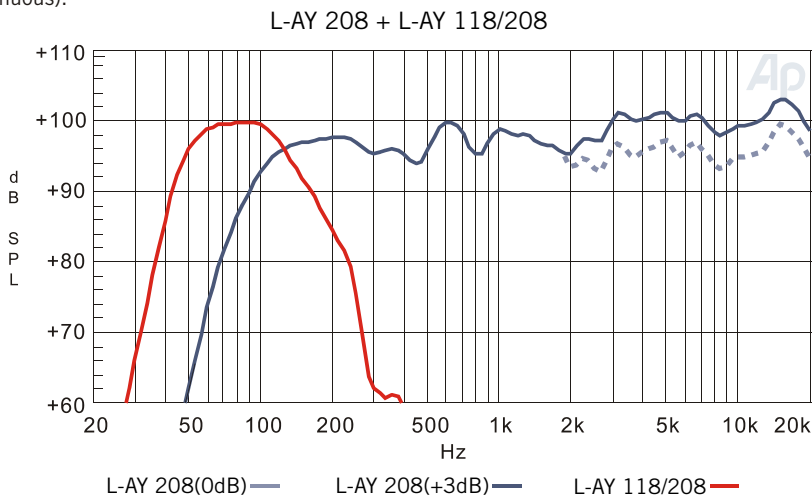
The High Frequency Configurator gives you the possibility to define the best sound pressure level in front of the audience.

The +3dB position is normally used for the L-AY 208 that work in array for covering the more distant audience. The 0dB is normally used for covering the nearest audience.



2. Frequency Response

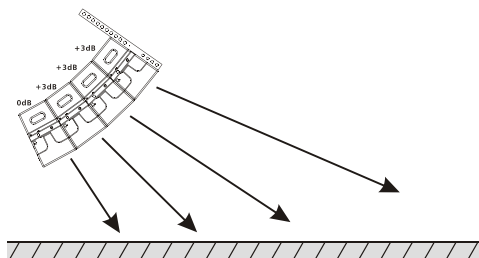
In the frequency response is visible the HFC in the two different position of the selector, 0dB (dotted line) and +3dB (continuous).



Layout of the Connector Panel L-AY

Medium Array configuration

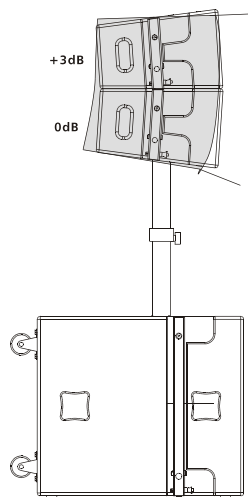
Below is an example of applying the HFC to L-AY 208's in array. In this particular configuration, the HFC on the top speaker is set at $\pm 3\text{dB}$, and the bottom speaker 0dB .



Small Array Configuration

This is an example of the HFC application with two L-AY 208's in a small array, with the top speaker set at $+3\text{dB}$ and the bottom speaker at 0dB . Do not stack more than two L-AY 208 speakers on the pole.

NOTE: Be sure to lock the two speaker cabinets with the original hardware.



Array Frame

The following table defines the maximum number of speakers that may be suspended using the Array Frame U-BOLT. A security design factor is maintained for the speaker configurations indicated in the table.

Maximum quantity of L-AY 208 in array(satellite)	2	3	4	5	6
Maximum quantity of L-AY 118/208 in array	1	1	1	0	0

Suspension Safety Warning

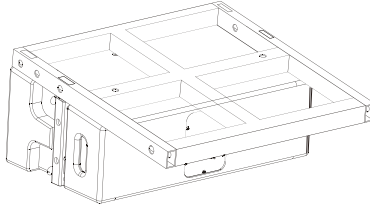
Never exceed the maximum recommended speaker cabinet listed on the table.

Research and understand the local regulations and requirements of the country where you intend to install the line array. The correct assembly of all associated hardware is required for a safe suspension system. Two point suspension with uniform loading of each lifting location is recommended when using Array Frame U-BOLT .

Layout of the Connector Panel L-AY

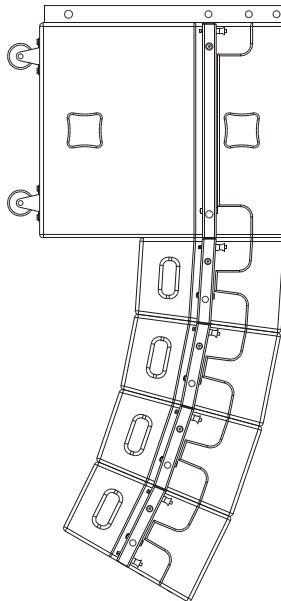
Array Frame Connection

The U-BOLT frame is connected to L-AY hardware with ARRAY quick release pins.



Locking the Loudspeakers Together

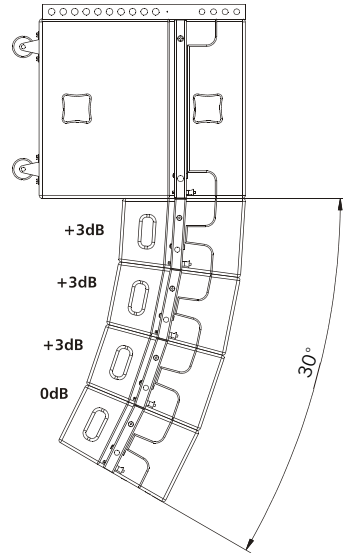
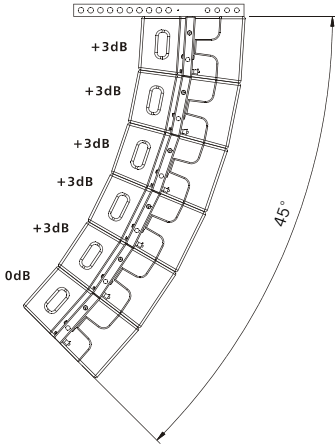
Any time two or more L-AY 118/208 and L-AY 208 are arrayed together, they must be mechanically secured to each other. See diagram below for details.



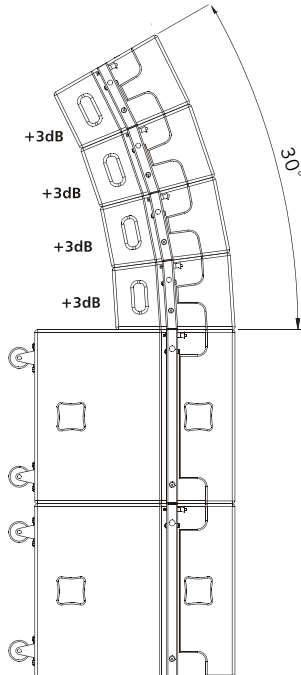
Layout of the Connector Panel L-AY

Deploying the System in Suspension & Compression

Suspension



Stack



Speaker Management: L-AY

! User Preset: 4*L-AY 118/208 + 8 *L-AY 208

EDIT → XOVER	FILTER TYPE	FILTER SHAPE	FREQUENCY	PHASE
OP 1&2	LPF	But24	117 Hz	Φ 0°
	HPF	But24	37.2 Hz	
OP 3&4	LPF	Thru	2K00Hz	Φ 0°
	HPF	But24	82.5 Hz	
OP 5&6	LPF	Thru	2K00Hz	Φ 0°
	HPF	But24	82.5Hz	

EDIT → OUT EQ	FILTER SELECT	FILTER TYPE	FREQUENCY	FILTER Q	GAIN
OP 1&2	EQ1	PEAK	37.2 Hz	1.95	+3dB
	EQ2	PEAK	101 Hz	1.95	+6dB
	EQ3 Default		Hz		
	EQ4 Default		Hz		
	EQ5 Default		Hz		
OP 3&4	EQ1	PEAK	1 KHz	1.00	-3.5dB
	EQ2	PEAK	1k8Hz	0.60	-3.5dB
	EQ3	PEAK	8k28Hz	1.95	+3.0dB
	EQ4 Default	PEAK	420 Hz	0.6	+6dB
	EQ5 Default		Hz		
OP 5&6	EQ1	PEAK	1 KHz	1.00	-3.5dB
	EQ2	PEAK	1k8Hz	0.60	-3.5dB
	EQ3	PEAK	8k28Hz	1.95	+3.0dB
	EQ4	PEAK	420 Hz	0.6	+6dB
	EQ5 Default				

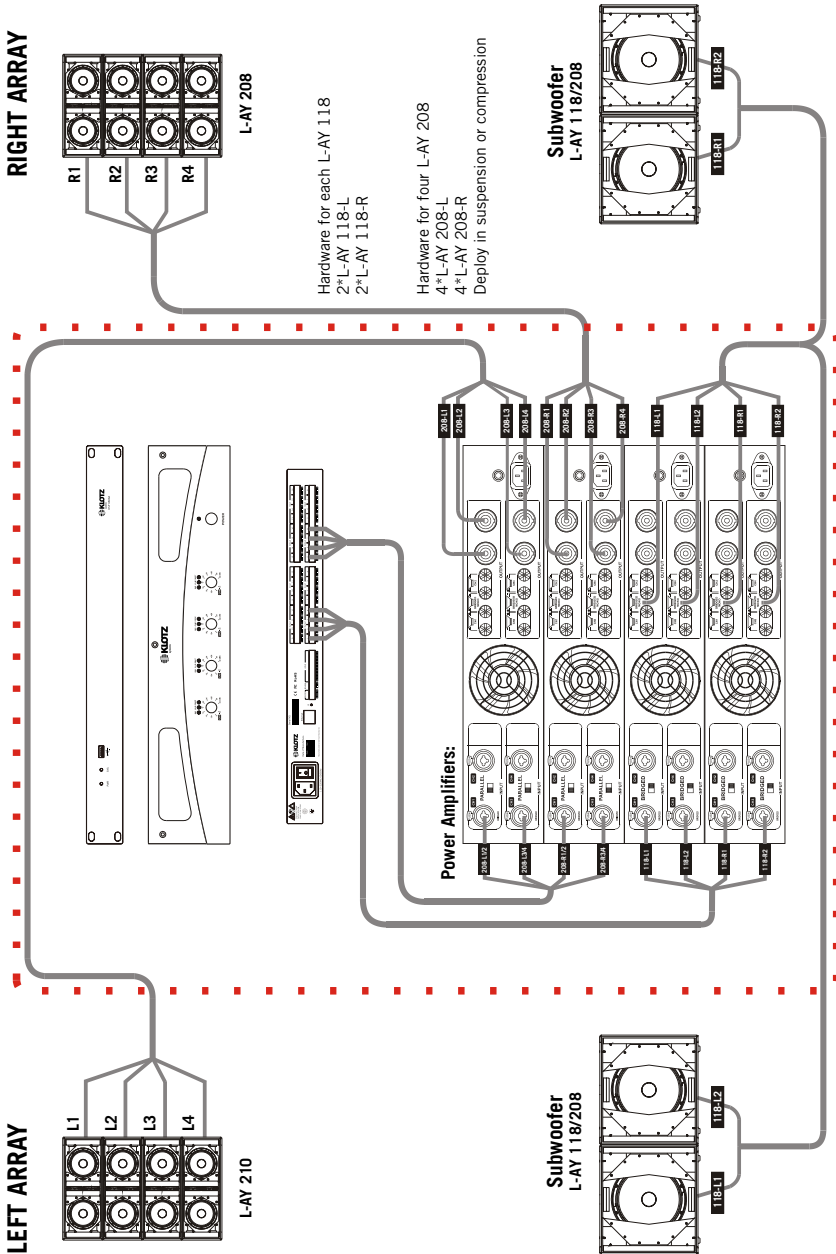
EDIT → OUT GAIN	
OP 1&2	-3.0 dB
OP 3&4	0 dB Default
OP 5&6	0 dB Default

EDIT → POLARITY	
OP 1&2	NORMAL
OP 3&4	NORMAL
OP 5&6	NORMAL

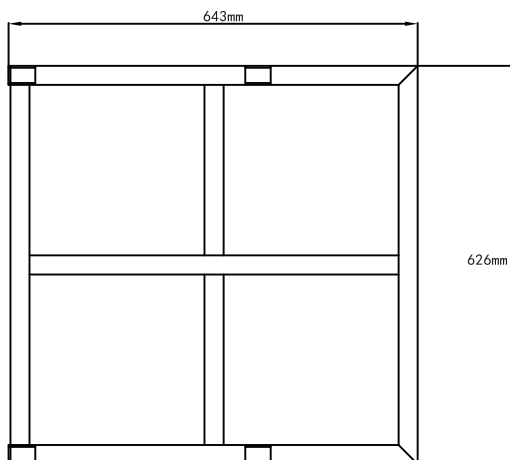
EDIT → COMP/LIM			
OP 1&2	SLOW	LIM.	
OP 3&4	FAST	LIM.	
OP 5&6	FAST	LIM.	

Configurations

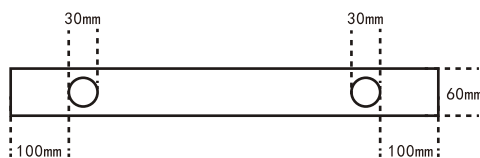
Hook-up: 4*L-AY 118/208 + 8*L-AY 208



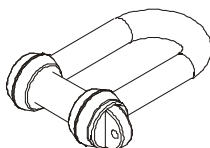
L-AY Hardware Parts



Hardware for top view



Hardware for side view



U bolt for flying bar



Manufactured to German Standards.
Specifications are subject to change without notice.
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