

L2 PROGRESSIVE ULTRA-DENSE LINE SOURCE



- Ultra-dense line source
- Best-in-class SPL/m, SPL/kg, SPL/m²
- Integrated Cardioid
- Fast & errorless mechanical deployment
- 2 elements, 4 coverage patterns (70°/90° L-R/110°)
- High-resolution Autofilter



ELECTRO-ACOUSTICS



Inaugurating the L Series, L2 and L2D are full-range line source elements designed for medium to large-sized mobile and installation applications. Based on the patented Progressive Ultra-dense Line Source (PULS) technology, the L Series solves all the challenges faced by the industry; combining sonic performance, with unprecedented power-to-size and weight ratios, and extraordinary ease of deployment. It is the ideal choice for stereo and L-ISA deployments in mid-sized festivals and tours yet also in performing arts, musicals, broadcast, corporate events, and much more.

Each L2 and L2D element is composed of eight 3" compression drivers loaded on DOSC waveguides, eight 10" drivers, and four 12" drivers mounted on the sides. This high component density enables L2 and L2D elements to produce a max SPL of up to 155 and 151 dB. Despite their low weight and compact size, L2 and L2D offer a bandwidth from 45 Hz to 20 kHz with typical large format system contour.

L2 forms a fixed progressive vertical coverage of 10° through four horizontal modules that are all fitted with Panflex™ to offer four directivity patterns: 70° or 110° symmetrical or 90° asymmetrical on either side. L2D forms a fixed progressive vertical coverage of 60° and also comprises four modules. The top two feature Panflex™ while the bottom two modules have a fixed, progressive coverage starting at 110° and widening to 140° at the bottom.

The optimized mechanical arrangement of L2 and L2D is enhanced by the amplification and DSP power of LA7.16(i) amplified controllers and the advanced Autofilter. With 16 channels of independent DSP enhancement, the wavefront sculpted produces a truly consistent response in the audience area and substantially reduces noise pollution on stage and in neighboring areas.

PHYSICAL

L2 and L2D enclosures are constructed of premium grade Baltic birch plywood to ensure maximum acoustical and mechanical integrity, and the full elements are weatherized to achieve an IP55 rating for outdoor operations

L2 and L2D feature an ergonomic four-point captive rigging system, that automatically locks ensuring both safety and speed of deployment. The progressive curvature without inter-element angles assures an errorless setup. L2 and L2D transportation and rigging accessories have been designed to facilitate manipulation from truck loading to on-site deployment, while the clips at the back of each element facilitate cable management.

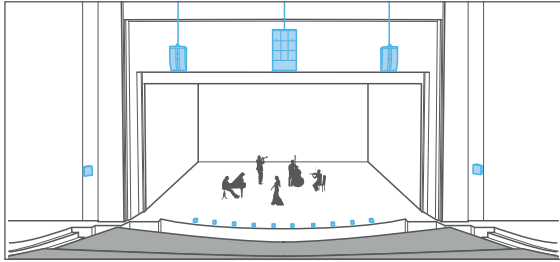
The high density of components in each element permits a reduction in the quantity of material used (cabinetry, metal pieces) compared to traditional line arrays, resulting in weight savings, but also reduced carbon footprint as less material is produced, assembled, shipped and transported around the world.



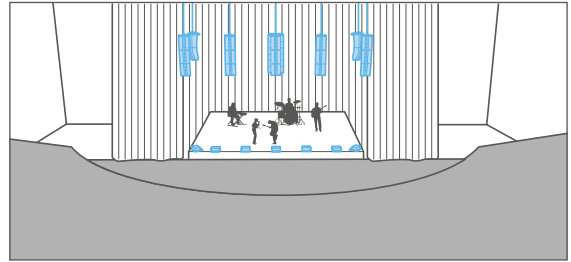
Integrated automatic rigging system; cable management clips and enclosure protection elements.

APPLICATIONS

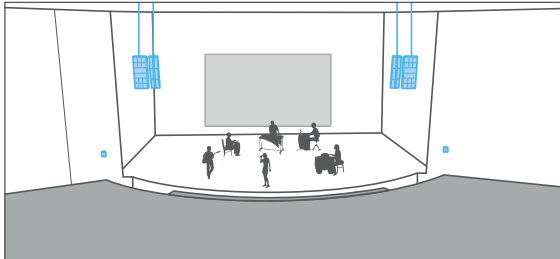
L2 and L2D can be deployed on their own or combined with KS28 subwoofers to address medium to large scale installation, mobile and touring applications. Designed to keep all dimensions minimal, to provide concert-grade performance and ensure superior directivity control across all frequencies, L2 and L2D are ideal for venues with space and sightlines restriction, with a need for high gain before feedback or for tours with optimized labor or transport.



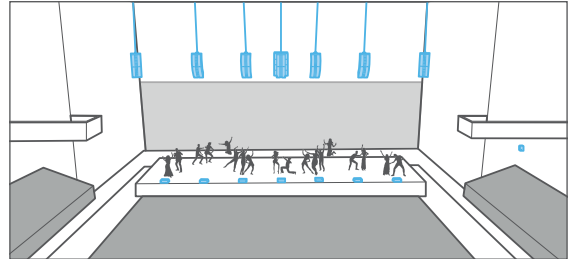
Performing Arts Center: L2D main stereo system



Touring: L2, L2D L-ISA scene system and outfills



Broadcast event: L2, L2D main stereo system



Music Hall: L2, L2D L-ISA scene system

RIGGING

L2 and L2D integrate an auto-lock rigging system with no external pins and no inter-element angles. The load-in and load-out are greatly simplified and accelerated, and setting the array curvature is effortless, reducing significantly the time and resources required to deploy the system.

L2 & L2D
Fast and secure Autolock rigging system

L2-BUMP + L2-BAR
Flying frame up to 4 L2 or 3 L2 + 1 L2D

L2-RIGBAR
Rigging bar up to 4 L2 and pullback

CLAMP1000
Clamp for 1000 kg with azimuth angle setting capability

TRANSPORTATION ACCESSORIES

L2 and L2D can be transported or stored on their dedicated chariots, L2-CHARIOT and L2D-CHARIOT, and protected with the dedicated covers. The chariots can also be used as a stacking platform when used with the K2-JACKS. K3-CHARIOTLID provides a strong and flat surface to stack objects in trucks or warehouses. A dedicated flightcase facilitates storage and transport of L2-BUMP and other rigging elements. All these accessories have been designed to substantially reduce truck and storage space, lowering the impact of storing and transporting L2 and L2D.

L2(D)-CHARIOT
Chariots for L2 & L2D

L2(D)-CHARIOTCOV & L2(D)-CHARIOTLID
Protective cover and lid for L2 & L2D

L2-BUMPFIGHT
Modular flightcase for 1 L2-BUMP and rigging elements

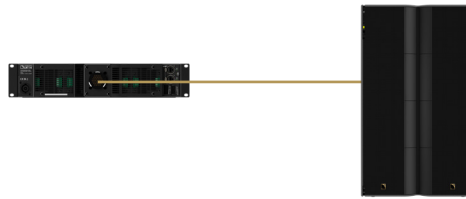
AMPLIFIED CONTROLLERS

L2 and L2D require 16 channels of amplification and are designed to be driven by LA7.16 and LA7.16i. This amplification scheme allows for simple cable management with a single cable between the amplified controller and the loudspeaker, as well as high-resolution optimization thanks to the enhanced Autofilter.

LA7.16: amplified controller with DSP



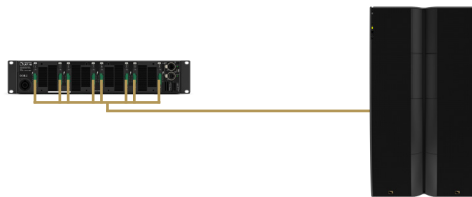
16 x 1300 W/8 ohms
16 inputs x 16 outputs architecture
Max 1 enclosure per amplified controller



LA7.16i: amplified controller with DSP



16 x 1300 W/8 ohms
16 inputs x 16 outputs architecture
Max 1 enclosure per amplified controller



SUBWOOFERS

KS28: Companion 18" subwoofer (2 x 18")

L2 + KS28: bandwidth: 25 Hz – 20 kHz
Ratio of 1 L2 to 2 KS28
Contour reinforced by 12 dB at 60 Hz



Other subwoofers: KS21(i)



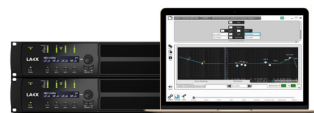
SOFTWARE

SOUNDVISION: simulation software



3D electro-acoustic and mechanical simulation software

LA Network Manager: control & monitoring software



Real-time control and monitoring up to 253 units
Multiple network topologies



L2



L2D

L series: Long throw progressive ultra-dense line source

Based on the patented PULS technology, L Series is the ultimate line source, adapted to long throw applications in rental productions and fixed installations. Born from more than 30 years of constant evolution in line source technology and from statistical analysis of sound system deployment in the field, L Series is a definitive answer to all the challenges rental productions and integrators face.

The L Series leverages the WST technology and advanced electronic enhancement to deliver state-of-the-art SPL per meter, SPL per weight and SPL per surface area, forming an ultra-light, ultra-fast and ultra-simple system to deploy.

COVERAGE

VERTICAL CONTROL

L2 and L2D are based on a fixed, progressive curvature optimized for the majority of venue geometries. A thorough analysis of hundreds of sound design projects of various genres highlighted a common geometry trend for most venues. This realization drove the definition of an optimized fixed array curvature, that matches a majority of venue geometries. Exploiting this fixed J-shape, L Series substantially increases the proximity between drivers in L2 and L2D, leveraging the WST principle to perfection.

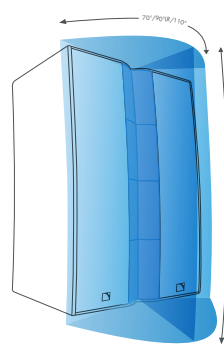
L Series rationalizes size, volume, weight, handling, and transport while providing ultimate sonic performance, as well as increased vertical directivity control.

HORIZONTAL CONTROL

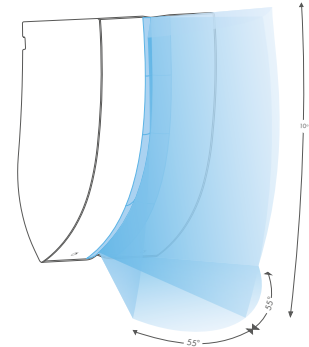
In the mid and high frequency ranges, L Series employs L-Acoustics Panflex™, a unique horizontal steering technology that combines mechanically adjustable fins with DSP algorithms effective from 500 Hz. The four Panflex™ modules of L2 and the top two Panflex™ modules of L2D can be freely adjusted. The bottom two modules of L2D have a fixed horizontal directivity progressing from 110° to 140° to offer an ultra-wide cone of directivity to cover the closest audience areas.

In the low frequency range, L Series natively offer cardioid and supercardioid patterns, via dedicated presets, to extensively reduce energy behind and below an array. The side-mounted transducers project energy via the front and the rear of the loudspeaker. This patented design ensures perfect summation in the front and broadband energy cancellation at the rear.

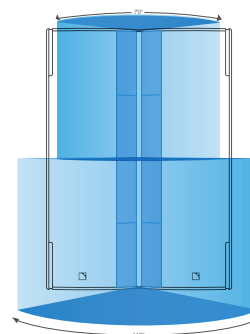
L Series matches complex audience geometries, produces even and consistent SPL coverage over distance, minimizes noise pollution towards neighboring areas, and reduces room excitation for clear and accurate sound reproduction.



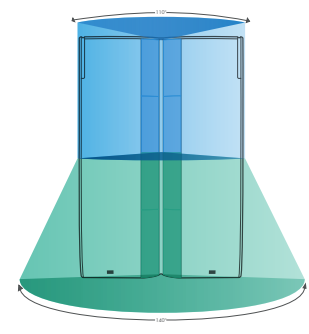
L2 progressive vertical directivity: 10°



L2D progressive vertical directivity: 60°



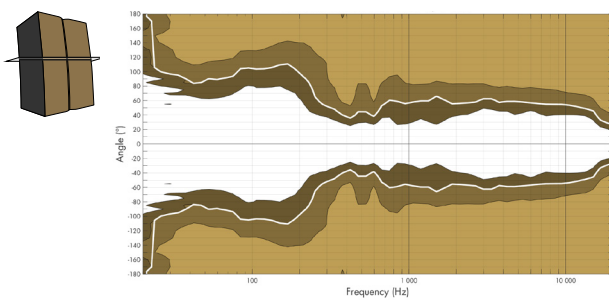
L2 Panflex
Top two modules at 70°
Bottom two modules at 110°



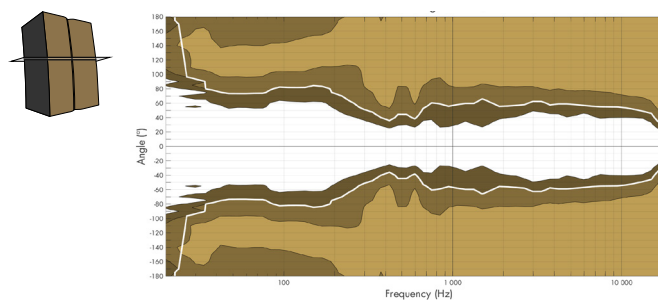
L2D Panflex
Top two modules at 110°
The bottom two modules have a fixed directivity progressing from 110° to 140°

BEAMWIDTH

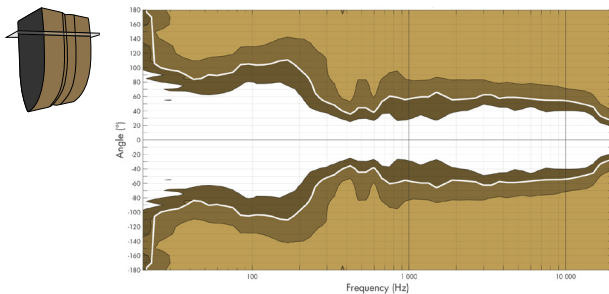
L2 Panflex at 110° with Cardioid pattern



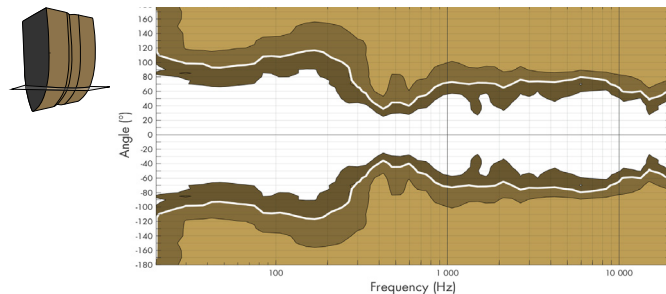
L2 Panflex at 110° with Supercardioid pattern



L2D Panflex at 110° with Cardioid pattern



L2D fixed curvature from 110° to 140° with Cardioid pattern



► Dispersion angle diagrams of a single L2 or L2D in the horizontal plane with various Panflex settings or cardioid patterns using lines of equal sound pressure at -3 dB, -6 dB, -12 dB.

L2 LONG THROW PROGRESSIVE LINE SOURCE



Part of the L Series, L2 is a full range progressive line source element designed for medium to large sized mobile and installation applications. Based on the Progressive Ultra-dense Line Source (PULS) technology, L2 offers an unprecedented combination of sonic performance, power-to-size and weight ratios, with ease of deployment.

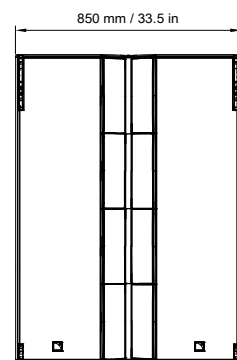
Housing eight 3" compression drivers loaded on DOSC waveguides, eight 10" drivers and four 12" drivers mounted on the sides, L2 delivers broad bandwidth with reinforced LF contour and high output capacity. The combination of high component density in a single element ensuring close proximity between them and the 16 channels of DSP and amplification provided by the LA7.16(i) produces an unprecedented level of control and sonic consistency.

L2 is shaped in a progressive mechanical arrangement producing 10° of vertical control and feature four user-adjustable modules of Panflex™ to increase horizontal coverage flexibility. Up to four L2 or three L2 and one L2D elements can be assembled to form a fixed J-shape line source, via a captive rigging system, that automatically locks securely. The absence of inter-element angles assures errorless setup and substantially increases speed of deployment. The combination of size and transportation accessories facilitate on-site deployment and reduces truck and storage space needs.

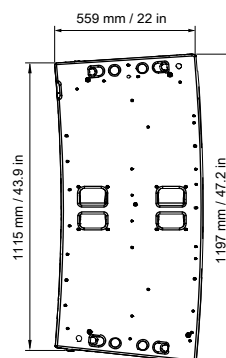
SPECIFICATIONS

Description	16-channel active progressive curvature WST® amplified by LA7.16/LA7.16i	
Usable bandwidth (-10 dB)	45 Hz - 20 kHz	
Maximum SPL¹	Full element	First module
	155 dB ([L2_70])	147 dB ([L2_70])
Nominal directivity	Vertical : 10° progressive directivity pattern Horizontal : 4 x Panflex modules 70°/110° or 90° asymmetric integrated cardioid or supercardioid patterns	
Transducers	LC: 4 x 12" neodymium cone drivers LF: 8 x 10" neodymium cone drivers HF: 8 x 3" neodymium diaphragm compression drivers	
Acoustical load	LC/LF: Bass-reflex, L-Vents HF: DOSC waveguide, Panflex™	
Nominal impedance	LC/LF/HF : 8 Ω/8 Ω/8 Ω	
Connectors	1 x 37-point male connector (32 points used)	
Rigging and handling	flush-fitting 4-point captive rigging system compatible with L2D	
Weight (net)	158 kg/348 lb	
Cabinet	Premium grade Baltic beech and birch plywood	
Front	Coated steel grill Acoustically neutral 3D fabric	
Rigging components	High grade steel with anti-corrosion coating	
Finish	Dark grey brown Pantone 426 C	
IP	IP55	

¹. Peak level at 1 m under free field conditions using pink noise with crest factor 4 (preset specified in brackets).



Front



Side

L2D LONG THROW PROGRESSIVE LINE SOURCE



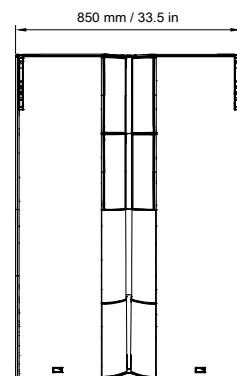
Part of the L Series, L2D is a full range progressive line source element designed for medium to large sized mobile and installation applications. Based on the Progressive Ultra-dense Line Source (PULS) technology, L2D offers an unprecedented combination of sonic performance, power-to-size and weight ratios, with ease of deployment.

Housing eight 3" compression drivers loaded on DOISC waveguides, eight 10" drivers and four 12" drivers mounted on the sides, L2 delivers broad bandwidth with reinforced LF contour and high output capacity. The combination of high component density in a single element ensuring close proximity between them and the 16 channels of DSP and amplification provided by the LA7.16(i) produces an unprecedented level of control and sonic consistency.

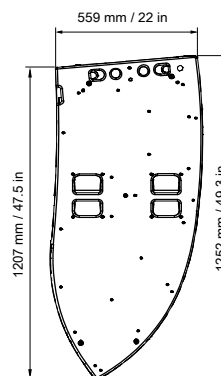
L2D is shaped in a progressive mechanical arrangement producing 60° of vertical control. L2D is divided into four modules from which the top two feature Panflex™ to offer horizontal coverage flexibility and the bottom two have fixed, progressive coverage starting at 110° and progressively widening to 140° at the bottom. L2D can be used on its own offering the ease-of-use of a point source and the performance of an enhanced line source. L2D can also be a downfill for L2, connecting to L2 via an autolocking rigging system to form a fixed J-shape line source. The absence of inter-element angles assures errorless setup and substantially increases speed of deployment. The combination of size and transportation accessories facilitate on-site deployment and reduces truck and storage space needs.

SPECIFICATIONS

Description	16-channel active progressive curvature WST® amplified by LA7.16 / LA7.16i	
Usable bandwidth (-10 dB)	45 Hz - 20 kHz	
Maximum SPL¹	Full element	First module
	151 dB ([L2_70])	147 dB ([L2_70])
Nominal directivity	Vertical : 60° progressive directivity pattern Horizontal : top 2 modules with Panflex 70°/110° or 90° asymmetric bottom 2 modules fixed progressive from 110° to 140° integrated cardioid or supercardioid patterns	
Transducers	LC : 4 x 12" neodymium cone drivers LF : 8 x 10" neodymium cone drivers HF : 8 x 3" neodymium diaphragm compression drivers	
Acoustical load	LC / LF : Bass-reflex, L-Vents HF : DOISC waveguide, Panflex™	
Nominal impedance	LC / LF / HF : 8 Ω / 8 Ω / 8 Ω	
Connectors	1 x 37-point male connector (32 points used)	
Rigging and handling	Flush-fitting 4-point captive rigging system compatible with L2	
Weight (net)	149 kg / 328 lb	
Cabinet	Premium grade Baltic beech and birch plywood	
Front	Coated steel grill Acoustically neutral 3D fabric	
Rigging components	High grade steel with anti-corrosion coating	
Finish	Dark grey brown Pantone 426 C	
IP	IP55	



Front



Side

¹- Peak level at 1 m under free field conditions using pink noise with crest factor 4 (preset specified in brackets).

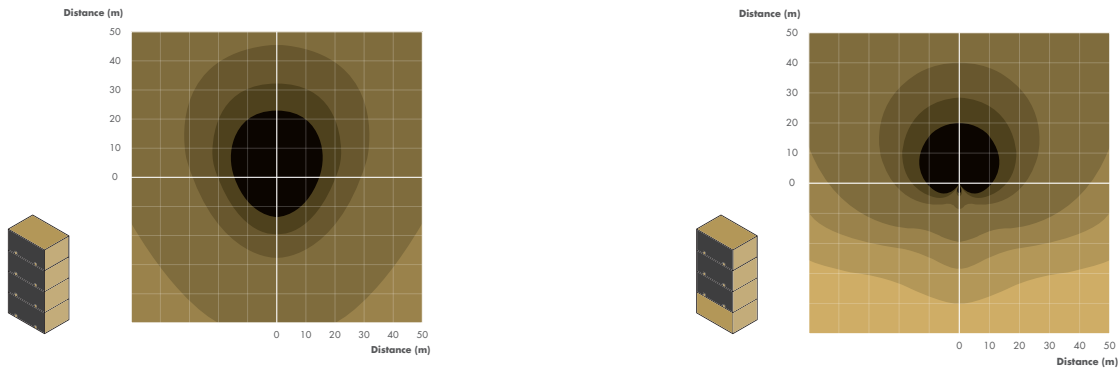
KS28 SUBWOOFER



Description	High power subwoofer: 2 × 18" amplified by LA12X
Low frequency limit (-10 dB)	25 Hz ([KS28 L2])
Maximum SPL¹	143 dB ([KS28 L2])
Nominal directivity	Standard or cardioid configurations
Transducers	2 × 18" neodymium cone drivers
Acoustical load	Bass-reflex, L-Vents
Nominal impedance	4 Ω
Connectors	IN: 1 × 4-point speakON
Rigging and handling	Captive two-point rigging system 6 ergonomic handles 2 ground runners and 8 side runners
Weight (net)	79 kg/174 lb
Cabinet	Premium grade Baltic beech and birch plywood
Front	Coated steel grill Acoustically neutral 3D fabric
Rigging components	High grade steel
Finish	Dark grey brown Pantone 426 C
IP	IP55

¹ Peak level at 1 m under half space conditions using pink noise with crest factor 4 (preset specified in brackets).

ISOCONTOUR



► SPL mapping of a block of four KS28 in standard (left) and cardioid (right) arrangements, using surfaces of equal sound pressure with three dB step colored scale.

DIMENSIONS

