CS1 SYSTEM SPECIFICATIONS SHEET

- Large format cardioid subwoofer
- Integrated cardioid
- Max SPL: 150 dB
- Fast & errorless mechanical deployment
- Driven by LA7.16 & LA12X
- Mechanically compatible with L1 array

L-VENTS

INTEGRATED CARDIOID

ELECTRO-ACOUSTICS

CS1 is a large-format cardioid subwoofer designed to deliver extended low frequency response and broadband pattern control for the most demanding applications. It introduces a new generation of L-Acoustics subwoofers built for consistency at scale, where low frequency energy is shaped, repeatable, and predictable across the entire audience.

At the core of CS1 is an ultra-dense acoustic design integrating four 21" transducers within a single enclosure. This high transducer density enables strong acoustic power, whilst reducing the line length substantially. The drivers are arranged in a patented cardioid topology, combining forward-facing and laterally positioned transducers to produce powerful forward summation while achieving maximum broadband cancellation behind the system. The result is a low frequency field that maintains impact while significantly reducing energy on stage and in surrounding areas.

CS1 goes beyond conventional cardioid behavior by offering multiple operating modes adapted to real-world deployment constraints. In addition to standard cardioid and supercardioid configurations, dedicated presets enable extended side rejection, allowing the system to control low frequency energy not only behind the array, but also across the stage. This flexibility ensures that directivity can be oriented where it matters most, delivering cleaner stage conditions and greater consistency throughout the audience.

Mechanical compatibility with the L1 system allows CS1 to be deployed as a flown extension within the array, increasing effective line length and reinforcing low frequency directivity in the vertical domain. Whether flown separately or ground stacked, it increases contour and overall system headroom while preserving the cardioid characteristics. This dual deployment approach enables CS1 to adapt seamlessly to different large scale venue geometries and production requirements.

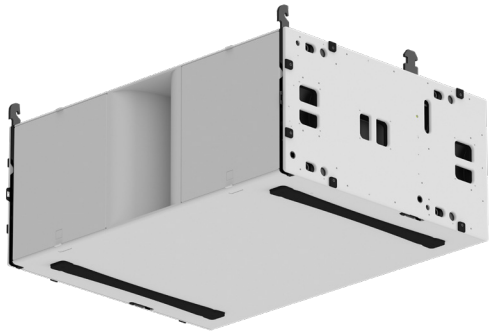
Amplification is supported by both LA7.16 and LA12X amplified controllers, with up to two CS1 enclosures driven per controller. This flexibility makes CS1 an ideal low frequency companion for both L Series and K Series systems, ensuring consistent performance across touring and installation applications while simplifying system design and inventory management.

By combining ultra-dense transducer integration, advanced cardioid topology, and flexible deployment and amplification options, CS1 delivers a low frequency foundation defined by impact, control, and consistency at scale.

DESIGN AND DEPLOYMENT

CS1 shares the same advanced rigging philosophy as the L Series, where deployment is fast, reliable, and inherently error-free. Each enclosure integrates an auto-locking mechanism that eliminates the need for external pins, while a single connection links amplification and control. This architecture reduces the number of steps required during setup and ensures consistent, repeatable deployment on site.

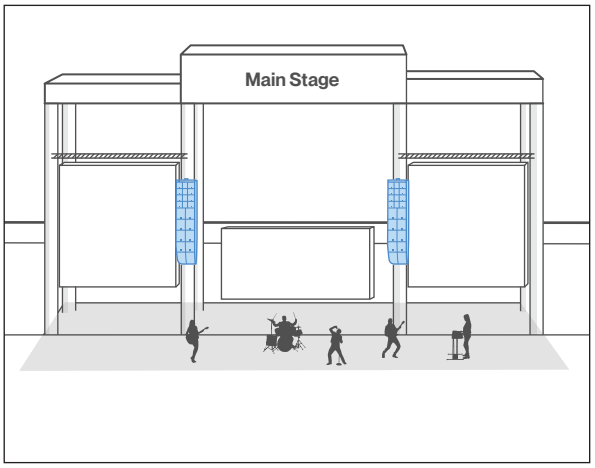
For almost the same bandwidth, a single CS1 delivers the acoustic output equivalent to two KS28 enclosures, allowing systems to be built with fewer elements while maintaining the required low frequency headroom. CS1 is fully weatherized to an IP55 rating, ensuring reliable performance in outdoor environments and under demanding touring conditions.



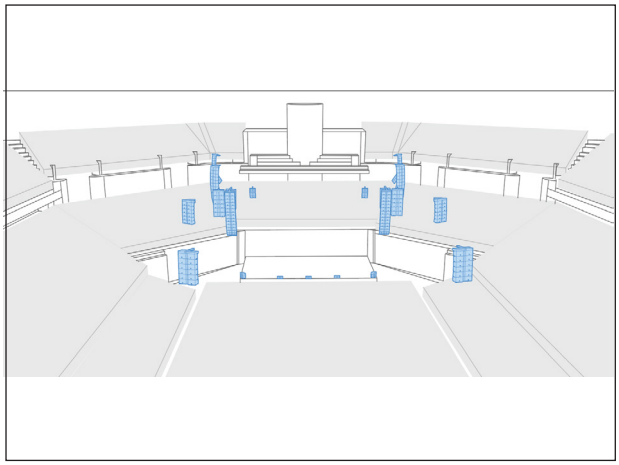
APPLICATIONS

CS1 is designed for large-format applications including festivals, stadiums, and arenas, where high output and controlled low frequency distribution are essential. It delivers consistent low frequency coverage at scale while maintaining clean stage conditions.

As part of a new generation of L-Acoustics cardioid subwoofers, CS1 integrates seamlessly with both L Series and K Series systems, extending bandwidth, reinforcing directivity, and enabling low frequency systems to scale with the main array.



Festival: CS1 + L1 stereo system



Stadium: CS1+K1 stereo system

AMPLIFIED CONTROLLERS

CS1 is powered by both LA7.16 amplified controller and LA12X amplified controller. With LA7.16, each transducer is driven individually for maximum control and consistency, while remaining channels can be used to drive additional two-way active or passive enclosures. LA12X offers flexibility, powering up to two CS1 enclosures in parallel for efficient deploymen.

In practice, CS1 systems integrate seamlessly within both LA-RAK III and LA-RAK II platforms. A single rack can power up to 6 CS1 enclosures connected in parallel, establishing a simple and scalable ratio for large deployments while maintaining consistent low frequency performance across the system.

LA7.16: amplified controller with DSP

16 x 1300 W/8 ohms
16 inputs x 16 outputs architecture
Max 2 CS1 per amplified controller

LA12X: amplified controller with DSP

4 x 3300 W/2.7 ohms
4 inputs x 4 outputs architecture
Max 2 CS1 per amplified controller

RIGGING

CS1 is supported by a dedicated rigging ecosystem designed for fast, reliable, and flexible deployment. The CS1-BUMP allows up to 8 CS1 to be flown, with the CS1-BAR extending configuration options. CS1 is fully compatible with the L1 rigging ecosystem. When deployed with the L1-BUMP and L1-BAR, up to 16 CS1 can be flown, enabling an unprecedented scale of flown low frequency deployment while maintaining a compact visual footprint. The system also supports CLAMP1000 for added integration flexibility.

CS1
Fast and secure Autolock rigging system

L1-BUMP + L1-BAR
Flying frame up to 10 L1
L1 BAR includes L1CS1 RAKMOUNT

CS1-BUMP + CS1-BAR
Flying frame up to 8 CS1

CLAMP1000

TRANSPORTATION ACCESSORIES

CS1-CHARIOT enables the transport of 3 or 4 CS1 enclosures and features integrated forklift sleeves, making handling and movement straightforward across large deployments. CS1-PLA provides a compact dolly solution for single-unit handling, offering flexibility for smaller-scale setups.

The L1CS1-BUMPFLIGHT provides a dedicated solution for rigging hardware, transporting an CS1-BUMP, an CS1-BAR, a K1-BP CHAIN, a K1-DELTA and an L1-PULLBACK.

CS1-CHARIOT
Chariot for 3 or 4 CS1

CS1-PLA
Protective cover and lid for L1 & L1D

L1CS1-BUMPFLIGHT
Modular flightcase for 1 L1-BUMP and rigging elements

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

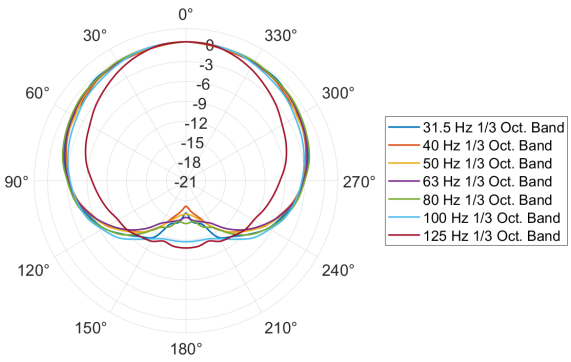
CS-SERIES Cardioid Subwoofers

CS1, the first in the new CS Series of subwoofers, integrates with the latest generation of L-Acoustics system optimization tools. When deployed within an L1 array, positioned in-line with L1 elements and powered by LA7.16, CS1 benefits from the sub low optimization algorithm of Autofilter.

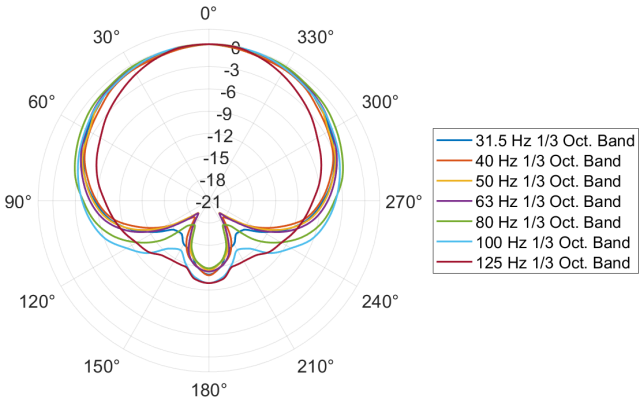
Autofilter extends control into the lowest frequencies, shaping the combined L1 and CS1 array down to 25 Hz for precise low-frequency directivity and consistent coverage from front to far field. This is achieved without added latency, preserving alignment and ensuring a predictable, repeatable low-frequency response.

CARDIOD POLAR PATTERNS

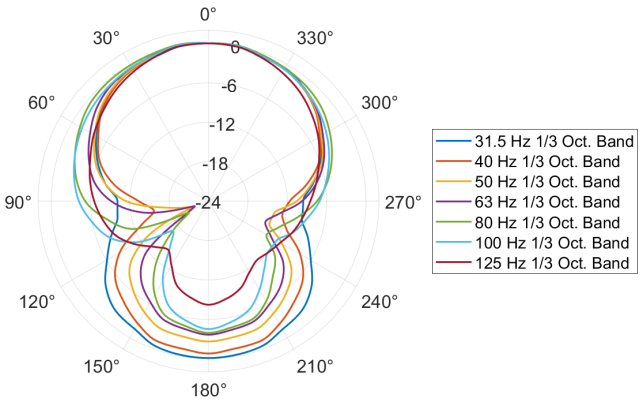
CS1 offers selectable cardioid preset options, allowing system tuning to match different deployment needs. Standard cardioid and supercardioid modes are complemented by additional side-rejection presets, with left and right configurations for enhanced lateral control.



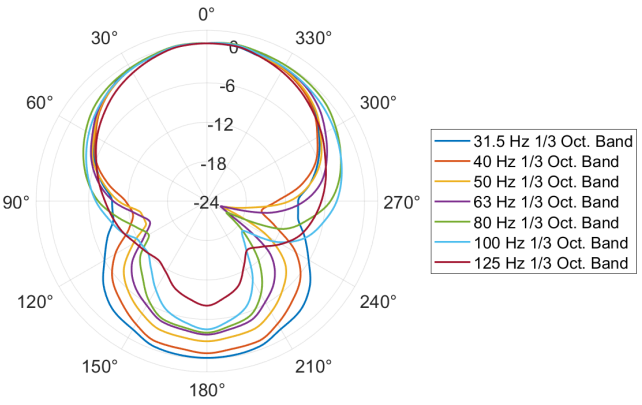
CS1_ Cardioid



CS1_Supercardioid



CS1_ Side Rejection Right



CS1_Side Rejection Left

CS1 PRODUCT SPECIFICATIONS SHEET

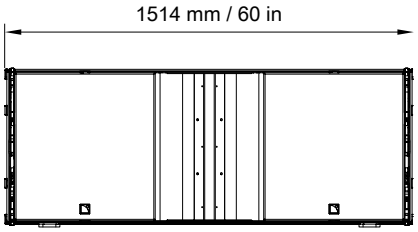
CS1 is a large format cardioid subwoofer designed to deliver extended low frequency response and broadband pattern control for the most demanding applications. Engineered with the L-Acoustics patented cardioid architecture, CS1 delivers powerful, linear low end while minimizing energy behind the array.

With bandwidth extending down to 25 Hz and a maximum SPL of 150 dB, CS1 provides the depth and headroom required for todays largest productions. Four 21“ transducers are arranged in a cardioid topology, two forward facing and one on each side, producing powerful low end while achieving broadband rear rejection that keeps stages clear and reduces unwanted spill. Dedicated presets offer cardioid and supercardioid and additonal side rejection modes, allowing users to orient maximum rejection directly behind the array or across the stage according to the needs of the venue.

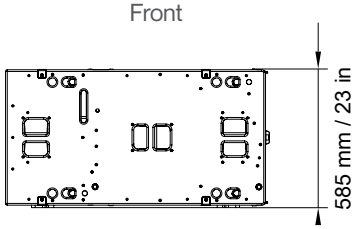
Mechanical compatibility with the L1 system allows CS1 to be flown within the array to extend line length and reinforce low frequency directivity, or ground stacked to increase contour and overall output. Whether deployed independently or as part of the flagship L Series, CS1 combines impact, precision, and deployment flexibility for stadiums, arenas, and festival main stages.

SPECIFICATIONS

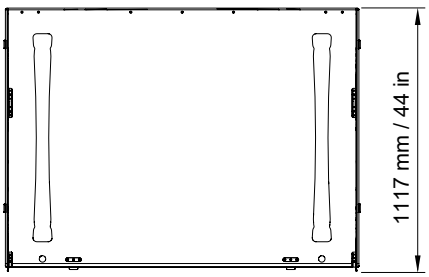
Description	Large Format Cardioid Subwoofer 4 × 21''
Low frequency limit (-10 dB)	25 Hz (Preset_60)
Maximum SPL[1]	150 dB (Preset_X)
Nominal directivity	Cardioid, Supercardioid and Side Rejection Patterns
Transducers	4 × 21'' neodymium cone drivers
Acoustical load	Bass-reflex, L-Vents
Nominal impedance	4 x 8 Ω
Connectors	IN: 8-point CA-COM
Rigging and handling	Flush-fitting 4-point captive rigging system 6 ergonomic handles 2 ground runners 8 side runners
Weight (net)	180 kg/397 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



Top

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