

MEGA SOUND INDIA (MSIPL) Powered Sunburn 2025's Main Stage For The Second Year In A Row

Image credit: Sunburn Festival, 2025 Mega Sound's main stage deployment at Sunburn 2025, featuring a four-tower L-Acoustics K1-based system



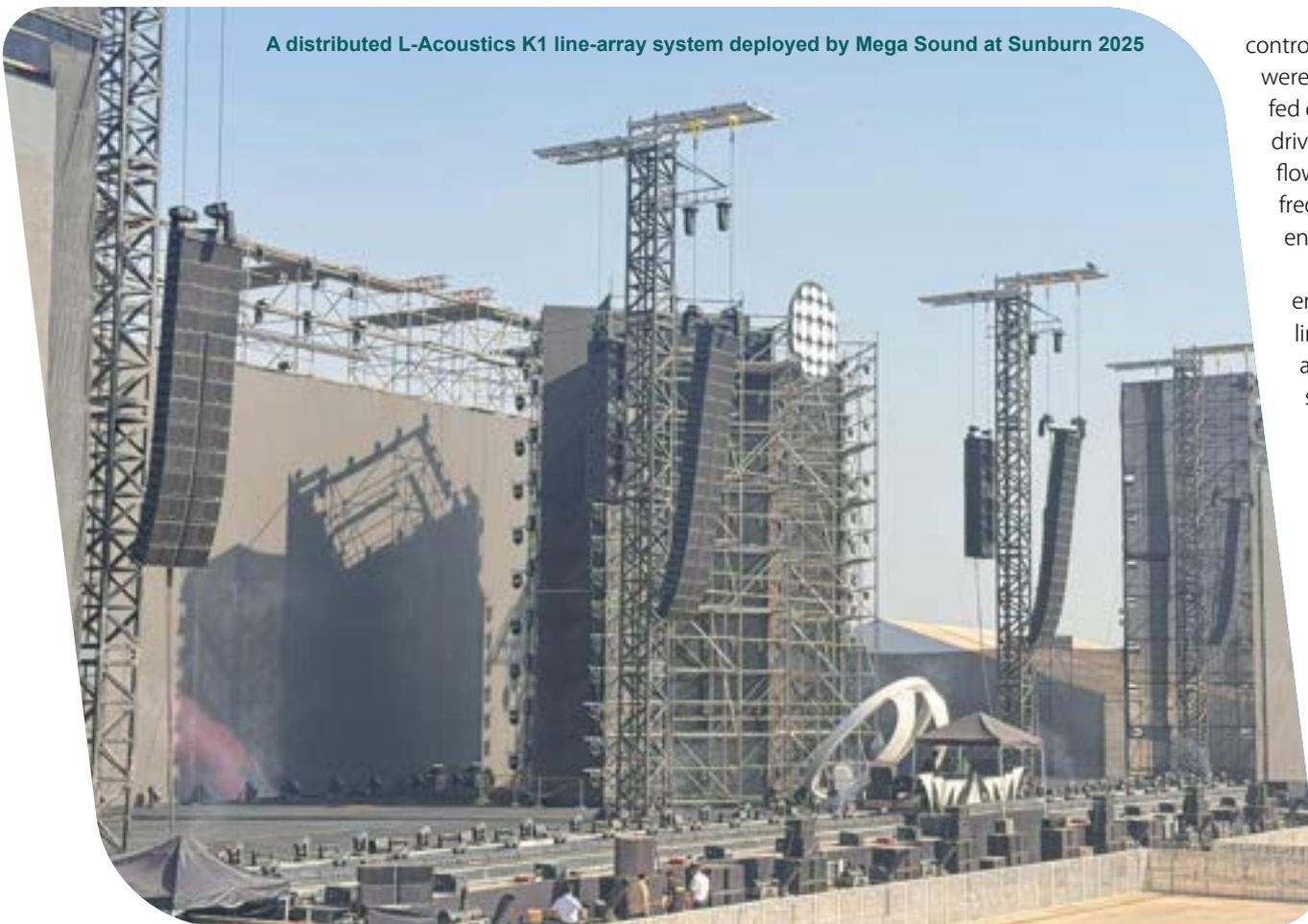
*Great festivals are built long before the first note hits the air. India has been displaying an ever growing appetite for high quality, large scale live concerts. At such a juncture, it is sound rental companies like **Mega Sound** that continue to define the industry's benchmark productions, and a recent and compelling example of their work is the main stage audio deployment at **Sunburn 2025**. **PALM Expo Magazine's** team takes a closer look at how the festival was translated from a design into reality. Let's dive in!*

Hosting global artists including **David Guetta, Axwell, Above & Beyond, Sara Landry, Vini Vici, and Indowarehouse**, Sunburn 2025 was no small feat. Orchestrating the festival's main stage, its sonic and technical nerve centre, was a responsibility entrusted only to a team with a proven legacy of landmark productions. For **Mega Sound**, this was familiar territory. Backed by a formidable inventory and years of large-format festival expertise, the team approached Sunburn 2025 with a meticulously engineered show, one that left no variable unaccounted for and set the tone for a flawless translation from design to live reality.

Modelling the site with efficient Pre-Production:

Pre production played a central role in shaping the final system design. Using **L-Acoustics' Soundvision**, MSIPL modelled coverage, SPL distribution, and off axis behaviour across the entire festival site. All active stages were plotted into the simulation environment, allowing the team to visualise how energy from the main stage could interact with neighbouring systems. These simulations directly influenced key design decisions, including array splay

A distributed L-Acoustics K1 line-array system deployed by Mega Sound at Sunburn 2025



angles, horizontal coverage widths, trim heights, and subwoofer placement. One critical outcome of this process was the decision to avoid delay towers altogether. Instead, MSIPL opted for a multi tower main array configuration within a compact horizontal footprint, ensuring even coverage while tightly controlling spill beyond defined audience boundaries.

A Four Tower Main System Built Around K1

The main PA system was built entirely around the **L-Acoustics** flagship K1 system and K Series, selected for predictable behaviour at high SPL, long throw performance, and tonal consistency. Four main PA towers were deployed, evenly spaced across the 60 metre span to ensure consistent horizontal coverage without excessive centre energy.

Two main arrays were optimised to cover the central audience field. Across both sides, these arrays comprised 8 L-Acoustics K1 SB, 24 L-Acoustics K1, and 4 L-Acoustics K2. The K1 elements provided the necessary long throw coverage, while the K1 SB units delivered dedicated low frequency extension. This was particularly critical for EDM content, ensuring that low frequency tonality remained consistent throughout the far field audience. The K2 elements were deployed as downfills beneath the K1 arrays, ensuring smooth vertical transition and coherent near field coverage.

The primary audience zone measured approximately 100 metres in width and 100 metres in depth. Within this footprint, the entire PA deployment was deliberately constrained to a 60 metre horizontal span. This limitation shaped the system philosophy from the outset, pushing MSIPL towards a distributed energy approach that prioritised coverage consistency and SPL discipline over sheer output.

Flanking the main arrays were two outer arrays designed specifically to address extreme side audience zones and elevated VIP lounges. These outer arrays comprised 8 L-Acoustics K1 SB and 20 L-Acoustics K1 across both sides. By allowing these areas to be served independently, MSIPL was able to manage SPL precisely in lateral and VIP zones without increasing overall system output.

Near field and front fill coverage was handled using a combination of L-Acoustics KARA, ARCS, and K2, ensuring clarity and intelligibility for audiences closest to the stage.

Managing Low Frequencies at Scale

Low frequency deployment followed a hybrid strategy combining flown and ground based subwoofers to balance depth projection with near field

control. 16 L-Acoustics KS28 subwoofers were flown behind the main arrays and fed directly from the main left right drive, effectively creating a full range flown system capable of carrying low frequency energy deep into the audience area.

On the ground, 24 KS28 subwoofers were deployed in a Straight in line distributed ARC configuration and fed independently via auxiliary sends. This approach ensured even low frequency distribution while minimising excessive coupling and uncontrolled spill. The result was the physical impact expected from an EDM festival, delivered with controlled SPL behaviour across all audience zones.

Rigging, Trim Heights and Structural Coordination

The PA towers were purpose built structures standing 20 metres high, providing ample flexibility for optimal deployment. The arrays were trimmed at approximately 16

metres, offering ideal vertical coverage while maintaining safe clearances and structural balance.

While trim height itself was not a limiting factor, all rigging decisions were governed by strict roof load limits and structural norms. Counterweight measures were implemented based on recommendations from the structural engineering team. All load calculations were shared in advance, verified, and approved prior to deployment. Once validated, a coordinated rigging team executed the plan, ensuring precise placement, safe handling, and full compliance with engineering parameters.

Audio Networking, Redundancy and Clock Management

The audio network architecture was built around **Luminex Gigacore AVB** switches at the core, with L-Acoustics LS10 switches deployed at endpoint locations. MSIPL implemented a three layer audio fallback architecture comprising primary AVB, secondary AVB redundancy, and analogue fallback paths integrated through Dante.

All AVB listeners were configured to receive redundant streams, and all critical components, including switches, uplinks, and signal paths, were duplicated to eliminate single points of failure. Clocking and latency management were treated as mission critical, given the reliance on AVB and PTP synchronisation.

The L-Acoustics P1 processor was designated as the primary AVB talker and clock leader, providing a stable and centralised timing reference for all downstream devices. The entire AVB topology was designed, documented, and validated during pre production, including IP addressing, subnet allocation, stream assignments, and device role definitions. As a result, on site commissioning was effectively a structured plug and play process.

Milan Manager was used extensively to map, monitor, and manage AVB routing and stream allocation, providing continuous visibility into clock stability, stream integrity, and overall network health. By adhering strictly to Milan compliant workflows, MSIPL maintained deterministic latency and tight synchronisation across the entire system.

Mixing Platforms and Artist Workflows

At Front of House, MSIPL deployed a **Yamaha Rivage PM7 console**, selected for its reliability, consistent tonality, and stability under sustained high SPL operation. The console's processing options were extensively utilised to enhance harmonic richness, transient articulation, and overall musical character

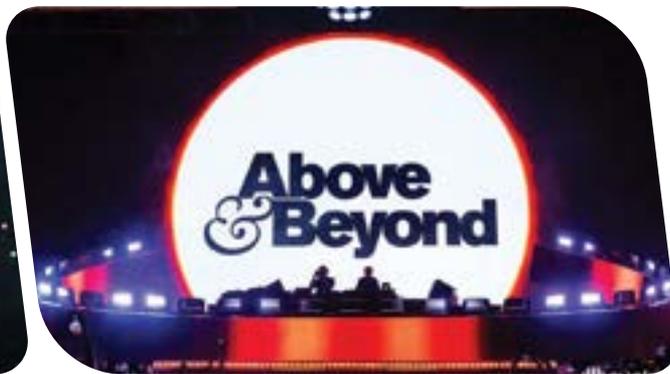


Image credit: Sunburn Festival, 2025, Front of House at Sunburn 2025, where Mega Sound's Yamaha Rivage PM7 drives the main stage's L-Acoustics K1-based system

without compromising headroom or clarity.

Monitor duties were handled by **DiGiCo Quantum 338 consoles** drawn from MSIPL's inventory. This FOH and monitor pairing delivered both sonic performance and operational reliability across long festival days with frequent artist changeovers.

Early co-ordination with international headliners and pre headliner teams allowed MSIPL to implement tailored FOH workflows aligned with individual touring preferences. Snapshot based workflows were used extensively, with each artist's gain staging, monitoring levels, and operational preferences captured during soundchecks and rehearsals. During live performances, snapshots were recalled instantly, reducing changeover times and eliminating the need for on the fly adjustments.

Multiple sets of DJ decks were shared across artists to streamline stage turnover while maintaining workflow continuity. All deck signal paths were implemented with redundant cabling to provide immediate fail safe continuity. MSIPL also supplied a comprehensive backline package, including **Pioneer CDJ 3000** and **CDJ 3000X players**, **DJM V10**, **DJM A9**, and **DJM 900 mixers**, along with spare players and a dedicated technical support team.

High Performance DJ Monitoring

Stage monitoring was designed to meet the high SPL, clarity, and low frequency impact requirements of international DJ performances. MSIPL deployed a hybrid monitoring system comprising L-Acoustics KARA, ARCS II, and SB18, allowing flexible configuration based on artist preference and booth layout.

The deployed monitoring inventory included 6 L-Acoustics KARA, 4 L-Acoustics ARCS II, and 8 L-Acoustics SB18, all powered by L-Acoustics LA12X amplification. This configuration delivered accurate tonal reference, strong transient response, and controlled low frequency energy without excessive stage spill.

Measurement, Monitoring and Power Integrity

Real time system monitoring was supported by redundant Mac workstations running system control software, providing continuous visibility into system status, SPL levels, and frequency response across multiple audience zones. Dedicated network monitoring tools verified link integrity and data flow stability across the AVB network.

A dedicated measurement workstation running **Rational L-Acoustics Smaart** was used for SPL and frequency analysis, supported by calibrated **Mipro** wireless measurement microphones deployed across key audience zones. This setup enabled continuous multi point measurement and real time comparison between console output and acoustic response.

Power distribution was handled via a robust backbone comprising 400 A **PowerSafe** main distribution panels and 125 A **PowerSafe** sub distribution

units positioned across the site. Surgex power conditioners and UPS systems protected all critical signal processing, control, and network infrastructure. Each power panel was equipped with ELR and VPR protection for continuous monitoring and automatic fault isolation.

Seamless Execution and a Benchmark Outcome

Due to Mega Sound's extensive preplanning, seamless execution, backed years of rigorous expertise, no significant operational challenges were encountered during load in, soundcheck, or show days. All technical documentation, including plots, load calculations, trim heights, and Soundvision reports, had been exchanged well in advance. The audio system was fully integrated into **SketchUp** stage models, enabling early validation of placement, sightlines, and aesthetic alignment with the Monolith stage concept.

For MSIPL, the event demonstrated how engineering discipline, detailed pre production, and team expertise converge to deliver a technically refined, globally benchmarked festival experience.

MSIPL Crew

Audio Director: **Siddhartha Chauhan**
 Systems and Front of House: **Sanjay K**
 Front of House A1: **Swapnil Elpass**
 Stage Head: **Rajesh Kumawat**
 Stage Technicians: **Paras Patmase, Jeason Thomas**

System at a Glance

- **Main arrays (both sides combined):** 8 × K1 SB, 24 × K1, 4 × K2
- **Outer arrays (both sides combined):** 8 × K1 SB, 20 × K1
- **Front/near field:** KARA, ARCS, K2
- **Subwoofers:** 16 × KS28 flown (from main L/R), 24 × KS28 ground (Straight in line distributed ARC, aux fed)
- **Total PA inventory:** K1 – 44, KS28 – 40, K1 SB – 16, K2 – 8, KARA – 16
- **FOH:** Yamaha Rivage PM7 with Rupert Neve Designs processing options
- **Monitors:** DiGiCo Quantum 338
- **DJ monitoring:** 6 × KARA, 4 × ARCS II, 8 × SB18, powered by LA12X
- **Network:** Luminex Gigacore AVB core, L Acoustics LS10 endpoints; primary AVB + secondary AVB redundancy + analogue fallback via Dante; P1 as AVB talker/clock leader; Milan Manager for routing/monitoring
- **Measurement:** Rational Acoustics Smaart; Mipro wireless measurement mics; redundant Mac workstations; dedicated network monitoring tools
- **Power:** 400 A PowerSafe main distribution; 125 A PowerSafe sub distribution; Surgex power conditioning; UPS backup; ELR and VPR protection

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