

L-ACOUSTICS SOUND SOLUTIONS

EDM

# EDM

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## INTRODUCTION

Since its founding in 1984, innovation has always been at the heart of L-Acoustics. From the introduction of the first high power coaxial system to the invention of Wavefront Sculpture Technology®, a research breakthrough that led to the introduction of line arrays, L-Acoustics has consistently shaped the future of the professional sound industry. For more than 30 years, L-Acoustics has refined our cabinetry to make our speakers lighter, made improvements in materials and acoustics to enhance SPL and bandwidth and paid meticulous attention to functional design to improve ease of use and speed of deployment.

EDM performances are all about wowing the audience with sights, with sounds, with emotions. Over the pages of this brochure, you'll see how L-Acoustics systems contribute to the world's most incredible live events and permanent installations in the EDM market. From sound design, through to load-in or install, and on to show time and load-out, L-Acoustics sound systems ensure that the audience is immersed in the performance, connected to the artist and ultimately goes home with incredible memories.

The result of a relentless focus on improving the event experience both for professionals and for audiences, L-Acoustics' latest generation Syva range, together with our innovations in multichannel technology and cutting edge sound design, creates the platform for tomorrow's immersive sound performances today. Combining proprietary processing hardware and software-based audio tools with our industry-leading loudspeakers, the L-ISA immersive ecosystem will roll out during late 2017 and is set to create the new standard for multisensory experiences.



Cédric Montrezor  
Director of Application, Install



Florent Bernard  
Director of Application, Touring





# TOMORROWLAND

## BIG SOUND, STUNNING DÉCOR

Tomorrowland is one of the world’s most important dance festivals, attracting over 400,000 people each year. Spread out over two three-day weekends in the town of Boom in Belgium, 2016 headliners included Martin Garrix, Axwell & Ingrosso, Armin van Buuren and Tiësto. Tomorrowland’s renown comes from its power line-up of thumping dance music, as well as its elaborate décor which immerses the audience in an intricate and dreamy atmosphere.

L-Acoustics K1/K1-SB unprecedented power and throw allows Tomorrowland to eliminate delay towers, while still delivering a fully immersive experience to all festival-goers.

Noizboyz and Phlippo Productions have been collaborating on Tomorrowland sound since 2010. They were able to achieve a full 160 meter throw from the stage arrays only, freeing sightlines and preserving the spectacular Tomorrowland decor. They lean on L-Acoustics Soundvision to plan the best design for the festival’s eight stages, modelling the festival grounds and décor in 3D with real-time mapping.

Tomorrowland wows audiences every year, continually enhancing the festival-goer experience. With the power and impact of an L-Acoustics K1 sound system, even fans at the very back of the field enjoy the full-range sound experience and dynamic, pounding bass.

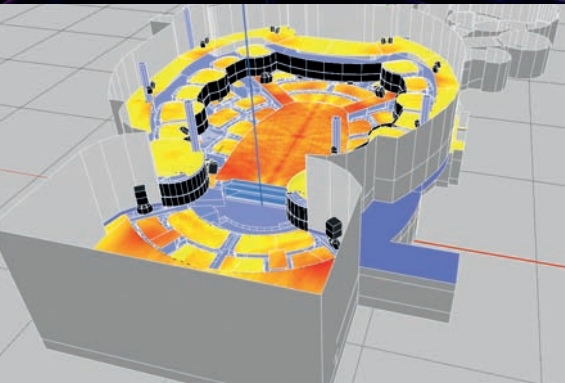
“The K1/K1-SB combo has the strongest SPL per meter on the market. Our main stage faces a steep hill, and Tomorrowland is known for its intricate scenery. Soundvision helped us to create a system, using K1 and K1-SB, that offered a nice clear throw and ensured that we could limit the system to the stage without compromising on sound quality throughout the audience.”

Noizboyz

### EQUIPMENT LIST

140 x K1	120 x K2	20 x K1-SB	86 x KS28	160 x SB28	44 x SB18
244 x Kara	34 x 115XT HiQ	8 x 12XT	16 x X12	22 x X15 HiQ	10 x ARCS II
14 x ARCS Wide	8 x Kiva	66 x LA12X	217 x LA8	9 x LA4X	





# OMNIA

## ARTIST APPROVED

At 75,000 square feet, the multi-story Omnia Nightclub at Caesars Palace Las Vegas opened in 2015, staking a claim as the largest nightclub in Las Vegas. Owners Hakkasan Group aimed to outdo and outperform previous designs in their landmark venues, which are dotted around the globe. They also named a roster of in-house DJs, including Afrojack, Calvin Harris, Armin Van Buuren and more.

Omnia’s design team asked those DJs to accompany them for demos of potential audio systems and after hearing L-Acoustics systems in Los Angeles, Paris and London, selected ARCS II and ARCS WiFo for their Las Vegas flagship in order to attract the world’s biggest and best artists.

Ireland-based Audiotek has been associated with Hakkasan for over 20 years and they were chosen to design the sound for the Main Club and Heart of Omnia VIP Lounge. They used ARCS II in the Main club, which can accommodate 3,500 patrons. On stage, Kara line source modules and SB18i subs deliver foldback to the DJs, a configuration that can be found in EDM clubs and festivals the world over. The more intimate Heart of Omnia lounge has an ARCS WiFo system, with monitoring at the DJ booth by 115XT HiQ coaxial and SB18i subwoofers.

On the Las Vegas Strip, the highest-stakes nightclub market in the world, Omnia stakes its reputation on its roster of world-class DJs. Having a world-class sound system that is recognized and sought after by those artists allows them to ensure the quality of their line-up for years to come.

“For Omnia, the world’s premier dance club, L-Acoustics was the most innovative and cutting edge audio solution, and we are delighted to say that we have achieved a result far beyond our greatest expectations. It delivers a sublime performance night after night, and the uniform reaction of clubbers, performers and management has been overwhelmingly positive.”

Frank Murray,  
Audiotek owner and managing director

### EQUIPMENT LIST

12 x ARCS II	6 x Kara	26 x 12XTi	12 x SB28	4 x SB18i
9 x LA8	8 x LAX			





# JACK Ü

## RESOLUTELY POWERFUL

Drew Malamud is an Ottawa-based producer/engineer who travels the world mixing EDM heavyweights Skrillex as well as the Skrillex/Diplo power duo, Jack Ü. Designing live sound at the globe’s most renowned EDM festivals, his goal is to create a dynamic, physical sound mix that compels the crowd to get up and moving to the beat.

L-Acoustics KS28 subwoofers and LA12X amplified controllers are his first choice at EDM shows for their increased tightness, resolution and ability to give him ample headroom and SPL.

“A game changing experience” is how Drew describes his first encounter with the clear resolution and incredible headroom of the KS28/LA12X combo when performing FOH duties for Jack Ü at a festival in Salzburg, Austria. Impressed by the KS28’s ultra-low frequencies, he immediately noted the KS28’s accurate rendering of notes in the 20 to 40 Hz range – notes that had disappeared or sounded sloppy on other sub systems. And since EDM shows are known for their power, Drew’s usual festival experience would be to push the system’s headroom to its ultimate limits while waiting for the inevitable tap on the shoulder from the event’s system tech, asking him to pull the sound back into ‘safe’ ground. The KS28/LA12X system solves those issues for him, allowing him to enjoy the show, pushing the system as hard as he needs without worry that he’ll be told to pull back.

“Mixing world-class EDM festival requires pushing hard in the low frequencies. One of the best improvements that KS28 offers over other subs is a clarity that was missing before and contributes to the overall feeling of finally having a system that can do what I need! All of those low, booming notes are reproduced without compromise and I often get fellow engineers and even audience members telling me that they’ve never felt bass like this before.”

Drew Malamud,  
producer/engineer, FOH for Skrillex and Jack Ü

Since discovering KS28 in Austria, Drew has found the combo at more and more events, and it’s become his system of choice for Skrillex and Jack Ü. The clarity and power offered by KS28 and LA12X are quickly transforming them into a new standard for demanding EDM shows. “Once you have experienced it, it’s really hard to go back”, enthuses Drew.

### EQUIPMENT LIST

32 x K1	20 x K2	16 x Kara	4 x ARCS II	40 x KS28	40 x LA12X
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# DJ MONITORING

## GOOD VIBES FOR ALL

Modern electronic dance music has its roots firmly in the early '90s Netherlands, where artists like Tiësto and Armin van Buuren began their careers performing at house parties. As their renown grew, these private gatherings mutated into local productions attracting tens of thousands, which themselves transformed into international events, blossoming into today's global phenomenon with sold-out shows the world over. As audiences and production values for EDM events grew, so did the monitoring system used by DJs.

Today, L-Acoustics Kara and SB18 are the reference DJ monitoring system around the globe, required by renowned artists in clubs and live events alike.

In 2003 at the very first *Tiësto in Concert* in Arnhem, the DJ stage was positioned along one side of the Gelredome. A massive L-Acoustics PA was deployed to cover the audience, and Tiësto demanded a monitor system which could match the main system performance. The in-the-round video setup limited space on stage, so systems engineer Mark Riemersma and FOH engineer Arno Voortman designed a compact, unobtrusive yet powerful monitor system using four-per-side L-Acoustics dV-DOSC over a pair of dV-SUBs. Success was immediate.



"When I'm touring the globe with Tiësto, I know that having an L-Acoustics monitor system gives him a super comfortable kitchen in which to do his cooking. And since we often play long sets, those monitors give him both power and clarity, which means he won't get listening fatigue. It makes the evening – for Tiësto, for me and for the audience – an enjoyable one."

Mark Riemersma, FOH/System Engineer, Tiësto

As L-Acoustics FOH sound systems gained worldwide recognition, the DJ community naturally adopted the L-Acoustics monitoring system, with its similar signature and reserve of power. In 2010 the smaller but more powerful Kara and SB18 sub replaced the dV-DOSC. High profile DJs like Tiësto, Armin van Buuren and David Guetta now demand this monitoring system for their tours, and signature festivals like *Tomorrowland*, *Electric Zoo* and *Ultra* rely on them. With clubs such as Hakkasan Group's Omnia Nightclub in Caesar's Palace Las Vegas featuring permanent installations, the Kara/SB18 monitoring system has become a signature of EDM events worldwide.

### EQUIPMENT LIST

6 x Kara

4 x SB18





# QLIMAX

## ABSOLUTE CONTROL

Arnhem’s GelreDome Stadium is the home of Qlimax, a popular all-night hard dance event whose high noise levels generated so many complaints from neighbors that a public debate was held as to whether the event could continue. As a result, the Municipality asked the event production to propose a solution that would appease the neighboring community while still allowing for a successful EDM celebration.

Event producer Q-dance, audio rental company Rent-All and specialists Focus Advanced Facilities worked together to propose an L-Acoustics K1 system of distributed line arrays to provide EDM-worthy energy to the audience, but not to the neighbors.

Focus and Rent-All started by radically changing the sound design, breaking the system up into smaller line arrays, distributed throughout the room. This allowed for each array to put out less overall energy, but kept more audience members close to a sound source, giving the sensation of energetic, thumping sound across the room. A second improvement was achieved by backing each array with a cardioid sub array, effectively removing all the low energy from the roof.

After testing the new system on two different events, which passed all of the sound pressure tests, the Municipality allowed Qlimax to continue and it is now one of the most successful EDM events in the Dutch calendar. The Qlimax sound design has been so successful that Focus has implemented it at other events, refining the system each year.

“Using the directional capacities and the proven cardioid arrangement of L-Acoustics sound systems, we were about to go from 200 complaints to virtually zero, while markedly improving the audience experience with improved sound quality. But most importantly, we were able to save a profitable and well-loved event from certain death by ensuring that the sound was enjoyed by ticket holders only, sparing the local neighbors from any nuisance.”

Ben Brouwers,  
sound consultant at Rent-All

### EQUIPMENT LIST

32 x K1	158 x K2	16 x SB28	48 x K1-SB
41 x LA8	12 x LA12X		





# ZERO GRAVITY

## CONSISTENT SOUND FROM BEACH TO BAR

Zero Gravity, Dubai’s most-talked-about hotspot, recently completed an extensive expansion, adding an infinity pool, changing facilities, a multi-use outdoor stage and a new audio system throughout the venue. To respond to the high standards of the local entertainment scene, venue management requested three distinct systems: an outdoor Dolby 5.1 cinema system, a distributed system for background music and a concert-grade live music system which can easily be zoned to required configurations.

L-Acoustics K2 line source arrays, ARCS Wide Constant Curvature Line Sources and X Series coaxial systems were installed throughout Zero Gravity ensuring a consistent sonic signature that follows patrons from the bar to the dance stage to the pool and beyond.

Delta Solutions used L-Acoustics Soundvision 3D modelling software to create a system consisting of a K2 line-array for the outdoor stage, which does double-duty for cinema and concerts, with additional arrays of ARCS Wide which act as delays during bigger events along with X Series coaxial speakers dotted around the bar, lounge, pool, beach and changing room areas for atmosphere. LA Network Manager helps to manage the whole system at once, allowing Zero Gravity to have consistent sound levels and quality throughout the expansive venue or to isolate each system, providing a unique experience in the different areas, as needed.

“Very few clubs in the world are big enough, both in size and conception, to justify a K2 line array, which is generally used in the world’s most prestigious arenas, tours and music festivals. Zero Gravity allowed us to use the very best of all the L-Acoustics technologies, creating a system that is as powerful and sophisticated as the venue itself, offering the same pristine sonic signature throughout.”

Gareth Armstrong, Delta Solutions

The L-Acoustics sound system at Zero Gravity provides ultimate consistency indoors and out. Whether patrons are dancing in the bar, enjoying an outdoor concert or preparing for a luxurious dip in the unique beachside infinity pool, Zero Gravity offers an unrivalled audio experience.



### EQUIPMENT LIST

12 x K2	28 x ARCS Wide	12 x SB28	7 x SB18i	6 x X15 HiQ
18 x X12	2 x 5XT	3 x LA4X	18 x LA8	





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*“In my travels I encounter a variety of sound systems, but my number one choice for any artist that I am working with is L-Acoustics. Being in front of an L-Acoustics PA gives me a clean palette to put together a mix that will accurately translate the artist’s vision and mine of what the show should sound like. My goal at the end of the day is consistency and L-Acoustics gives me the tools to achieve this.”*

Wouter Asselman, FOH engineer for Armin Van Buuren

▲ Tomorrowland Festival - Boom, Belgium

# CERTIFIED PARTNERS

L-Acoustics systems are unique, and our Rental Network of over 600 agents worldwide is key to the strength of our brand. Our partners operate on the most prestigious tours, festivals and events and are committed to a high standard of service, based on the L-Acoustics rental network charter:

## INVENTORY

L-Acoustics offers a complete range of turnkey sound systems specifically designed to meet the needs of the touring, festival and special events markets. Certified partners commit to owning and maintaining inventory levels in excess of the minimum threshold set by L-Acoustics.

## EQUIPMENT STANDARDS

To ensure performance consistency, predictability and compatibility of systems, rental partners commit to investing in the full L-Acoustics system, including enclosures, subwoofers, amplification, signal processing, cabling and standard accessories.

## TRAINED TECHNICIANS

L-Acoustics certifies its system engineers with official training seminars. Technical and engineering personnel are trained on theory, sound design, set-up and rigging procedures for all systems.

Working with an L-Acoustics certified partner ensures that you will have the quantity and quality of equipment needed for your club or event and that the system will work at its best. L-Acoustics’ clients benefit from dedicated manufacturer support and can expect the highest quality of service from design to set-up through to performance.







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*“For our first time supporting Electric Zoo Festival, Soundvision helped to ensure that everything went smoothly. Our client had a ton of drawings of every stage and every coverage area. Soundvision enabled us to plan ahead, modeling out systems for multiple stages to give accurate, even, and powerful sound coverage throughout the entire audience area. We knew exactly what we were walking into, which helped us have a successful experience onsite.”*

Bryan Baumgardner, head of audio operations and logistics for Clearwing Productions

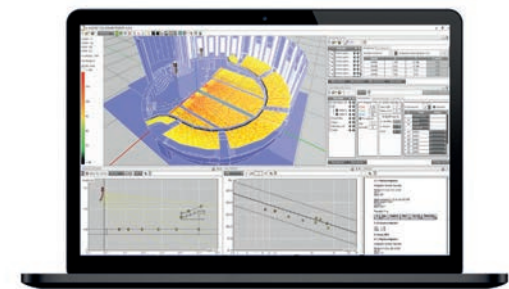
▲ Electric Zoo Festival - New York City, NY

# SOUNDVISION

## 3D SOUND DESIGN

Soundvision supports sound designers to create acoustical and mechanical simulations of their L-Acoustics sound systems. The first 3D sound design program capable of operating in real time, Soundvision allows designers to draw audience zones manually, import them from CAD files or upload them from the L-Acoustics online database of the world’s most renowned venues. Placing loudspeakers in the simulation is quick and easy, and Soundvision automatically calculates impact coverage and SPL mapping, including subs. System time alignment of multiple loudspeakers or arrays can be visualized with delay mode. Soundvision provides mechanical data with detailed set-up information for installers and riggers.

Advanced features include cardioid array modeling tools, contour EQ modeling tools and a response curve display tool that features adjustable target curve and post-processing options.







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*“Our in-house team of application engineers offers years of experience either in creating sound solutions for large format events or in supporting installations from small live clubs to the world’s most renowned venues. We accompany our partners from the planning stage, offering design support for festivals of all types, including 3D modelling and solutions to assist with noise pollution, all the way through to execution, with on-site support. Likewise, for install projects, our team offers support right from the early stages of their project, all the way through to commissioning and training. Our goal is to ensure that we offer engineering-driven advice and expertise to attain the optimum sound solution for each individual project.”*

Julien Laval, Application Engineer Install at L-Acoustics

# SERVICES

## EDUCATION AND SUPPORT

L-Acoustics’ total system approach to sound goes beyond hardware and software. We offer training, show assistance, design support and on-site tuning and calibration for rental providers and system integrators. Our in-house engineers and certified consultants have been carefully selected for their skills and professional experience in the audio industry.

From basic technical and operational knowledge of L-Acoustics systems, through to providing full certification as a Systems Engineer, our clients will always get the best out of their L-Acoustics systems.





## REFERENCES

## PERMANENT INSTALLATIONS

<b>Le Baoli</b>	Cannes - FR
<b>Le Faust</b>	Paris - FR
<b>Le Flow</b>	Paris - FR
<b>Printworks</b>	London - UK
<b>Omnia</b>	Jakarta - ID
<b>Omnia</b>	Las Vegas, NV - US
<b>Omnia</b>	San Diego, CA - US
<b>Queen</b>	Paris - FR
<b>Tunes Bar at the Conservatorium Hotel</b>	Amsterdam - NL
<b>Wanderlust</b>	Paris - FR
<b>Webster Hall</b>	New York City, NY - US
<b>Zero Gravity</b>	Dubai - UA

## LIVE EVENTS

<b>AMF</b>	Amsterdam - NL
<b>Beyond Wonderland</b>	Monterrey - MX
<b>Coachella</b>	Coachella, CA - US
<b>Creamfields</b>	Daresbury - UK
<b>Digital Dreams</b>	Toronto - CA
<b>Defqon 1</b>	Biddinghuizen - NL
<b>Electric Daisy Carnival</b>	Mexico City - MX
<b>Electric Daisy Carnival</b>	Milton Keynes - UK
<b>Electric Zoo</b>	New York City, NY - US

## Freaky Deaky

<b>Gorgan City Tour</b>	Tour
<b>Hadra Festival</b>	Vieure - FR
<b>Heineken Festival</b>	Kuala Lumpur - MY
<b>Hors Série</b>	Paris - FR
<b>Junction 2 Festival</b>	London - UK
<b>Love Family Park Festival</b>	Mainz - DE
<b>Melt! Festival</b>	Gräfenhainichen - DE
<b>Minus Zero Festival</b>	Stratton, VT - US
<b>Movement</b>	Detroit, MI - US
<b>Nero Tour</b>	Tour
<b>Polaris</b>	Verdier - CH
<b>Qlimax</b>	Arnhem - NL
<b>Rudimental Tour</b>	Tour
<b>Sonar by Night Festival</b>	Barcelona - SP
<b>Spring Awakening</b>	Chicago, IL - US
<b>Sunset Music Festival</b>	Tampa, FL - US
<b>The Best of Armin Only</b>	Amsterdam - NL
<b>The Chainsmokers</b>	2017 World Tour
<b>The Flying Dutch</b>	Amsterdam + Eindhoven - NL
<b>Tomorrowland Festival</b>	Boom - BE
<b>Ultra Festival</b>	Seoul - KR
<b>Ultra Festival</b>	Singapore - SG
<b>Ultra Festival</b>	Split - HR
<b>Untold Festival</b>	Cluj-Napoca - RO
<b>Weather Festival (Winter Edition)</b>	Paris - FR

## NOTES

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins or other markings on the paper.



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