technology

SOUND & STAGE • LIGHTING • INSTALL SOUND • MUSIC PRODUCTION • DJ TECHNOLOGY

EXPO PROMOTION

A non-defining listing of pro sound and lighting products impacting the global market

Global Pro Sound & Light 7 Po So

"India is an important market for d&b and business growth in the territory is consistent"

CEO, d&b audiotechnik GmBH

—11— Questions



INTERVIEW WITH KEN POOCH

Mix Focus MIXING INDIAN CLASSICAL WITH **AJAY VIJENDRA**

PALM Expo Update IRAA 2019 JURY COMMITTEE AND AWARD CATEGORIES ANNOUNCED

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Product Focus:

- Touring Consoles
- Stage Microphones

Theme: FOH



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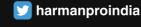
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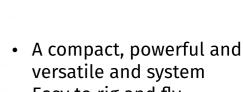


Taking line array performance to a whole new level

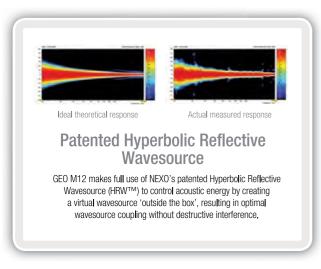


Magnetic Waveguide Flanges

System flexibility can be increased by adding magnetic flanges to the HF waveguide exit, changing the standard 80° acoustic coverage across the horizontal plane to 120°. No tools are required to remove or replace the grille and flanges



- Easy to rig and fly
- Dedicated msub18 sub bass cabinet
- Geo M12 for large theatres and live venues
- Geo M12 for live events
- Geo M12 for public address
- Geo M12 for concerts and festivals













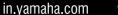
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Behind the Desk

It's that time of the year again when **PALM technology** draws **Top 50 products** in pro audio and lighting. As technology races ahead, integrating faster computing, expanded and faster memory, ease of use, radical and evolved design, compatibility, new applications and other features, globally, manufacturers are launching new and state-of-the-art products at a rapid pace.

A slew of industry magazines across print and/or digital have their own lists and this selection of products is *PT's* choice that we select as worthy of our annual Top 50. PT does not claim that this is a definitive list of Top 50, but this is what we feel works for this market.

Indian industry too has been embracing new tech, which is today easily accessible in India, not only in the metros, but also the smaller towns and cities. What is unique to India is that it embraces good quality, Made in India products with the same dynamism as it does the European or Chinese solutions. The Made in India products that find a place in the Top 50 are a good indication of the maturing audio industry in the country.

Amnon Harman is the latest industry leader to contribute to the *11 Questions* section offering his insights to d&b audiotechnik's cutting-edge R&D and growth strategy in his own unedited words (*pg. 97*). He says that d&b recognized an appreciation of good sound in the Indian market and Indian customers today are not afraid of cost to invest in good technology. His observations are timely as we find buyers across the length and breadth of the country investing into equip-

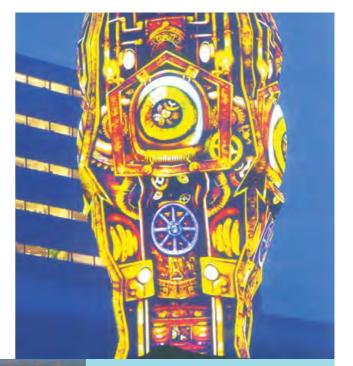
ment, reports of which can be found in the news pages of **PT**. Number of **Soundcraft Vi Series** growing organically across India is also an indicator of where the live sound console market is headed (pg. 86).

Live sound, where beyond electronics, there are dynamics, mix magician – **Ken Pooch** who obliged *PT* with an interview for this FOH special issue in between mixing FOH for top-of-the-line artistes, is quick to point out that the challenge a FOH faces, depends on the artistes themselves. A "never give up" attitude and hard work is his "sound advice" to young FOH engineers out there aspiring to be, where Pooch is today. (*More on pg. 60*).

In India, today there is no paucity of acts in every genre. This year started with music lovers in Mumbai being treated to a bouquet of Indian classical music concerts – from Hindustani and Carnatic music at Gateway of India at the crack of dawn, to concerts by the calm sea, reflecting the moon at Marine Drive. FOH engineer **Ajay Vijendra**, our contributing writer for this issue, provides insight into his workflow for mixing Indian classical music (pg. 82).

With PALM expo on the horizon, the 'busy period' for the team here at PT has just about begun, more so due to AV-ISE, the concurrent expo - AV Integrated Systems - born out of a demand by AV consultants and systems integrators, religiously attending the PALM expo each year for dedicated AV expo. The expo's eponymously titled publication – AV Integrated Systems, edited by the resourceful Content Manager – Anvita Pillai and anchored by yours truly, will drive the expo's highlight features – namely the AV Summit Conference, CAVS – Certified AV Specialist program, AV Education & Training Program and AV Project Gallery Walk of Fame.

Focus product segments at the AV Integrated Systems expo include Video Projection &



projection. It is about digital art.

If I take one nanosecond of every image, and I take a print out, every print is a work of art. It is millions of artistic images. When anyone sees it, they feel a part of it, because it brings Africa out, it brings Asia, it brings modern art, it brings everything out, and that is what so satisfying. This is technology art. This is the future."

– Anil Chopra's (centre) vision of the Sviatovid - the projection

mapping showcase by Bart Kresa unveiled at ISE Europe 2019

"This is not just about digital



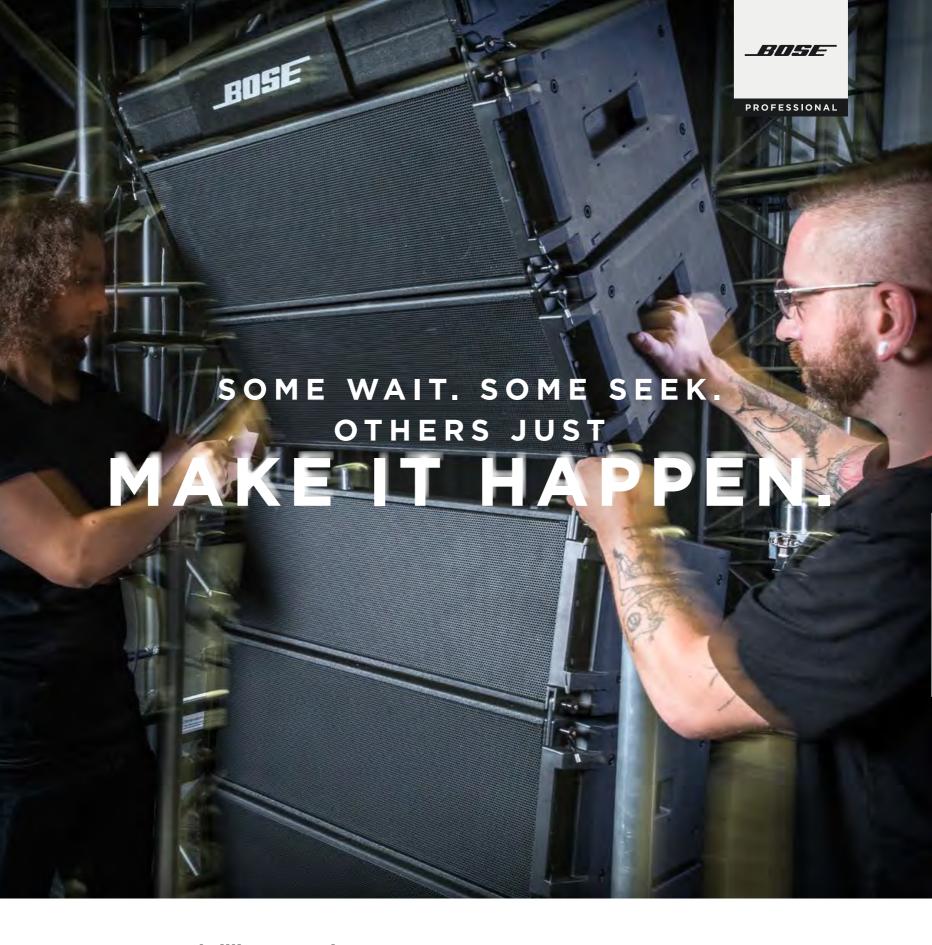
Display, Digital Signage, Large Display, Interactive Display, Unified communications, Education technology, Audio Processing, Digital Cinema, Cabling, Connectors and signal management, Conference and collaboration, IP & Network distribution. If you haven't already booked your booth yet at the expo, drop us a line and join the marquee list of exhibitors.

PALM on the other hand continues to grow year on year with the inclusion of new exhibitors. **Anil Chopra,** our Content Chief, made his first expo stop of the year at ISE 2019 and met master projection designer Bart Kresa who PALM awarded for Creative Direction at the PALM Sound & Light awards in 2013 and was enraptured by Kresa's projection mapping showcase - Sviatovid unveiled at ISE. The ISE Daily also reported Mr. Chopra's vision of the Sviatovid. Kresa incidentally had also showcased a unique demonstration of video mapping at the 2013 PALM Integration for Entertainment Demo in Mumbai.

Our next issue is the **Studio** special issue. The issue will also feature stories of all the illustrious studios nominated for the 13th edition of the **IRAA awards**. Gear up for more in the *March-April*.

Cheers till then!

Smita Rai - Content Anchor



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Ajay Vijendra, FOH Engineer on Mixing Indian Classical Music

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My goal in all of my mixes is to deliver a record quality mix with impact. I try to adhere to what the record sounds like as best I can. Everyone knows it and wants the music to sound like it.

60

POOCH, FOH Engineer



HX-7

Variable Dispersion Line Array

The HX-7 is a powerful and compact variable dispersion line array with SYNC-Drive™ waveguide technology and flexible mounting options. Thanks to its award winning enclosure design, employing four modules per unit, the HX-7 allows precise adjustment of sound dispersion angles of 0 - 15 - 30 - 45 and 60 degrees. The line array offers pristine clarity in a wide range of applications from sports venues, auditoriums, concert halls and challenging houses of worship. With the HX-7 you're getting affordable quality and stellar performance.



EM ACOUSTICS LAUNCHES ST-215 TOURING SUBWOOFER

EM Acoustics has announced the launch of their ST-215 medium format touring subwoofer. As the first product in the forthcoming S Series of subwoofers, the ST-215 is designed to complement other products within the EM Acoustics range as well as offering ideal low frequency support for HALO-B systems.

Featuring dual 4-inch voice coil 15-inch neodymium LF drive units for unmatched power density and headroom, the ST-215 has been voiced to add low frequency body to flown HALO-B systems and is also mechanically compatible with HALO-B. However, this versatile subwoofer is also a standalone product and can be used to support any EM Acoustics product, in either a flown or ground-stacked configuration.

The compact, lightweight enclosure offers an optimally-tuned bass reflex

design with a single low-velocity port to minimize distortion generated by turbulence. The high motor strength of the drive units gives the ST-215 excellent transient response and the moving area of the two high-excursion 15-inch drive units generates significant low frequency extension and overall subwoofer output. The enclosure is symmetrical to facilitate the creation of cardioid arrays where appropriate.

Housed in a robust weather-resistant enclosure and utilizing stainless steel fixings and a stainless-steel grille, the ST-215 is ready for outdoor use straight out of the box. Even the touring-friendly 4-point flying hardware is coated with XylanTM for maximum durability. All rigging components retract flush with the cabinet for transit and ground stack use. Arrays of up to nine units can be easily and

quickly assembled with aboveregulation safety compliance.

According to operations director, Mike Wheeler, the ST-215 offers all the advantages of dedicated sub-bass support for HALO-B without being too specific for use with other EM

Acoustics loudspeakers. "We deliberately designed the ST-215 to be mechanically and acoustically compatible with HALO-B, because HALO-B deserves to have a subwoofer that is precisely tailored to match the rest of the system," he explains. "However, the design is flexible



EM Acoustics ST-215 touring subwoofer

enough that it's also a highly versatile system in its own right and can easily accompany other EM Acoustics systems, which makes it really easy to integrate into rental stock, for example. However, that same flexibility makes it equally at home in fixed installations, so it really is the best of both worlds."

LOGIC SYSTEMS LAUNCHES NOTION LINE-UP

Logic Systems Pro Audio has launched the **Notion line-up**, which replaces the popular ML range and comprises of four two-way systems, ranging from the compact N8 to the powerful N14, plus three sub woofers.

Each full range enclosure features a rotatable horn for horizontal or vertical orientation. Comprehensive mounting options include eyebolt suspension, wall bracket and pole mounting, while ergonomic handles incorporated in the rear of each full range enclosure allow easy handling with all sub woofers having side

handles

All Notion series enclosures are constructed from durable plywood and finished with hard-wearing black textured coating paint with white and customer RAL colour options available to order. It's applications ranges from portable sound reinforcement for live bands, DJs and corporate events to installations in nightclubs, bars, commercial spaces and churches.

Leigh Comins, operations manager at Logic Systems, comments: "The new range brings warmth and clarity of sound and improved overall performance at a price point not previously possible. It's a fresh, modern design, catering not only the for needs of portability but also installation purposes.

"We're confident that ML users will be more than happy with the new model," adds Leigh, "because it offers everything that was popular about the ML - and more - and in a more contemporary style with quality features."



AUDIOCENTER UNVEILS EA5 SERIES

Audiocenter has now introduced its latest flagship of speakers to its enormous range, **the EA5 Series.** These active speakers come in different sizes which includes 8,10,12,15-inch tops along with a single 18-inch subwoofer to complete the range.

As the company states that this EA5 Series is built with BrainCore, an innovative core application technology that has been researched and developed by Audiocenter. With its supreme performance and high reliability, advanced technology and scientific methodology, BrainCore analyses and processes the input

signal, DSP module, Class D amplifier and loudspeaker optimally, achieving excellent frequency response and audio reproduction even at high levels of SPL and because of this, the EA5 Series ticks all the checkboxes of the premium speaker series.

The EA5 series also includes a D Class amplifier and the SPL ranges from 132dB in the EA508 to 137dB in the EA5118. This series uses Beyma drivers with 3-inch voice coils in the tops and 4-inch in the subwoofer. The HF's used







Audiocenter EA512, EA515 and EA5118

are also Beyma which are placed strategically in a rugged Russian birch wood cabinet which also includes Audiocenter's advanced cooling

system. These speakers can be pole mounted, flown, ground stacked or even be used as active monitors, giving it a range of application uses.





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ADAMSON POWERS THE PARTY FULL THROTTLE WITH RICH AUDIO IN PUNE

Rich Audio, one of India's leading pro audio rental company have evolved at every stage from planning to implementation and with the purchase of the Adamson S10 system, have become the first in India to take advantage of Adamson's superior sound quality and service.

They recently provided complete event solution for a major party held in Pune, with popular names like Akon, Sukhbir Singh, Sohail Khan, DJ Skales, DJ Tony Montana, DJ Girish Kilogram, Bappi Lahari and Sivamani performing at the event. Adamson's scalable S10 line array system with S119 and E219 subwoofers were used for the event. 'Mix Man' Lee Braganza and Zura Braganza from Rich Audio

headed system tech for the event along with Adamson's APAC director David Dohrmann.

Mr. Lee Brazganza commented, saying "The setup worked really well. The consistency of the system was amazing -very good quality with clean musical sound. The critically optimized sound chamber of the S10 allows for equal sound distribution throughout the venue and provided a continuous level from front to back, while the S119 and E219 subwoofers provided exceptional power handling with excellent sound reproduction; and the ability to widen coverage smoothly is a big plus. Adamson's S10 system truly raises the bar for system performance. Very pleased with our rig!"



NEW GEO M12 LINE ARRAY COMPLETES GEO M SERIES

The new NEXO GEO M12 line array made its debut during the NAMM Show at the Yamaha Commercial Audio products and NEXO booth at the Anaheim Convention Center. The addition joins the GEO M family of sound reinforcement loudspeakers. 'The Big Twelve' also made its performance debut as part of the NAMM Yamaha Grand Plaza Stage.

Sharing the same aesthetic design and sonic signatures as the other models in the GEO M Series, the GEO M12 delivers all the NEXO hallmarks of power, flexibility, coverage and sonic performance in a thoroughly modern package. The GEO MSUB18 companion subbase cabinet also made its NAMM debut.

The GEO M12 takes its place as the new head of the NEXO family of line array designs that includes the GEO M10 and GEO M6 mid-size and compact systems. "The Big Twelve' is a logical complement to our GEO M Series range," explains NEXO worldwide sales director Denis Baudier; "it is packed with design features that we and structural innovations that derive from our flagship STM Series modular line array."

The two-way module delivers a frequency response of 50Hz-20kHz with nominal peak SPL of 140dB. "Using the single driver architecture that we deployed successfully in the GEO M10 we can deliver better LF extension, interference-free coverage in the MF range and better SPL output," says François Deffarges, worldwide director of NEXO's engineering support division. "This means that line arrays like GEO M10 and now GEO M12 can be very cost-

The M12 module offers a variety of dispersion options, allowing it to be optimized on the fly to fit the exact acoustic needs of each venue. Horizontal directivity is 80 degrees by default, but, by adding an optional Configurable Directivity Device (the NEXO-patented CDD), it can be changed in seconds to 120 degrees, using a magnetic fixing system.

In addition to horizontal directivity options, M12 offers two vertical directivity options: the 10 degree GEO M1210 and the 20 degree GEO M1220. This unique NEXO design allows for more vertical coverage with fewer cabinets without compromising performance.

The M12 enclosure includes more developments in loudspeaker design by using the same honeycomb structure and urethane co-polymer material first used in NEXO's

> STM Series cabinets and carries a full complement of patented technology including the Hyperbolic Reflective Wavesource (HRW) and Phase Directivity Device (PDD) as well as a new and improved version of the patented V-shaped profile of

Rental companies can also

switch between 2-Way active and passive using a protected switch on the rear of the M12 module. This consideration for the working engineer is a NEXO hallmark and saves time in the shop and on a job

Deployment of the system is just as easy as cabinet configuration with the integrated, "no loose parts" AutoRig rigging system saving engineers valuable time on-site. The system automatically connects the front rigging system when loudspeakers are assembled, with a guided back rigging system for easy angle adjustment. Coverage is achieved with a choice of 11 angles between cabinets, in arrays of up to 12 boxes, indoors or outdoors.

NEXO's latest addition to the Geo M family boasts elevated SPL for its category, numerous technological innovations from configurable directivity options, an easy to use AutoRig system, and multiple patented acoustic devices. These technological advancements give end users and installers the ability to quickly configure and deploy high performance systems that deliver consistent sound across a variety of venues with a cost effective solution.



Line Array









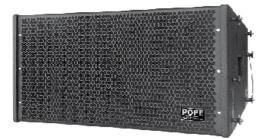
ML-112V2 Two Way Speaker 1110W



ML-10 Two Way Speaker 710W



ML-12 Three Way Speaker 2020W



ML-210 Two Way Speaker 1310W



Electronics

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OUTLINE UNVEILS RAFT OF NEW OUTLINE PRODUCTS

Outline has announced the official launch of no less than four entirely new designs.

The Ki-Series is an applicationflexible compact loudspeaker concept designed for a broad range of installed applications. Both models (the Ki-12 and Ki-10) maximise efficiency and cost effectiveness with internal crossover networks, a small footprint, integral mounting points and very high SPL capability. Showcasing another example of Outline's innovative engineering, both models also feature rotatable horns that can be adjusted without any disassembly of the device.

The MV1CX is the latest member of the Cinema Series family of Outline products. This high-powered, slimline co-axial design is ideal as a main system component for smaller cinemas and may also be used as the centre speaker in L-C-R arrangements. Its small footprint features sidelocated reflex ports to eliminate LFinduced screen vibration.

Outline's V10 and V15 kits are thoughtfully-conceived and highly cost-effective sound systems designed specifically for musicians, DJs, presenters, lecturers, entertainers and anyone who transports and operates their own audio equipment. Comprising

either one or two powered subwoofers which also contain the amplification and processing for the satellite speakers (from Outline's wellestablished Vegas range), these portable setups deliver up to 12kW of audio power while retaining the class-leading audio quality for

In fact, the price to power-ratio is nothing short of extraordinary, with the mono-sub V10 producing 4.5kW and the dual-sub V15 system delivering a massive 12kW of pure,

uncoloured audio power.

Like all Outline products, both V10 and V15 systems are entirely made in Italy, in the same factory as Outline's top-line touring systems and to the same exemplary standards.

All enclosures are fabricated from top-quality birch ply, again the same material used in Outline's premium products, rather than the moulded plastic favored by many manufacturers

which Outline is justly recognized.

competing at this level - this makes them not only much more durable but also better sounding.

Outline V10 & V15

Finally, the all-new Monaco 215 CX is yet another Outline loudspeaker which appears to defy the laws of physics. Containing two 15" LF transducers, one of which features a co-axially-loaded 3" diaphragm compression driver, this is a true full-range enclosure which can be driven either passively (by a single amplifier channel) or bi-amped. Ideal for a wide range of small to medium sized sound reinforcement applications, it is also compatible with various models of Outline subwoofer if further LF extension is required.

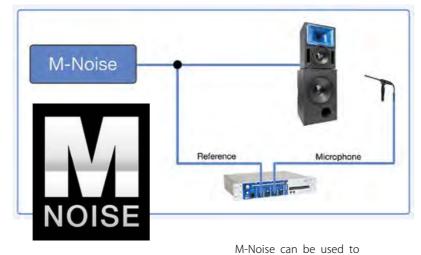
Outline have also recently announced the availability of new software (1.8.2) and firmware (V.93) for their unique Newton processor and their proprietary 'Dashboard' remote control software.



MEYER SOUND INTRODUCES M-NOISE TEST SIGNAL FOR 'REAL WORLD' LOUDSPEAKER SPL MEASUREMENTS

Meyer Sound has introduced M-Noise, a new test signal that will promote standardized measurement of a loudspeaker system's maximum linear output. A mathematically derived test signal that effectively emulates the dynamic characteristics of music, reportedly M-Noise enables a far more accurate measurement of a loudspeaker system's linear peak SPL in any application requiring reproduction of musical content.

"It's vital to have an accurate and consistently repeatable way to measure the linear peak SPL of a loudspeaker when reproducing music," says Vice President and Chief Loudspeaker Designer Pablo Espinosa. "Pink noise may get you in the ballpark but you still could be off by 6 dB or more when you switch to music program. However, if you measure your maximum level using M-Noise, following our recommended procedures, you will



know for certain your real-world limit for sustained, linear and fullbandwidth music reproduction. The procedure is consistent and repeatable, and it gives you full confidence that your system will have the headroom required for accurate reproduction of dynamics without compression."

determine the linear peak SPL of any loudspeaker system, regardless of manufacturer, size or design. However, the accuracy and consistency of results will depend on the type and quality of the test equipment (as specified in the video) and adherence to the proper measurement procedures.

EARTHWORKS DEBUTS NEW SR314 LIVE VOCAL MICROPHONE

Earthworks has debuted the SR314, a new precision-engineered cardioid condenser microphone designed to deliver a fresh approach to vocal miking in live performance environments.

Stated frequency response is 20 Hz to 30 kHz, with 145 dB SPL handling. The company notes that key characteristics include a rich, open and natural sound captured in a tight cardioid polar pattern that is consistent throughout the full frequency



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MARTIN AUDIO UPGRADES WAVEFRONT PRECISION LONGBOW

Martin Audio has announced its latest optimized line array, adding to the popular **Wavefront Precision Series with the Longbow (WPL) edition**

Wavefront Precision Longbow (WPL) now brings this high performance, optimization, flexibility and control to large-scale touring and installation applications. Designed as a complete system with external iKON multi-channel amplifiers, automated DISPLAY optimization software and VU-NET control platform, WPL provides financial accessibility to the higher echelons of touring and install

sound — from stadium concert and outdoor festivals to arena and House of Worship installations.

The complete system philosophy guarantees that WPL arrays perform predictably and effortlessly to their design maximum, as well as ensuring that they are compatible with other WPL systems throughout the world.

It incorporates 2 x 12" (300mm) drivers with Hybrid horn/reflex loading, 2 x 6.5" (165mm) cone drivers on a midrange horn which covers the vocal frequency range from 300Hz to 4kHz, and 3 x 1''(25mm) exit HF drivers operating from 4kHz upwards. Each section features innovative horn-loading techniques and refinements which raise the acoustic performance of WPL to a superior level — both in terms of output and smooth 90° horizontal coverage patterns of the mid and HF horns. Sonically, WPL's exemplary horizontal dispersion pattern translates to an incredibly consistent frequency response off-axis, with minimal variation from the onaxis response.

The maximum peak outputs of the LF, Mid and HF sections are 139dB, 140dB and 145dB per enclosure at 1metre and 6dB crest factor respectively — ensuring that a WPL array will meet the most demanding requirements for throw and clarity in

the largest venues and outdoor events.

Dom Harter,
Managing Director, says,
"Martin Audio

enjoyed a record sales year in 2018 and we will strive hard to continue this trend in 2019. WPL is a compelling proposition combining superlative sound, optimization and control with quick deployment and trucking efficiency, all in an affordable package that we believe will delight customers. Importantly, this is also a shipping product with the first systems having already been delivered to two new US customers and we have taken orders for more systems around the world

BRIAN SOUND JOINS ADAMSON

Mumbai-based Brian Sound has become the latest company to join the Adamson network, having recently purchased the S10 line array system from Adamson's India distributor AVCL Pro, sub-division of Sonotone. The system consists of S10 line array loudspeakers with S119 subwoofers powered by Lab. Gruppen PLM12K44 amplifiers.

Brian Menezes of Brian Sound, commented, "We were looking to upgrade our existing line array and had researched all of the leading brands currently on the market. We trialled the Adamson S10 during the shootout in Mumbai, and it really stood out as the ideal system for us, with exceptional sound quality, easy rigging and comparable power while being smaller and lighter."

Coinciding with the purchase,

AVCL invited Brain Sound to attend Adamson's Applied Certification training conducted by David Dohrmann, Adamson's Technical Director for the APAC Region. "We value the support we've already received from AVCL and Adamson," adds Menezes. "Having so much expertise and experience backing us made us even more certain that we made the right choice making the move to Adamson."

"Brian Sound has a great reputation providing sound equipment and services to the Indian market. This is a great next step in their evolution and we look forward to continue working and supporting their impressive growth with Adamson", says Karan Nagpal, Director of Sonotone.

DAS AUDIO ACTION-500 SERIES LOUDSPEAKERS

DAS Audio has announced the addition of the **ACTION-500 series**, consisting of 8 active and 8 passive loudspeaker models, which include a 12" monitor, full-range systems consisting of 8", 12", 15" and 2 x 15", and 3 subwoofers, to its line of available products.

DAS Audio presents the ACTION-500 series, consisting of 8 active and 8 passive loudspeaker models, which include a 12" monitor, full-range systems consisting of 8", 12", 15" and 2 x 15", and 3 subwoofers. The complete renovation of one of DAS Audio's most recognized series



upgrades both design and physical features—making the systems more compact and lightweight, with an attractive modern design.

ACTION-508A Features

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It incorporates a newly designed DAS 8GV transducer and M-34 compression driver. The ACTION-508A powered version incorporates a new Class D power amplifier—providing higher power, thus optimizing the performance of the system. All fullrange systems in the ACTION series, including the ACTION-508/512/515 and 525 have new horns that provide improved frequency response on both the vertical and horizontal planes while offering a wider 90°x 60° dispersion for room-filling coverage. The horns can be rotated to maintain coverage coherency when used in the horizontal position. The ACTION-512/512A and ACTION-515/515A have dual angle pole mounts, 0° and

10°, making it possible to adapt the coverage when needed.

All active systems incorporate a mixer with 2 signal inputs, offering versatility when used by performing musicians, DJs, or any application requiring two sound sources.

DAScontrol technology with a rear located LCD screen enables the selection of up to 3 different presets (Live, Dance, and Monitor) and HPF and LPF filters that optimize the systems when used with subwoofers. The powered systems provide the option of using the logo as a limit indicator, which can easily be seen from the front of the cabinets.

The subwoofers of the series, the ACTION-S18 and S218, improve their performance with a new transducer (18FW) designed by DAS Audio. The high excursion transducers achieve clarity and high power in the reproduction of low frequencies.



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North - Amritsar: Khem Singh & Sons (0183-2541309), Dehradun: Venus Music Care (09837121890), Delhi: Raj Musicals (09899272572),

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South - Bangalore: Soundglitz (09886754864), Chennai: Krish Music (09841440156), Cochin: Sangeeth Mahal (09895482629),

Hyderabad: Khords Complete Music Store (09908583067), Trivendrum: Sruthi Musicals (09846029134)

West - Ahemdabad: Nrutika Enterprise (0971246969), Jabalpur: Ajit & His Beats (09425151979), Mumbai: Shalu Music (09892642311)

Ujjain: Shree Mahakal Music House (09827006143), Vijaywada: Taal Musicals (09392113553), Vishakhapatnam: Harmony Musicals (09949466685)

SSL UNVEILS NEW LIVE CONSOLE OPTIONS

Solid State Logic has announced the release of **SSL Live L350** and **L550 consoles,** reportedly the most powerful SSL Live consoles to date.

Alongside the new desks comes X-Light, a next generation of touring-grade, high bandwidth Dante AoIP infrastructure technology, a new Stagebox and new V4.8 software.

The L550 features a total of 288 processing paths, 36 matrix outputs and 48 VCAs, assignable to any of the 36 + 2 faders on the control surface

L350 features a total of 216 processing paths, 36 matrix outputs and 36 VCAs in a compact 24 + 2 fader frame

Both consoles can be augmented with USB Remote Fader Tiles or be connected to remotely from another console, a laptop running SOLSA remote control software, or a tablet running the TaCo control app for a

truly flexible and expandable work surface

The L350 and L550 replace the L300 and L500 Plus in the current SSL Live console range and are showfile compatible with all other SSL Live consoles. All existing SSL MADI and Network I/O Dante stageboxes can be deployed with any combination of SSL Live consoles to suit the requirements of even the most complex production. Upgrade kits are also available to existing L300 and L500 Plus owners who wish to upgrade their consoles to the latest specification to benefit from the processing power increase and keep their console inventory up

X-Light is a high channel count, ultra-low latency interface, carrying 256x256 channels of 96 kHz 24-bit audio plus control data between SSL Live consoles and Dante devices Solid State Logic

on stage via a single cable. The X-Light option can be fitted to any L100, L200, L350 or L550 console. Owners of L300 and L500 consoles can upgrade to L350/L550 to take advantage of X-Light.

For the touring market, a new 1U X-Light Bridge interface designed to be deployed within stage I/O racks, features a fully redundant pair of X-Light connections using Neutrik opticalCON Quad format connectors on the front panel. On the rear panel there are two redundant pairs

of Neutrik etherCON format Dante connections for audio and control distribution.

SSL is also further expanding the SSL Network I/O range of Dante interfaces with the introduction of the SB16.12 Stagebox. Based on the same specifications and design as the llarger SB32.24, the new SB16.12 features 16 SuperAnalogue mic/line inputs with gain compensated digital split outputs, eight-line outputs, four AES inputs with SRC and four AES outputs.

AVNU ALLIANCE ANNOUNCES ADAMSON SYSTEMS ENGINEERING AS NEW PROFESSIONAL AUDIO MEMBER

Avnu Alliance has welcomed Adamson Systems Engineering as a new member to the organization's pro AV segment, directly supporting the segment's **Milan initiative**.

Milan is a standards-based, userdriven deterministic network protocol based on audio video bridging (AVB) for professional media, that assures devices will work together at new levels of convenience, reliability and functionality. Created and maintained by Pro Audio market leaders in the Avnu Alliance, Milan is the first tangible solution for promising deterministic, reliable, and future-proof delivery of networked media.

roof delivery of networked media.

"Adamson is excited to be among

the first Avnu members to develop product that are Milanready," said **Morten Lave**, Network Architect for Adamson. "We strongly support the mission of the Avnu Alliance and the Milan protocol – the organization's commitment to developing solutions that support network interoperability and directly

address market-required needs are in line with the work we are also trying to achieve here at Adamson in creating networked audio products that are fully redundant and easily manageable. We believe that Adamson and Avnu will be successful collaborative partners for our market."

NEXT-PROAUDIO UNVEILS N-RAK

NEXT-proaudio has developed a unified rack solution **N-RAK**, designed for optimum performance flexibility and setup simplicity. Reportedly, the new rack was configured to interface seamlessly allowing multiple configurations for the entire NEXT-proaudio's product range. Consisting in a family of 4 different models,

N-RAK 20, N-RAK40, N-RAK60, N-RAK80, all the N-Raks are equipped with Powersoft X8 and/or X4 amplifiers, featuring Dante audio networking functionality (optionally).

N-RAK has Dante (optional), AES3 and Analog inputs for multiple connections, making the setup process greatly simplified and much more efficient than the former LA Rack. With the Powersoft amplifiers already built

in and no assembly required, it's an easy-to-configure, all-in-one amplifier solution that eliminates the process of building amp racks.

The N-RAK touring rack offers an advanced rack solution for all NEXT-proaudio' systems covering signal and power distribution in a plug-and-play touring package.

The N-RAK versatility extends to delivery as well, since its dimensions were projected to allow easy shipment on European trucks, sea containers and other transportation modes.

The fully equipped N-RAK module comprises a 6U Customized Rack with 2 Powersoft X8 (N-RAK80) or 1 Powersoft X8 and 1 Powersoft X4 (N-RAK60) or 1 Powersoft X8



(N-RAK40) or 1 Powersoft X4 (N-RAK20); 2U Audio Distribution Panel in the front; and 2U Power Distribution Panel in the back.

The N-RAK features Armonia software for convenient, simplified and standard control. The complete digital audio signal management system based on ARM Cortex A-8 processor and TI C6000 DSP platform

heralds new and innovative level of signal processing, providing non-boolean routing and mixing, multi-stage equalization with raised-cosine, IIR and FIR filters, delay up to 4 s in input processing and 200 ms for time alignment, gain and polarity adjustment, crossover, peak limiters, TruePower limiters and Active DampingControl.



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HARMAN PROFESSIONAL SOLUTIONS RELEASES SOUNDCRAFT UI24R 3.0 FIRMWARE UPDATE

HARMAN Professional Solutions has debuted a significant free update to the Soundcraft Ui24R surfaceless mixer and multitrack digital recorder.

Top functionality added by the Ui24R 3.0 Firmware Update:

• Cascading: It enables users to connect two Ui24R via Ethernet to double their mixing capability by enabling a new 32x32 bidirectional audio bus between consoles. Users can easily switch between Host and Remote units with a single click on Ui24R's HTML5 screen user interface. Common applications of this new functionality include: doubling mic inputs, by adding a second Ui24R as a submixer, routed into the main Ui24R; and utilizing two Ui24R mixers to create two fully independent mixes, each with

dedicated EQ/Gate/Compression, for example when mixing FOH and monitors, or creating independent FOH and streaming/live recording

- Cue Recall: Ui24R's new Cue feature enables the saving and fast recall of mix settings. While recalling Cues, Ui24R can block any changes to routing or processor types, which enables seamless operation, an essential during low volume events, for example while mixing for theater.
- UDP Lighting Control: A new UDP view in the Ui24R HTML
 5 interface adds simple buttons to send industry-standard UDP commands over Ethernet to external gear such as lighting software or hardware lighting controllers. A valuable use for

this feature is to trigger pre-set lighting cues, which is perfect for community theaters, churches or corporate presentation settings where the sound engineers or volunteers might not have lighting

- Lexicon Reverb PreDelay: The embedded Lexicon processing in Ui24R is now enhanced with Reverb Pre-Delay, allowing users to easily set the time before first surface reflections and more quickly simulate desired acoustic environments.
- Big Desktop: The new "Big Desktop" INFO view adds

experience.

provides a birds eye view of the entire Ui24R mix environment, represented as a single large console surface. Users can see graphics of their gate, compressor, EQ curve, FX and Aux sends, and jump between controls for editing with simple double-clicks. This feature is designed for use on 1080p resolutions screens.

• Expanded Touch Screen Support: Users now have more options for touchscreen control of Ui24R with more than 25 leading touchscreens, which directly connect to the Ui24R via HDMI and USB.



LOGIC SYSTEMS APPOINTS ANDY MULLEN

British manufacturer Logic Systems Pro Audio has created the new role of International Sales Manager, appointing Andy Mullen to the position. Mr Mullen joins the company with 25 years of experience at several major sound and lighting companies with a focus on sub-assemblies, electronic design, mixing desks, amplifiers and juke boxes.

'It's an exciting time at Logic, with two major new line-ups launched last year and more scheduled for this year,' said Mr Mullen, denoting to the recently launched Notion range. 'The company has a rich heritage in producing outstanding loudspeaker products and we want to build on that, applying new technologies and techniques to design and product development. We've set our sights on being at the forefront of manufacture for the next generation of premium loudspeaker products in the UK.'

Andy Mullen, International Sales Manager, Logic Systems Pro Audio



ADAMSON INTRODUCES MILAN-READY CS7P INTELLIGENT POINT SOURCE ENCLOSURE

Adamson Systems Engineering has introduced **CS7p** point source enclosure – the first entry in a new generation of loudspeaker technology. Beginning with the CS7p, the new CS-Series reportedly will be the world's first family of mobile loudspeakers to feature onboard Class-D amplification, DSP, and Milanready (AVB) network endpoints.

The CS-Series builds atop the proven foundation of the tour-grade S-Series and install-focused IS-Series.

"The CS7p gives us the luxury of streaming audio over AVB with console manufacturers that are coauthoring the Milan specification alongside their industry peers. In an application such as FOH monitoring, it simplifies the deployment process

by allowing users to make a single connection," says **Benoit Cabot**, Director of R&D at Adamson. "In the future, the building blocks in the CS-Series will simplify complex system deployments by eliminating complications in network infrastructure."

Acoustically, the CS7p contains two 7-in Kevlar Neodymium transducers and a 3-in compression driver, loaded with a rotatable 70 x 40 (H x V) waveguide. The dipole arrangement of the cabinet provides a stable polar response, and the CS7p can also be paired to increase horizontal coverage and overall output.

"In recent years, Adamson has been working as part of the Avnu Alliance with other industry leaders in the development of the Milan protocol – an initiative that we believe will benefit the entire



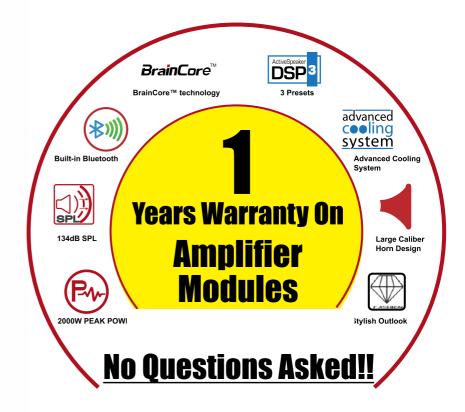
professional audio industry," begins Morten Lave, Network Architect for Adamson. "With the CS7p and other upcoming CS-Series offerings, Adamson has taken steps to ensure compliance with Milan, but we have also included a fully redundant, daisy-chainable networking topology to ensure that the signal chain is the most manageable and secure in any networked audio loudspeaker product available on the market today."

"Technological convergence has always been at the forefront of Brock Adamson's vision, and ultimately, the CS-Series carries Adamson's longstanding and proven manufacturing philosophies into the digital audio landscape," says Marc Bertrand, Adamson CEO.



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GALAXY AUDIO ANNOUNCES NEW AS-950 WIRELESS PERSONAL MONITOR

With its 16 selectable UHF frequencies, 50mW of audio power and included EB4 ear buds, Galaxy Audio's **new AS-950** offers stereo monitoring even in a crowded RF environment.

The AS-950T transmitter includes a L/R level display, channel up/ down select with LCD display, stereo XLR/1/4-inch inputs, and headphone output with volume control.

The AS-950R receiver offers a 50mW stereo output with RF and stereo indicators. The EB4 ear buds feature titanium drivers, extended bass response and aluminum alloy construction. A single/dual rack mount kit is included.

With its frequency-agile performance and affordable price, the AS-950 brings personal monitoring to professional musicians, live theaters, houses of worship and schools Audition the AS-950 in the 2nd quarter of 2019 at a Galaxy dealer near you.

DAVIS PROSOUND & LIGHTING ADDS DIGICO SD12 **DIGITAL MIXING CONSOLE TO INVENTORY**

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J Davis Prosound & Lighting has made its identity in supplying professional Sound & lighting equipment with qualified sound engineers and technicians for major concerts and events. The company has recently invested in Digico SD12 mixing console.

Establish in 1980, J Davis & Lighting company has been providing High-quality sound and precision lighting using Professional equipment for commercial & International events all over the country. Currently, J Davis Prosound & Lighting has extended

its services in providing Trussing & Audio-visual equipment which is a very integral part of every event today.

USB of Digico SD12 Digital Mixing Console

"The SD12 is set to raise the bar in terms of what users will expect from a compact, affordable and multi-functional console. Not only SD12 is a true sonic powerhouse, but it also benefits from dual 15-inch touchscreens and it is the first in the SD range with built-in recording interfaces; which makes virtual sound checking very straightforward

indeed." Savs, J Davis Prosound & Lighting Company.

includes a DVI output, new LED and the SD12 Lightbar is identical consoles. "We even had space for two assignable master faders - only

perfect for expandability." Commented Company.



MEYER SOUND PREVIEWS NEW POINT SOURCE LOUDSPEAKER DESIGN

Meyer Sound has previewed the most innovative redesign of its point source loudspeakers since the introduction of self-powered systems more than two decades ago. Designated ULTRA-X40, the new loudspeaker series features a concentric driver configuration, new amplifier and processor technologies drawn from the LEO Family of line array loudspeakers, a rotatable horn, an extraordinary power-to-size/weight ratio, and a wide selection of versatile rigging options.

"The ULTRA-X40 is the first in a completely new generation of Meyer Sound point source loudspeakers," remarks Meyer Sound Senior Vice President of Marketing John McMahon. "We are confident it will redefine the category of compact loudspeakers much as the UPA-1P did when it was first introduced back in the late-nineties. The ULTRA-X40 offers significant advantages across an exceptionally broad range of portable and installed applications."

Reportedly, ULTRA-X40 employs a concentric driver configuration with dual 8-inch neodymium magnet

cone drivers coupled to a low-mid waveguide surrounding the single 3-inch diaphragm high-frequency compression driver. The 110° x 50° Constant-Q HF horn is easily field rotatable and working in concert with the concentric design it ensures that the full bandwidth coverage pattern will be uniform with either horizontal or vertical orientation.

The ULTRA-X40 also incorporates a newly designed and highly efficient 3-channel class D amplifier that produces a total peak output power of 1950 W with very low power consumption due to its highly efficient design. The new amplifier design also contributes to a total system weight of only 55 pounds (25 kg), a reduction of more than 20 pounds relative to the UPA-1P.

Preliminary performance specifications include an operating frequency range of 60 Hz to 18 kHz, with linear peak SPL of 130.5 dB measured with M-Noise, free-field at 4 m and referred to 1 m. Highly refined signal processing with advanced phase alignment methods results in phase response of \pm 45° from 100



Hz to 16 kHz. Another variant in the ULTRA-X40 family, the ULTRA-X42, offers the same performance but with the coverage pattern defined by a narrower 60° x 50° Constant-Q HF horn

The rear-panel features a female XLR 3-pin input connector with a male loop output. The optional RMS remote system monitoring module provides comprehensive monitoring of

loudspeaker parameters from a host computer running Compass software. In addition, the optional XLR 5-pin connectors version of the input board accommodates both balanced audio and RMS signals. AC line power is furnished via loop-through powerCON 20 connectors.

Housed in a premium multi-ply birch enclosure with textured finish, ULTRA-X40 loudspeakers measure 12.51 inches (318 mm) wide, 22.31 inches (567 mm) high and 14 inches (356 mm) deep. An integral handle for portable applications is standard, but it may be quickly removed for permanent installation. Flexible mounting and rigging is facilitated by 11 integral M8 points as well as an integral 35 mm pole mount receptacle with an M20 threaded insert socket for added stability.

Optional rigging accessories include a U-bracket, yoke, pick-up plates for horizontal or vertical orientation, and brackets for grouping in horizontal or vertical clusters. Full weather protection and custom color finishes are also available as options.

















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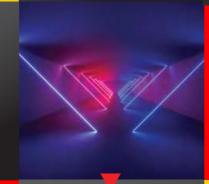






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ELECTRO-VOICE DEBUTS RE3 WIRELESS

Electro-Voice has announced the launch of the **RE3:** a new UHF wireless microphone system engineered for best-in-class sound quality, wireless flexibility and overall ease of use in alignment with the latest RF regulations. The RE3's user-friendly, state-of-the-art technology and roadworthy construction extend the rock-solid reputation of its predecessor the RE2.

RE3 receivers and transmitters are available in 10 pre-packaged sets, configured to cover a wide range of performance and presentation applications. Sets contain one 1/2-rack-space diversity receiver with antennas, universal power supply, rack mount kit, transmitter, batteries and an input device.

Additionally, the RE3 portfolio contains a comprehensive assortment of accessories to aid in the creation of large, multi-channel systems. The RE3's UHF design with clear frequency scanning makes multi-system wireless operation fast and simple.

The RE3 handheld combines robust aluminum build quality with a sleek profile. Five handheld system sets are available with a choice of interchangeable mic capsules: ND76, ND86, ND96 (dynamic) and the new RE420 and RE520 (condenser). These capsules can be purchased separately.

The compact RE3 bodypack features cast magnesium construction for maximum durability. Five bodypack system sets are available for instrument and lavalier/headworn microphone applications: OL3, CL3 (lavalier), HW3 (headworn), GC3 (instrument cable) and one bodypack-only system.

All RE3 transmitters offer excellent battery life and run on regular alkaline or rechargeable AA cells.

The RE3 operates on three bandwidths for the North American market, chosen to minimize the complexities of today's challenging RF environments. These include two 36 MHz-wide bands in the low and high 500 MHz spectrum, as well as one



Key features:

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- 36 MHz tuning bandwidths (most bands) / 1440 selectable frequencies
- Eight groups with up to 22 frequency coordinated channels in a group
- Electro-Voice ND and RE series capsules on handheld transmitters, for superior sound quality
- Selectable low/high transmitter output power -- 10 mW and 50 mW in most bandwidths (10 mW only in EU-specific band)

NEXT-PROAUDIO INTRODUCES LA26, ULTRA-COMPACT LINE ARRAY

NEXT-proaudio has announced the launch of the LA26, a new ultra-compact modular line source, with a long throw capability, delivering great sound quality at a very high SPL levels from the front row to the back of the entire audience. The LA26 is a 2-way, full range passive line array cabinet housing two 6.5" neodymium Flat Diaphragm drivers located in the side walls of the HF Oblate Spheroidal Waveguide, a 2" diaphragm HF neodymium driver and a passive network crossover presenting a nominal input impedance of 16Ω . A fast and easy 3-point autolocking rigging mechanism is integrated for easy build of ground stacked or flown systems.

The new technology waveguide and coplanar transducer configuration, generates precisely coherent wavefronts uniformly spread in the horizontal plane (105°) and precisely coupled in the vertical plane without sacrificing HF presence in the far field, further eliminating the low-mid lobbing normally associated with two-way line source systems. According to the Portuguese Manufacturer, the main goal is to improve the audience coverage by the unrivaled dispersion control and smooth even sound also be used as Touring sound reinforcement for small and medium-size venues, sports arenas, stadiums, and corporate AV events. It can be flown in arrays for use as a main system or configured as single cabinets or short stacks for



radiation pattern.

Measuring 498.5mm (19.6in) wide and weighting only 15kg, the product's elegant lines and flush-fitted rigging allow it to fit into any architecture, making it a natural element for installations in Concert Halls, Theatres, and special venues demanding minimum visual obstruction. The LA26 can

use as front-fills and under-balconyfills. Using an adaptive flying frame, the use of this system as a complement to larger LA systems becomes possible.

"Our new LA26 is the smallest and lightest in the LA series keeping the elegance of LA Family." explains **Antonio Correia**, R&D Manager at NEXT-proaudio, "The new line array model is uniquely flexible, upgradeable, and financially accessible."

For low frequency extension the LAs15A active subwoofer or the LAs15 passive subwoofer can be used. Both models house a powerful 15-inch, long excursion 100mm (4in) voice coil speaker, operating from 38Hz to 200Hz and can be paired with LA26 cabinets via the integrated pole mount, ground-stacked, or flown.

The LAs15A (active) is powered by the DPA4000 power unit, capable of delivering 4000Wrms with a magnificent precision and punch at incredible SPL, combining optimized acoustic, electro-acoustic and electronic solutions to maximize efficiency. Each LAs15A has a separate power output to power up to 3 LA26. Using the appropriate preset a cardioid system can be easily implemented. Besides this solution, the LA26 together with the LAs15 passive subwoofer, can be powered by the N-RAK, NEXT-proaudio's new unified rack solution.

ADAMSON APPOINTS MARC BERTRAND AS CEO



Marc Bertrand, CEO, Adamson

Adamson Systems Engineering has announced the appointment of professional audio industry veteran Marc Bertrand as its Chief Executive Officer (CEO). Bertrand will lead Adamson's global operations from its headquarters in Port Perry, Ontario, as company Founder Brock Adamson assumes the role of Chairman.

"It's a tremendous honour to be leading a company as respected and reputable as Adamson – especially amidst an exciting time of growth and continued innovation," begins Bertrand. "We have one of the most passionate partner networks I've ever seen, and close collaboration has led to considerable growth in key territories in recent years. Their connection to the product and the people that support the network provides a solid foundation as we build on Brock's vision and proven approach to manufacturing with a host of new products and innovations in 2019 and beyond."

Bertrand spent a decade with

Tannoy North America beginning in the mid-1990s, eventually serving as Managing Director for five years. Then, in 2009, he became the CEO of TC Group Americas, overseeing a catalog of brands including Tannoy, TC Electronic, Lab.gruppen, Lake, and others through to 2016.

Following his time with TC Group Americas, Bertrand assumed an advisory role with Adamson before formally joining the company in November 2017 as Managing Director Americas, attracted by the entrepreneurial and energetic management team at Adamson.

In his new role, Bertrand plans to continue building the Adamson brand in the vital North American market while maintaining its strong presence in Europe and supporting its growing Asia-Pacific market position.

"Since I joined Adamson, I've worked with Marc both in his role as CEO of TC Group Americas and within our organization. Together, we formalized Adamson's system approach through the standardization of the Lab.gruppen infrastructure. This experience led to Marc gaining a deep understanding of the needs of our network and Brock's vision. Our history of working together will make it easy to support him as he transitions into his new role," states James Oliver, Director of Marketing and Sales.

"The core group at Adamson is focused and skilled," Bertrand adds. "Our ability to continue the exponential growth that the organization has experienced under the leadership of Brock Adamson is undeniable."

In closing, **Brock Adamson** comments: "In his time with Adamson thus far, Marc has proven that his esteemed reputation in our industry is well-earned, and that his strengths as a leader complement our direction for the future."

POWERSOFT UNVEILS T SERIES AMPLIFIERS

Powersoft has announced the release of its new **T Series line**, reportedly an ultra-reliable and efficient amplifier platform designed with the rental market in mind.

"We're setting a new benchmark for the type of reliability and audio performance you can expect from a product at this price level," said **Klas Dalbjörn**, product manager at Powersoft. "The T Series is Powersoft's solution for rental companies with small to medium-size sound systems. It features next generation processing and networking capabilities, but at lower price point. It is also perfect for small touring bands, DJs and a range of other applications."

The T Series consists of both 2- and 4-channel models available in 3,000 W and 6,000 W versions supporting channel powers from 750 W to 3,000 W in a single rack unit. All models can deliver the same high peak voltage and can drive single 8/16-ohm cabinets at full SPL, making the T Series a cost-effective solution for small systems without boxes in parallel. The high voltage can also be used for power sharing between channels for applications such as

bi-amped loudspeakers or subwoofers with passive tops.

In addition to analog inputs, the T Series also includes AES3 and Dante by Audinate inputs, which are optimized for daisy-chained distribution of 2-channel audio to multiple amplifiers with no need for external switches or splitters. Each model features group controllable advanced EQ to let users equalize multiple amplifiers in a chain, as well

as a robust preset library with FIR processing.

The T Series offers remote control and advanced signal processing abilities via Powersoft's ArmoníaPlus System Manager as well as onboard DSP. Each amplifier platform in the T Series is fully operable from the front panel display, ensuring ease of set up and control. The display includes features like preset recall, gain, delay and mute, plus it also shows available headroom, as well as other status monitoring.

In addition, the T Series lets users



Powersoft T Series Amplifier

configure presets. In other words, if a T Series amplifier platform is included in a rental package, the user can limit the amplifier platform's functionality to ensure reliable and safe performance prior to renting out the platform.

"We spent a lot of time working on a display with a navigation that's very easy to understand and to configure," **Dalbjörn** said. "We have included context sensitive buttons with back lighting that lights up only when the button is functional, which makes it really easy for end-users to control the system using the front panel.

"Our decision to include the option for daisy-chained Dante networking on the T Series was based on customer feedback," **Dalbjörn** continued. "The T Series is really a game changer, I think, in terms of reliable performance, usability and audio quality. We're raising the bar on what you can expect in a small to medium-size rental system."

QSC CEO JOE PHAM NAMED 2019 AVIXA CHAIRMAN OF THE BOARD OF DIRECTORS

OSC has announced that Joe Pham. Ph.D, President & CEO, QSC has been named Chairman of the 2019 AVIXA Board of Directors, Reportedly, this will be Pham's fifth year as a member of the board, having served as the board's Vice Chair in 2018.

"The next few years will be an exciting time for AV as we continue to mature and move towards a deeper integration with the IT end user," says Pham. "This shift will challenge the industry to provide

more opportunities for forwardthinking companies to evolve their business models to deliver more value over the lifetime of the customer. I am privileged to be part of AVIXA and look forward to collaborating with some of the brightest minds in AV to bring about next level of innovation and customer service '

"On a personal note, Joe Pham is one of the finest individuals that I've had the privilege to meet during my entire 15 years in this amazing, audiovisual industry," said David Labuskes, CTS, CAE, RCDD. Chief Executive Officer of AVIXA. "On a professional side. the AVIXA Board of Directors is the foundation of our strength as the industry association and Joe Pham's commitment to the industry and AVIXA is extraordinary. I'm proud to work beside him as we advance the audiovisual industry globally."



Joe Pham, Ph.D, President & CEO, QSC

WAVES INTRODUCES CLA MIXHUB PLUGIN

Waves Audio has introduced the CLA MixHub plugin, developed together with Grammy-winning winning engineer Chris Lord-Alge. The CLA MixHub captures the console workflow and analog sound of Chris Lord-Alge's mixes.

Reportedly, CLA MixHub is the first plugin to work in buckets groupings of up to eight channels, in up to eight buckets in total. In other words can mix up to 64 channels from one CLA MixHub plugin window. By mixing tracks side by side in the MixHub's buckets, users can gain a mixing perspective that lets you immediately hear how one track's processing affects others within a song.

While mixing, users can flip between two plugin view modes: Bucket view, with control of up to

eight channels at a time, or Channel view, focusing on a single channel's processing chain. Each channel consists of five sections: Input, dynamics, EO, output, and an insert point. Each processing module can be expanded to reveal additional functionality.

The input section handles highand low-pass filtering and switchable harmonic distortion. The "line" control models the line amp in Chris's console, adding light saturation. For more extreme drive, kick in the mic pre. This, in effect, is like running a line-level signal through the console's microphone preamp.

Chris Lord-Alge comments, "Mixing in buckets means the world to me. It's one of the secrets to my success and to my fast-paced, decisive mixing. By creating this plugin, I'm able to

give others access to that same quick workflow in a plugin, pushing the envelope of in-the-box mixing to the next, CLAapproved level."

CLA MixHub features:

- · Mix with the console workflow and rich analog console sound of legendary mixer Chris Lord-Alge
- · Meticulous hardware modelling of Chris's console with added functionality
- · Mix swiftly and efficiently with a clear perspective
- · Control up to 64 channels from a single plugin window: Build up to 8 "buckets," each containing eight channels from across your mix



Waves CLA MixHub Plugin

- · Flip anytime between bucket view and single-channel view
- · Insert slot: Load an extra Waves plugin within each CLA MixHub channel strip
- Re-order your processing chain within the plugin
- Flexible dynamics sidechaining
- Includes Chris Lord-Alge's personal

DBTECHNOLOGIES UNVEILS RS16000 TOURING RACK

The new RS16000 Touring Rack by dBTechnologies, reportedly is operable within the UHF spectrum between 470-870 MHz, the digital, 24-bit, true diversity wireless microphone system offers up to 400 MHz of tuning bandwidth (for any receiver and transmitter) across six channels.

A total of 16,000 frequencies are available to users, which can be selected in manual mode within 25 kHz increments to meet the needs of virtually any application in countries around the globe.

Housed in a rugged road case, the RS16000 system includes six RS16000R receivers, a model AS6W antenna splitter with 9V phantom power, its own active cooling system, an

RPS10 power supply, and a HUB800 network hub, which facilitates use of dB Technology's proprietary Wireless Manager software via a front - panel USB port. An Ethernet port is also provided in the back-panel for building and managing multiple systems, each of which can virtually support more than 60 transmitters simultaneously.

Sold separately, handheld and bodypack transmitters are available for use with the system. Interchangeable capsules are included with the handheld transmitter along with a Shure adapter, while the bodypack is equipped with a Shure compatible fourpole Mini-XLR connector. Either alkaline or rechargeable lithium-ion batteries can be used with both transmitters.

providing up to seven hours of continuous operation.

Beyond the broadband antenna included with each system, optional accessories

include windproof omnidirectional and directional antennas, both of which are active with adjustable gain (+12, +6, 0, -6 dBm), and outfitted with an LED indicator that warns users when RF saturation exceeds safe levels.

With an operating range of nearly 300 feet in absence of interference, the RS16000 Touring Rack is FCC,



RED, and IC compliant. Its low latency (1.8 ms maximum) complements the digital, compander-free circuitry to insure sonic clarity across the entire working spectrum. As a safeguard, a 48-bit random encryption key enables discreet operation that can't be decrypted even with another RS16000 device.







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PROJECTS

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SOUND.COM INVESTS IN ADAMSON LOUDSPEAKERS

Sound.com, a sound rental company based in Mumbai, has invested in Adamson loudspeakers. This purchase has taken place through Adamson's local distributor, Sonotone. This purchase includes 48 **Adamson 510** full-range cabinets, **16 E119** subwoofers, and eight **5119** subs, all powered by Lab.gruppen

Adamson. Getting Sound.com on board will help us resonate the same demand in the Indian tour sound industry."

Product Features:

Adamson S10 Full-Range Cabinets:
 The S10 is a 2-way, full range line array cabinet containing 2x ND10-LM Kevlar Neodymium drivers (2x 16 Ω) and an NH4TA2 1.5" exit

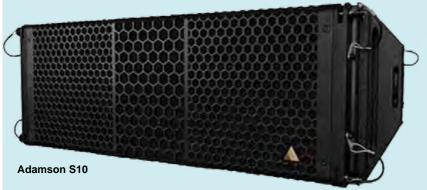
presence in the far field. Patentpending Controlled Summation Technology further eliminates lowmid lobbing normally associated with 2-way line source systems.

 Adamson E119 Subwoofer: These Subwoofers was developed to bolster the low-end of the E-Series line of products. The employs a dual 5" voice coil for exceptional power handling, with a dual-spider suspension system for extra stability even under extreme excursion. It is mounted in an ultra-efficient front-loaded enclosure, designed to reproduce clean, musical low frequency information. Users

> will appreciate the lower fundamental notes of this design.

• Adamson S119 Subwoofer: It is the companion subwoofer to the S10. The enclosure is loaded with a light weight, long excursion, 19" ND19 Kevlar Neodymium driver

utilizing Adamson's Advanced Cone Architecture and a 5" voice coil for exceptional power handling. It is mounted in an ultra-efficient frontloaded enclosure, designed to reproduce clean, musical low frequency information.



PLM20K44 amplifiers, which is part of D'Souza's Business strategy.

Karan Nagpal from Sonotone says, "Adamson is currently one of the fastest growing tour sound companies globally, all the major festivals in Europe and the rest of the world are now touring on compression driver (8 Ω). The critically optimized sound chamber produces a slightly curved wave front with a nominal dispersion pattern of 110° x 10° (H x V). The chamber's efficiency allows for increased vertical dispersion without sacrificing high frequency

Adamson E119

enclosure is loaded with a light weight, long excursion, 19" SD19 Kevlar Neodymium driver utilizing Adamson's Advanced Cone Architecture and Symmetrical Drive Technology. The driver

ELECTRO-VOICE ANNOUNCE RE SERIES OF MICROPHONES

Electro-Voice has announced the next generation of its **RE series** of premium-grade, high-performance condenser vocal microphones for live performance: the RE420 (cardioid polar pattern) and RE520 (supercardioid polar pattern).

Each new model is engineered for refined, best-in-class performance, benchmarked across critical technical categories including dynamic range, maximum SPL, self-noise and transient response – all with the pure, accurate audio quality for which the RE series is renowned.

The RE420's cardioid pattern combines effective acoustic control with a comfortable working range, allowing freedom of vocal expression. It provides warm low-frequency response, open mids and clear highs.

The RE520's supercardioid pattern ensures superior sonic isolation and high gain-before-feedback, to maintain a vivid vocal presence – even in the most challenging stage environments. It provides tight low-frequency response, natural-sounding mids and detailed highs.

The RE420 and RE520 are the next generations of the RE410 and RE510 – microphones with a reputation in the live sound industry for outperforming comparable condensers costing significantly more. The updated design and engineering of the new models evolves the professional performance, look and feel of their predecessors, while extending the RE series' reputation for exceptional value in the premium vocal microphone segment.

The RE420 and RE520 join the acclaimed RE320 in EV's RE Performance microphone group. Both are ideal for high-quality stage performance and productions, club and concert sound, touring artists, and house of worship praise bands.

RE420 & RE520 shared features:

- Premium EV condenser elements provide studio sound quality for live performances
- Multi-stage pop filters minimize breath blasts and plosives
- Selectable high-pass filters reduce undesirable low-frequency content when engaged
- Vibration-absorbing internal shock mounts minimize handling noise
- Sleek new form factors with elegantly tapered metal handles and dentresistant "Memraflex" grilles



www.palmtechnology.in



- Low Cut for each MIC input
- Built in 24-bit DSP effects with 100 presets
- Robust, analogue control surface
- Smooth 60mm faders
- Easy playback & recording via USB
- Built tough for the long haul





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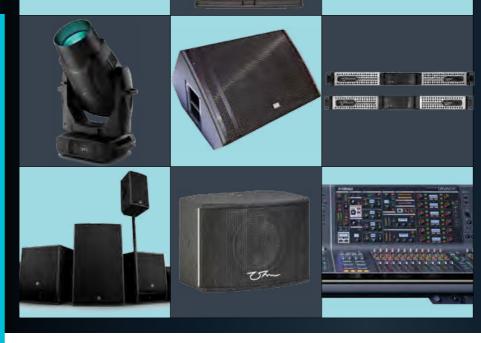








From January through December, **PT** writes about new products launched in the pro audio and lighting realm. In 2018, many of your favorite brands introduced innovative and cool tech. Here we bring a listing of **PT's** top 50 products, launched in 2018 featuring rich new technology and ease of use, as also popularity in the Indian subcontinent. The listing in random order is **PT's** choice and is a nondefining list.



Allen & Heath – SQ-7:

This award-winning flagship console is a part of Allen & Heath's SQ Series. The 33-fader SQ-7 Mixer is powered by A&H's revolutionary 96kHz XCVI FPGA engine.

This new 48 channel/36 bus digital

mixer created to excel in demanding scenarios such as AV, corporate events, live productions and houses of worship, offers pristine high-





resolution audio quality and an ultralow latency of less than 0.7 ms. Built on Allen & Heath's newest generation 96kHz FPGA XCVI core, the console is capable of delivering high resolution audio with industry leading latency at under 0.7ms, even while handling a huge number of inputs and outputs. The console also features 32 exceptional onboard mic preamps, plus 8 stereo FX engines with dedicated stereo return channels and access to the renowned RackExtra FX library. SQ is a natural choice for in-ear monitor setups, providing 12 stereo mixes, while Automatic Mic Mixing makes it an excellent choice for conferences, panel talks and more.

FaitalPRO 18XL2000:

This new Super Woofer called 18XL2000 which has an extra gear. Conceptually it arises from the need to create a magnetic circuit capable of withstanding a very high nominal power, 2000 W continuous AES, and it guarantees a different functionality compared to traditional 4" voice coil speakers. This is due to an even more powerful magnetic motor. The magnetic circuit is concentrated on a neodymium cap structure which integrates a perforated pad; therefore, it guarantees an even greater

efficiency of the classic magnet with external ring. The coil of 4,65" diameter, allows to keep a very high efficiency, even the weight of the neodymium magnet is reduced and therefore the overall weight of the loudspeaker itself is reduced, making it the ideal companion in touring applications. The casing volume of only about 170 liters allows loudspeaker manufacturers ample freedom in the creation of projects and amplification systems. The



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recommended applications in the pro-audio world are global, wherever a very high power is needed in the lower part of the range, as in touring and in very large top-quality line arrays.

Antelope Edge Strip Bundle:

This compact and affordable package by Antelope is an all-in-one solution for high-quality studio recordings with vintage analog sound. It also contains Antelope Audio's renowned Edge Modeling Microphone, a dual-capsule condenser large-diaphragm microphone, which is specifically

designed to reproduce
the expressiveness and
character of expensive
classic microphones
and the Discrete MP,
an all-analog dualchannel microphone
pre-

designed to deliver

Antelope's signature pristine audio quality.

The Edge Strip bundle offers rock-solid analog reliability, mixed with the benefits of digital audio. The Discrete MP includes two XLR+TRS combo inputs, as well as two TRS outputs for additional routing and signal processing. The discrete preamp design offers up to 61dB of maximum gain, and total control over the coloration, clarity, and character of the performance.

Each Edge Modeling Microphone consists of a special double-sided capsule with 2-3 microns gold sputtered membranes. This allows users to accomplish multi-dimensional modeling, and emulate a variety of different microphones, polar patterns, and even mic placements.

Pioneer DDJ-400:

The Pioneer DJ DDJ-400 is an all-new entry-level controller for Rekordbox DJ, with more professional DJ features at an affordable price. The controller features a new song selection mode and is also compatible with the new tutorial feature in Rekordbox DJ, which



explains basic equipment operation step by step. The DDJ-400 also comes bundled with the full Rekordbox DJ software and removes the more complicated three-button/knob effect sections at the top of the controller, favoring a more deckoriented Loop/Cue section. These new features make the Pioneer DJ DDJ-400 more user and beginner friendly than previous Rekordbox entry-level controllers.

Avid - VENUE S6L:

Avid expanded its Avid VENUE|S6L unified live sound platform family with the addition of VENUE | S6L-24C control surface, Avid VENUE | E6L-112 engine and Stage 32 I/O rack. These new

additions make Avid VENUE|S6L more

capable to provide sound companies

and performance venues with greater

more compact and affordable variant

flexibility to configure the perfect

system to meet any production,

space or budget requirement. A

of the S6L-24D control surface,

featuring 24 faders, 32 assignable

knobs, and an integrated central

touchscreen. It also has E6L-112

component for mid-level systems,

featuring 112 input processing

channels, 48 busses, 100 plug-in

a Stage 32 I/O rack to increases

flexibility in distributing I/O across

the performance space and enables

engineers to expand local and stage

engine which is a central processing

slots, and support for up to two HDX

cards. Along with that it also feature

I/O. Its modular design allows for maximum user customisation – up to 32 inputs or outputs, in any order.

Beta-Three VEYRON 10:

The Compact Active Line array system, combines the simplicity and practicality of aesthetics to deliver high quality sound in a variety of indoor and outdoor environments. It can be assembled



quickly into a complete sound reinforcement system. It is suitable for small and medium sized performances, multi-functional halls, theaters, clubs, conference halls and other applications. Recently, Beta Three India did three sound



reinforcement projects with VEYRON 10 - installation for an event at Indira Gandhi Prathisthan Auditorium, Lucknow, UP, Installation for an open event at Swabhumi, Kolkata, WB and Installation for Republic Day Celebrations by CPCL, Chennai.

Audio-Technica ATH-M60x:

This latest addition of audiotechnica to their acclaimed M-Series headphone line is an affordable, extremely comfortable low-profile, on-ear professional headphone that utilizes the same proprietary 45 mm large-aperture drivers found in the ATH-M50x, designed for studio, broadcast and mobile applications. At the heart of the ATH-M60x is a pair of proprietary 45 mm drivers that, with a 102 dB/mW sensitivity, provide an impressive 15 Hz – 28 kHz frequency response. The 7.8-ounce headphones have an impedance of



38 ohms with a maximum input power of 1,600 mW. The headphones include three detachable cables: a 3-meter (9.8-foot) coiled cable, a 3-meter straight cable and a 1.2-meter (3.9-foot) straight cable. Each one terminates in a 3.5 mm (1/8-inch) gold-plated stereo miniplug. Also included is a threaded 6.3 mm (1/4-inch) stereo adapter that can be attached to either of the 3-meter cables, allowing the headphones to be used with a 1/4-inch headphone jack.

Audinate Avio:

Dante AVIO by Audinate is a family of cost-effective endpoint adapters that allow audio professionals to connect





TA-80

Digital Plug-on Transmitter





World's Only Dante-enabled
Plug-on Digital Wireless System















Digital Wireless Stereo IEM System

Digital crystal-clear sound quality, unparalleled RF reliability and digital encryption protection.

MIPRO's MI-909, featuring the industry's smallest bodypack receiver, operates across 64MHz of bandwidth with multiple presets allowing 16 channel operations. With innovative digital technology offering a frequency response from 20Hz to 15kHz, 112dB of dynamic range, onboard DSP, and digital diversity reception, MIPRO's MI-909 system boasts unmatched features, digital audio clarity and functions that easily surpass the competition.



legacy analogue and digital audio equipment to Dante networks. This series features six new adapters including line-in and line-out analogue adapters, a bi-directional AES3/EBU adapter and a bi-directional stereo USB adapter.

Each Dante AVIO adapter acts as a completely independent Dante network device, allowing legacy gear to enjoy the benefits of networked

connectivity unparalleled in a small digital stereo mixer. Eight high-quality audio preamps with XLR-combo jacks accommodate microphones or instruments, with switchable phantom power. Two Aux inputs allow for additional source inputs. Outputs include four aux sends, balanced quarter-inch TRS and XLR stereo outputs and an independent headphone output. USB-A and USB-B



audio. These devices can now seamlessly transmit high quality, uncompressed audio streams over long distances without the noise and ground issues common to analogue connections. Dante AVIO adapters enable non-networked equipment to be interoperable with any of the more than 1250 Dante-enabled products on the market.

It can also connect any computer to a Dante audio network without additional software, providing classcomplaint stereo input and output that can be used by any audio application. Ideal for presentations and conference rooms, the Dante AVIO USB adapter may be passed between computers without altering networked audio connections.

Bose T8s and T4s:

Bose professional extended the

ToneMatch audio engine series with

four-channel T4S ToneMatch mixer

Compact and portable, both the

T8S and T4S are gig-ready. Their

The T8S offers high-density

controls and connectors.

rugged enclosures have a protective,

magnetically-coupled cover to protect

the powerful new eight-channel

T8S ToneMatch mixer and the

JBL Professional 3

mm x 184 mm x 83 mm).

Featuring patented technologies derived from the JBL 7 Series and M2 Master Reference Monitors, and sporting a sleek, modern design, JBL 3 Series MkII delivers outstanding performance and an enjoyable mix experience. JBL 3 Series MKII monitors are available in three configurations to meet the requirements of any audio

Series MKII:

connections allow for USB drive

playback or PC/Mac interface. The

T8S includes a ToneMatch power

supply. Dimensions: 8.4" x 12.25" x

of the same features as the T8S,

the T4S features an Aux send

except for the following differences:

count of two, and outputs to either

quarter-inch TRS balanced stereo or

dual ToneMatch links - designed to

send digital audio to L1 Model 1S/II

systems while receiving power on the

same provided ToneMatch cable. The

final difference between the mixers

is the T8S exclusive output meter.

Dimensions: 8.4" x 7.25" x 3.25" (214

3.25" (214 mm x 311 mm x 83 mm).

The four-channel T4S offers most

environment, including the 305P MkII







(5" woofer), 306P MkII (6.5" woofer) and 308P MkII (8" woofer). These are equipped with the groundbreaking JBL Image Control Waveguide to deliver impressive detail, ambience and depth. Originally developed for JBL's flagship M2 Master Reference Monitor, this patented innovation ensures an acoustically seamless transition between the low- and high-frequency transducers and provides an ultra-wide soundstage and precise imaging. With a broad sweet spot and neutral frequency response, MkII delivers a crystalclear mix representation and reveals subtle details, even when listening off-axis. The 3 Series MkII offers more control to tailor the sound to meet the sonic characteristics of individual studio environments or personal preferences. A new Boundary EQ setting attenuates the low-end boost that can occur when monitors are positioned directly on the desktop or near walls, plus a 3-position HF Trim switch allows users to adjust the high-frequency response.

extraordinary luminous efficiency

unit, able to be a perfect beam

module, with over 500 taps of FIR

& IIR Filtering, enabling the speaker

to achieve any desired target curve,

without any loss in fidelity. Its 2 x 10" Low Frequency Drivers, supported

by a 1.4" compression driver, are

powered by a 2500W Class D, energy

efficient amplifier module. The Delta

30 is the answer to all Touring & Installation Line Source Requirements.

Claypaky Sharpy Plus:

Claypaky Sharpy is a 100% HYBRID

light and a perfect spotlight. It is suitable for every occasion, with an which ensures substantial savings through lower power consumption. The SHARPY PLUS fits a totally new, top-ranking-performance Osram Sirius 330W X8 lamp and weighs only 21.6 kg (47.6 lb) with quick functionality.



Its body is slightly larger than the Sharpy's, to house a high-quality optical unit with a zoom that ranges from 3° to 36°. Its minimum beam angle of 3° makes it possible to generate the narrow parallel light beams essential for beam light mode. Its wide zoom range also allows large beam angles, which makes the SHARPY PLUS a perfect

British Acoustics Delta 30:

Delta 30 combines all the British Acoustics learnings from history and leverages it to the technologies available today to create a perfect fusion between man & machine. The speaker features a state-of-the-art DSP







360 PRO SOLUTIONS

eurocable



Single Mode Unbreakable Double Jacket Optical Cable

eurocable

The Eurocable FOHD "unbreakable" LSZH single mode fiber optic cables have been created to satisfy the demanding elements of the entertainment market when using new signal distribution systems with connections for optical signals, where cables that can withstand the day to day use for live events is crucial. Designed to tolerate extreme bend radiuses with zero attenuation. Available with multiple termination methods, LSZH is a next generation cable specifically designed for live entertainment and broadcast applications.

spotlight for all purposes. It has two independent operating modes -BEAM mode and Spot mode. Its 3° to 36° (1:9) zoom covers the entire range linearly, both in spot mode and in beam mode. This feature makes the SHARPY PLUS unique on the market.

ChamSys QuickQ 20:

QuickQ 20 is a part of QuickQ console family by ChamSys designed with a quick and easy user interface, 9.7" touch screen, and a comprehensive feature-set and power to the small console market. This console is ideal for students, volunteers, or part-time operators, and comfortable to use even by professionals on small-scale shows.

ChamSys QuickQ 20 offers an easy path to setup, programming and playback. It's also rich in features that help create an immersive mood at worship services by colorizing a



headphone amplifier - and is still accessible and easy to use. An adjuster on the front controls the volume for the powerful headphone amplifier. Another adjuster sends



room. For example, its dedicated "Color Control Area" includes hue and saturation encoders. The console also allows users to select colors from inbuilt palettes and gel libraries using the touchscreen.

Beyerdynamic FOX:

The beyerdynamic FOX guarantees excellent sound quality, be it for recording vocals or speech, for a performance with an acoustic guitar or a regular podcast/ gaming. The device features a high-quality microphone capsule, as found in professional studio microphones around the world. This largemembrane condenser microphone provides high sensitivity compared to common dynamic microphones. This means that even quiet sounds and the finest nuances can be captured perfectly. The cardioid polar pattern shields against rear-incident noise, providing ideal protection against background noise.

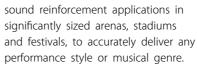
It combines a microphone, preamplifier, converter and

the microphone signal to the headphones, giving instant control. A button on the back of the microphone regulates the gain and enables use of the FOX for especially loud sources. A mute button makes it easy to, for example, cut the sound of a cough during live online transmissions.

d&b audiotechnik - GSL **System:**

GSL System is a new loudspeaker system sitting right at the top of the company product portfolio. The GSL System is a complete solution created specifically for the largest





The GSL8 and GSL12 loudspeakers, with 80° and 120° horizontal dispersion respectively, are unique among large scale line array modules in providing consistent pattern control all the way down to 45 Hz. The geometry of two front facing 14" drivers and two side firing 10" drivers couple and apply cardioid techniques, creating precise directivity behavior with significantly extended low frequency headroom towards the audience.

Mid-range is delivered by a high sensitivity horn loaded with a 10" driver, while three innovative, custom designed 3.4" diaphragm HF drivers mounted on a wave shaping device provide the high frequency resolution and output.

Each loudspeaker is driven in 2-way active mode by the d&b D80 amplifier: one channel powers the 14" drivers, with all other components passively crossed over and powered by a second channel. The SL-SUB and SL-GSUB complement the low end with two forward facing 21" drivers and a single, rear facing 21" driver delivering the cardioid dispersion. The SL-SUB can be flown, while the SL-GSUB is designed for ground stacked applications. Driven in 2-way active mode from two channels of the D80 amplifier, the outstanding SPL and headroom reduces the number of subwoofers typically required.

Denon DJ SC5000M:

Continuing its heritage of motorized media players, Denon DJ has launched its SC5000M, now headlined with a 7", real vinyl and adjustable torque, motorized platter. This die cast aluminum platter features ultra-high-resolution MIDI (3600 ticks per rotation) performance accuracy.

The SC5000M brushless motor is unaffected by centrifugal force, maintains efficient conduction cooling and offers protection from environmental dust or dirt.



Using both Denon DJ's free, Engine Prime music analysis and management software and the SC5000M player itself, DJs can



import extensive and meticulously constructed digital music collections from iTunes, Serato DJ Pro and Rekordbox, including playlists, folders, hot cues and loops. In addition, integrated support has also been added for Native Instruments users to import their full or part music collections and enjoy a 'laptop free Traktor experience' on the SC5000M.

RCF NX32A:

The NX 32-A is an active speaker specifically designed to be the everyday tool for rental companies and professional musicians. It's one of the most flexible speakers for deploying high-quality sound as a

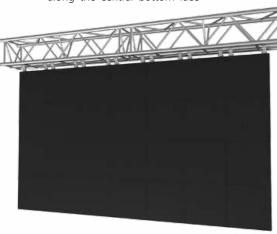


stand-alone FOH system or as a satellite (with subwoofer) but either as a stage monitor or a or a front, down or side fill speaker. Its key features include, 1400 W 2-way class-D amplifier; 131 dB SPL Max; 50 – 20000 Hz Frequency Range; 90° x

60° constant directivity coverage; 12" woofer, 2.5" voice coil; Horn loaded 3.0"neodymium c. driver and Multiple rigging points.

Global Truss 5 Chord:

This new 5 Chord truss by Global Truss is designed for LED screen applications. Utilizing the existing F44P 400 x 400mm truss design the F45 features an additional chord along the central bottom face



of the truss with ladder bracing allowing for LED screens to be easily mounted. This extra chord prevents having to balance the load by slings or braces across the two bottom chords that would be necessary on standard 4 chord truss. The 4mm wall thickness from the F44P allows this new series of truss to be compatible with both F44 and F44P series meaning whole stocks don't have to be replaced and lengths can be added when required. Ladder horizontal braces create extra hanging space along the central chord whilst creating a cleaner look when hanging LED screens.

DiGiCo Quantum 7:

Quantum 7 software by DiGiCo is developed with seventh generation FPGA devices to further expand audio processing power, which allow DiGiCo to provide its users with an unrivalled amount of further flexibility.

Quantum 7 expands an SD7 to over 600 channels of processing in 96kHz operation that can be connected in the outside world to approaching 3000 potential I/Os. The engine is also equipped with eight newly assignable MADI connections and two DMI slots for AoIP and other connectivity options from the complete family of DMI card options. There are other powerful enhancements, too, including Nodal Processing and True Solo.

Nodal Processing means that for the first-time processing can be applied to any node on the auxiliary section of the console,

> allowing engineers to send unique processing on each send from a single, or multiple channels. This level of creativity will

allow engineers to tailor and deliver dedicated mixes that were simply not possible before Quantum 7.

Coupled with Nodal Processing is the new True Solo system that allows the operator's monitoring system to replicate almost any section of the console, and how that source is being processed and heard. This saves time and

speeds up the process of managing the potentially daunting number of channels and busses available to the user.

Focal Shape Twin:

The Shape Twin by Focal continues the unusual industrial design of the earlier models and also the unusual use of twin, side-mounted auxiliary bass radiators. The Shape Twin, however, adds a second bass/mid driver and dedicated amplifier, a more powerful tweeter amplifier, and a significant increase in the height dimension.

The unique part of the design, and what makes it a 2.5-way system instead of a 3-way, is that one of the drivers handles frequencies from 40 Hz to 180 Hz and the other from 40 Hz to 2.5 kHz. This configuration gives the Shape Twin essentially the same woofer surface area as a standard 8-inch monitor, which accounts for its bass response going down to 40 Hz.

On the back of each speaker,





there is an XLR and RCA inputs and a power switch.

Like the other Shape Series speakers, the driver cones are made of a combination of flax and glass fibers. The Shape Twins come with metal mesh covers for the drivers and the tweeters.

On the back of each speaker, it has XLR and RCA inputs and a power switch. An automatic function keeps the amplifiers in Standby mode after the power switch has been turned on until the inputs receive an audio signal. The speakers also go into Standby mode after receiving no audio for 30 minutes. The green power-on LED on the front turns red when in Standby, and back to green when it's off.

Harman Crown DCi DA:

Harman Professional Solution has extended it highly successful Crown DriveCore Install DA Series amplifier with the addition of Crown DCi 8|300DA – an 8-channel power amplifier with 300W per channel, DCi 4|300DA – a 4-channel power amplifier with 300W per channel and DCi 4|600DA – a 4 channel power amplifier with 600W per channel.

Crown DCi DA Series provides a balanced combination of output power, channel count and speaker load flexibility along with proprietary DriveCore technology for superb efficiency and exemplary audio quality. This brings Crown's legendary power handling to even more distributed amplifier applications as well as applications that have standardized on Dante for networked audio transport.

These new members of the Crown DCi DA Series bring new 300- and 600-watt options, offering the same robustness and capabilities of Crown's DriveCore Install DA Series at lower wattage. In addition to being able to send and receive Dante and AES67 networked audio, the DCi DA Series includes a high-powered DSP with JBL speaker tunings, network control/monitoring, highly efficient design, and the ability to drive 2/4/8/16 ohm, 70V and 100V speaker loads out of each channel without the need for an external transformer.

Genelec S360:

Genelec's new high-SPL Smart Active Monitor, the two-way S360A, is intended for professional applications that demand high acoustic power or listening at a distance. Applications include large immersive setups in post-production studios or



film mixing stages and play-live monitoring in music production.

Housed in a low diffraction enclosure with premium quality Finnish woodwork, the S360 features an enhanced 10-inch high efficiency woofer and 1-inch titanium diaphragm compression tweeter housed in an extended directivity control waveguide – delivering neutral reproduction with a short-term SPL capability of 118 dB, with peaks even higher.

To deliver sensational punch



while preventing air turbulence, the S360 includes an innovative Iso-Plate, which also effectively decouples the monitor from its base when standing.

As part of the growing SAM family of Genelec monitors and subwoofers, the S360 tightly integrates with GLM software, via which it can be configured, calibrated and controlled.

Korg VOLCA MIX:

Volca MIX is the long-awaited mixer for the volca series and has unlock the aximum poteintial of the series. It is a four-channel analog mixer with an intuitive interface and plenty of connectivity. It provides two mono inputs and one stereo input, perfect for connecting three volca units. The jacks are minijacks, allowing users to make connections with just one stereo mini-cable from the headphone out of each volca unit. There's a master volume with LED VU meter for adjusting the output level, as well as a headphone output that can be used simultaneously with the line output, providing a reliable monitoring environment on stage. The volca mix is equipped with master effects powered by all-analog circuitry. In addition to an expander that broadens a mono source into a stereo sound image, there's a dynamic range compressor that

dynamic range compressor that compresses the high-frequency range according to level changes of the low-frequency region, as well as a side chain effect that's indispensable for dance music. Use these to dynamically vary the mix, adding a professional feel to live performances with the volca.

MX MDR HP 9000:

MX HP Series Power Amplifiers are the most Stable and high



Releve Spot's calibrated fourcolor additive mixing system builds on the success of the ColorSource Deep Blue array offering brighter



VLA Compact is designed specifically for permanent installation applications requiring even coverage, high intelligibility and audio levels capable of overcoming crowd noise. As a fundamental design element, VLA Compact Series offers large format horn-loaded modules to provide broad bandwidth horizontal directivity and an increase in sensitivity.

To drive the superior performance of the VLA Compact Series, the



quality series of Amplifiers in its class. It has a heart throbbing bass when coupled with MX 18" High Powered bass drivers and has one of the highest quality to value for money ratio. The lowest power consumption is less than 0.1A when working without load. An inbuilt 0.5 dB - 0.8 dB limiter delay is present for variable value over frequencies. The channel gain is automatically reduced, protecting the loudspeakers from potential damage from the high power and continuous square

reds, more vibrant greens, and deeper blues than typical event-focused automated luminaires, with the even and calibrated color mixing. It also allows to mix infinite shades of warm and cool whites, every hue of favorite reds and blues, or the perfect sunset or sunrise.

Users can program the parameters of the fixture, so it never rotates into a nearby pipe, balcony



low frequency drivers featuring HARMAN's patented Differential Drive technology, with 65° and 100° horizontal coverage options available. A subwoofer with dual 15" Differential Drive woofers is also available. Because the VLA Compact is intended for outdoor use, the speakers also include weather protection out of the box, with an IP55-rated fiberglass enclosure and steel end panels.

full-range models include dual 10"



compresses the high-frequency range according to level changes of the low-frequency region, as well as a side chain effect that's indispensable for dance music. Use these to dynamically vary the mix, adding a professional feel to live performances with the volca. The volca mix comes with AC adapter, DC-DC cables, and audio cables included.

The volca mix is equipped with master effects powered by all-analog circuitry. In addition to an expander that broadens a mono source into a stereo sound image, there's a waves. The input works differently over varying frequencies and temperatures. This exclusive MX Amplifier feature gradually increases gain to the attenuator setting or avoiding unnecessary stress on the loudspeakers. The Short Circuit Protection is included if an output is shorted the Auto Ramp function will automatically Protect the amplifier. The circuit senses the short circuit as an extremely stressful load condition and attenuates the signal, protecting the channel's output transistors from over current stress.

rail, catwalk, or another fixture. It is reportedly a brilliant feature that will help programmers of all experience levels to fully utilize automated lighting in places they never have been able to before.

JBL VLA Compact Series:

VLA Compact Series line array

Neumann U 67:

Neumann U 67 was originally launched in the year 1960 and this year the company has again started the production of this iconic tube microphone. This current re-issued version is identical to the U 67 made from 1960-1971. It uses the same capsule and electronic design. Key parts, such as the BV 12 output transformer, have been meticulously reproduced according to original documentation. Its EF86 tubes have been carefully selected in a dedicated measurement facility for optimal characteristics and lowest noise. It is a well-equipped microphone for virtually any recording task. Due to its essentially linear response in the three polar patterns, the U 67 is also













a very versatile microphone for all kinds of instruments such as strings, woodwinds, brass, piano, drums, acoustic and electric guitar, bass guitar and upright bass. Besides the microphone, it includes an elastic suspension, a microphone cable and the NU 67 V power supply. The power supply was redesigned to meet today's strict safety requirements and to accommodate the slightly higher filament current of newer premium-grade tubes. The new NU 67 V is fully compatible with older U 67 microphones, and automatically adapts to the local mains voltage.

MA Lighting GrandMA3:

This light console is the work-horse of the range and provides the perfect combination of power and physical size. It is suitable for all but the most demanding productions, making it probably the most versatile lighting console available. GrandMA3 features 60 physical playbacks, 16 assignable x-keys and a dedicated master playback section for plenty of playback options. It also has huge multi-touch screen real-estate to provide instant access to programming tools and is fully

configurable to suit individual needs. The two letterbox screens are context sensitive and dedicated to providing feedback and options for the grandMA3 light console playback and encoder hardware.

The grandMA3 light console includes 8,192 control parameters as standard, ensuring that it is the perfect base platform for the world's most prestigious entertainment lighting applications. The system size is scalable to 250,000 parameters with the use of additional grandMA3 processing units. The grandMA3 light is compatible with grandMA2 and grandMA3 software.

QSC KS112:

QSC's newest K Family member, is the ultra-compact KS112 powered subwoofer. Joining the previously-introduced KS212C cardioid powered subwoofer, the KS112 is the second model in the KS subwoofer series. With its innovative design, legendary



QSC amplification and advanced DSP, it is the perfect choice for a variety of installation and entertainment applications.

The KS112 features a single 12-inch transducer in a 6th order bandpass premium birch cabinet. On-board DSP provides variable crossover, delay, and savable/



recallable Scenes for commonlyused applications while advanced thermal and excursion processing further optimize system performance. Two M20 threaded pole receptacles provide a positive, wobble-free connection to a threaded speaker pole in either vertical or horizontal deployment (pole not included). Rugged, low-noise casters are included, while a locking security cover and padded transport cover are available options. The $\mathsf{KS}112$ also features the renowned OSC Global 6-year warranty with product registration.

Solid State Logic L100:

This newest member of the SSL Live console range. L100 provides a physically smaller premium solution for customers who prioritize outstanding sonic performance in space restricted



even play them back into each channel for an effortless virtual sound check. Not only is this great for recording performances, it works great in the studio whenever needed.

is a part of its DL Series. Delivering

control that the DL Series is known for, the DL16S and DL32S also offer an all-new affordable, Built-Like-

proven performance and intuitive

A-Tank stagebox form factor with

Fully loaded with DSP on each of

the Onyx+ mic preamps and output

and DL16S deliver the mixing power

busses plus 4 FX processors, DL32S

built-in WiFi.

With Master Fader 5.0, users now have more choices than ever on how they can control their DL Series mixer on up to 20 devices simultaneously. Adding Android support means virtually anyone can download the Master Fader app on devices they already own.

installations,

for sub-mix positions or corporate production. L100 sets itself apart with its compact, 12 + 2 fader configuration frame, while using SSL's fast access layer / bank switching and Super-Q technology to ensure no channel, group, aux, VCA, or master is ever far away from the engineer's fingers. Its 17" multigesture touchscreen gives access to all of the console's functions and combines with Quick Controls in the Fader Tile to provide intuitive, immediate hands-on hardware control. Its 96 fully-processed paths provide ample capacity for small- to mid-sized live productions, and its flexible architecture facilitate users to configure it with up to 64 input channels, 36 aux sends, 12 stem groups, 12 VCAs, and four masters. An additional 4 x 32 input, 12-ouput matrix is always available.

Mackie DL32S & DL16S:

Mackie's new 16-channel DL16S and 32-channel DL32S Digital Mixers

Numark NS6II:

NS6II is a 4-channel DJ controller with a full roster of professional features and uncompromised performance at an amazing value. The NS6II is a Numark first—a DJ controller that enables connect two laptops to be connected simultaneously, each engaging Serato DJ, for seamless DJ hand-offs. With a push of a button, both DJs can switch between the two laptops and play at the same time between four

In addition to the dual USB ports,



PERFORMANCE THAT NEVER CEASES TO AMAZE

RKBO



PROFESSIONAL TROLLEY SPEAKER

(10 inch) ₹4000/- each

PROFESSIONAL TROLLEY SPEAKER (12 inch) ₹5000/- each

PROFESSIONAL TROLLEY SPEAKER (15 inch) ₹6500/- each

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Philips Vari-Lite VL2600:

A pair of microphone inputs with

independent EQ ensure the DJ can

manage their night with ease. With

sound quality without compromise.

its audiophile-grade circuitry, the

NS6II delivers impeccable 24-bit

The new VL2600 range from Philips Vari-Lite is the LED update for the VL2500 Series. There are three models in the range - Spot, Profile and Wash, which offer an updated, more saturated, but still familiar



Philips Vari-Lite CMY colour mixing system with variable CTO colour correction, high-colour temperature (7200 K) output, a class-leading wide zoom range (7-48°) and a flat and even field of light at any beam angle. In terms of light quality, output power, reliability and cost, the three fixtures in the VL2600 range are high performing luminaires.

Meyer Sound UP4 Slim:

UP-4 slim ultracompact installation

technology. This three-way system comprising two 4-inch cone drivers, a 1-inch metal dome tweeter, a three-channel amplifier and dedicated signal processing. The UP-4slim's operating frequency range is 65 Hz to 18 kHz, and the aluminum enclosure is ported, damped and braced to minimize resonance while maintaining uniform response to the lower frequency limit. It measures 15.90 inches high, 4.29 inches wide and 5.69 inches deep (404 mm x 109 mm x 145 mm). Weight is 14 pounds (5.9 kg). The UP-4slim may be installed using the optional U-bracket or mounting yoke. Other options include custom color matching and weather protection for outdoor installations. Applications for the UP-4slim include foreground/ background music and paging in commercial installations, delay and fill systems in performance venues,



and portable systems for smaller rooms

Yamaha Rivage PM7:

This new generation audio mixing console by Yamaha Professional has expanded the digital mixing options available for an even broader range of applications. The core Rivage PM7 Digital Mixing System includes the CSD-R7 Digital Mixing Console, TWINLANe-based RPio622 and

for the 100 series and brand-new on-camera systems, G4 delivers high-quality, reliable audio for musical performances, houses of worship, theatres, business and education settings as well as camera work. Its 100 series comprise Vocal Sets that include the acclaimed capsules of the evolution e 835, e 845, e 865, e 935, and e 945 microphones. Compared to G3, the 100 series impresses with new multi-channel capabilities: Up to 12 wireless systems can now be daisy-chained for simultaneous



RPio222 I/O Racks, and Dante-based Rio3224-D2 and Rio1608-D2 I/O Racks

It features 120 input channels, 60 mix buses, 24 matrices, and a selection of 48 plug-ins, while its Dual Console function allows it to be connected to one of the PM10 system control surfaces. It offers connectivity to two types of audio networks, allowing either or both to be used for connection and control of I/O rack units. The dedicated TWINLANe network uses optical cable to handle up 400 channels of audio. Combinations of the RPio622 and/or RPio222 I/O racks and HY256-TL or HY256-TL-SMF audio interface cards allow input via hybrid microphone preamplifiers with analog input stages, as well as digital sections with VCM technology models of Rupert Neve Designs' transformer and SILK processing circuitry. The system can be equipped with the Dante audio network from Audinate, and Rio3224-D2 and Rio1608-D2 I/O racks will be released simultaneously as the system components.

Sennheiser G4 Series:

With a sleek new user interface, a generously expanded switching bandwidth and higher RF output power for the 300 and 500 series, new multi-channel functionality

programming via an enhanced Easy Set-up function. The ew G4 500 series is ideal for bands, theatres and houses of worship that require an expanded feature set, greater range, more spectrum flexibility and the additional control options offered by the Wireless Systems Manager software.

DPA dvote 4099 Core:

The award winning d:vote series is already the recognized standard for this type of microphone and the CORE version adds just another layer of sound quality that further distances this mic from its competitors. This microphone comes in two versions: d:vote CORE 4099 Mic, Loud SPL - used to closemike most types of instruments and d:vote CORE 4099 Mic, Extreme SPL – used to close-mike extremely loud instruments, such as drums and some brass. d:vote CORE 4099 brings more clarity and details to your music, across the entire dynamic range. From the piano to guitar; strings to woodwinds; brass to percussion, the d:vote Series sounds equally impressive on them all. This one microphone model can beautifully reinforce an entire orchestra. The d:vote CORE 4099 also









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reliability and remote control over your entire PA's health.

Labgruppen PLM5K44:

PLM5K44 is a 5,000-Watt Amplifier with 4 Flexible Output Channels, LAKE Digital Signal Processing and Digital Audio Networking for Touring that belies its compact, lightweight design. Best-in-class SPL performance, sophisticated DSP processing, unrivalled low-frequency bass sound reproduction. The culmination of all Yamaha's accrued sound reinforcement, acoustics, and signal processing technology expertise—particularly with the introduction of our Dante-enabled models—DZR

loops, add effects, and scratch with absolute confidence with your Traktor Kontrol S2 using either the included Traktor Pro 3 software or Native Instruments' Traktor DJ iOS app. Whether it's bass-heavy breakdowns, steppy synths, or peak-time rewinds the TRAKTOR KONTROL S2 has everything users need to make their mix happen. Craft sets on two decks and get creative with easy-to-use tools like looping, beat syncing, and club-grade effects.



features an enhanced shock mount design, providing excellent isolation from handling noise and rumble. Detachable cables are available in heavy duty or lightweight versions, depending on the application – both are designed to withstand the rigors of daily use.

DB Techonology VIO L212 series:

VIO L212 is the first dBTechnologies' full scale line array module designed for large touring sound reinforcement applications, concurrently providing mighty output capability and optimized coverage behavior. dBTechnologies was able to pack great sound pressure levels into one of the most compact

Applications. It also has following features: Integrated 8x8 channels of dual redundant Dante digital audio networking with AES67 support; 4 x 900 Watts into 2 Ohms, 4 x 1.250 Watts into 2.67 Ohms. 4 x 1,250 Watts into 4 Ohms, 4 x 1,250 Watts into 8 Ohms, 4 x 700 Watts into 16 Ohms; Rational Power Management (RPM) provides total flexibility to allocate available power across all 4 output channels; Under-Voltage Limiting (UVL) for continued operation during severe mains supply voltage drops; Dedicated on-board surveillance and load monitoring for complete peace of mind; Redundant audio inputs and on-board system surveillance for full system security; 100 user presets for simple and efficient system configuration and set-up; 4 input channels of AES/ EBU (AES3) digital audio supporting

represents Yamaha's first fully-integrated, smart/editable speaker range of professional, powered loudspeakers. Wherein the CZR series is a range of passive loudspeakers offering high power handling and outstanding sonic performance in a portable, lightweight, yet rugged design. The CZR is ideal for a range of live performance and installed sound environments— from live bands at outdoor festivals to DJ's in clubs—these loudspeakers deliver crystal clear, high-quality sound with impressive bass performance.

Native Instruments Traktor S2 MK3:

It is a premium digital DJ system by Native instruments with a 2-deck controller and 4-channel audio VUE Audiotechnik added the HM-115 into its HM-Class of high definition stage monitoring systems. This new stage monitoring system is designed for those who prefer a more compact design, but desire

VUE HM-115:



additional low-frequency extension. From its precise, beryllium-infused HF transducers, to the companion rackmount V4 VUEDrive Systems Engine with next-generation DSP capabilities,



and lightest active 2x12" line array systems. This system comes with built-in technologies: Near Field Communication (NFC) proximity sensors are used to determine the position of each box within an array. This technology, together with a hi-brightness LED bulb on the front of the enclosure, contributes to help the user to recognize, identify and match each box physical position on the remote-control software Aurora Net. The amp also allows users to run a system-test on electronics and transducers before and after use and a real time impedance control. This unique system ensures tour-grade

all standard sample rates up to 192 kHz with 24-bit resolution; 2 Neutrik etherCON RJ-45 ports provide dual redundant Dante interfaces and remote configuration via LAKE Controller and Dante Controller software

Yamaha DZR and CZR:

Yamaha added two new flagship models of high-performance powered loudspeakers to their portfolio i.e. DZR and CZR Series. The new DZR delivers on all fronts realizing a truly professional sound delivered with a level of power





8"/10"/12"/15"/18"/21"

Innovative Design + Performance + Reliability - POWERX

Q-line Series

QLINE-1404 1400 watts X 4 channel @4 ohms Q LINE-2204 2400 watts X 4 channel @4 ohms QLINE-3004 3000 watts X 4 channel @4 ohms



Phenolic Diaphragm









D-line Series

D LINE-3000 1000 watts x2 @4 ohms
D LINE-4000 1350 watts X 2 @4 ohms
D LINE-5000 1800 watts X 2 @4 ohms
DLINE-7000 2400 watts X 2 @4 ohms

Pro Series

PRO 3000 870 watts X 2 @4 ohms PRO 4000 1725 watts X 2 @4 ohms PRO 6000 2025 watts X 2 @4 ohms PRO 8000 2400 watts X 2 @4 ohms





D-line Series

DJM 1000 450 watts X 2 @4 ohms
DJM 2000 750 watts X 2 @4 ohms

Most robust + Powerful + Reliable = POWER)

the HM-115 is a fully integrated, electro-acoustic monitoring system that delivers unparalleled output and fidelity for the most demanding foldback applications.

Pope Professionals GL 212:

GL-212 is a Four-way Line Array speaker system designed for large

maximum output power per channel of: 400 to 1250 W at 8 Ω ; 400 to 2400 W at 4 Ω ; 500 to 3000 W at 2 Ω ; 1000 to 6000 Watt at 4 Ω bridged; 800 to 4800 Watt at 8 Ω bridged; 400 to 2400 Watt at 100 Volt and 70 Volt. The two new models are available in standard or DSP+D versions, which have been engineered to extend system performance with on board high-end

signal processing and Dante digital

PR lighting Omega:

six RGBW four-in-one 60W LEDs

This new Omega versatile moving

zoom bar from PR Lighting features

and capable to produce a powerful

and zoomable blade of light. Each

pixel can be controlled individually,

and the light output can easily

audio distribution.

combinations of these), delivering a

brightness adjustable; overtemperature protection; and wireless DMX controllable. Housed in IP20 high temperature plastic housing, the net weight of the Omega is just 14.1kg.

Madrix ORION:

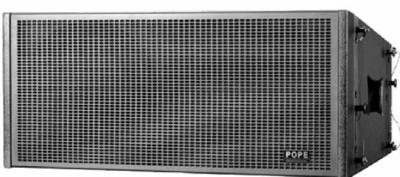
It is the next MADRIX hardware interface made in Germany. As a general-purpose input device, it enables interactive projects with ease. 8 versatile inputs receive any



0 V - 12 V analog input signal in order to connect to a wide range of compatible sensors, potentiometers, switches, and triggers. Sensors for



light, temperature, passive infrared,



venues and live concert by Pope Professional. The Line Array speaker consist of two 12" Neodymium woofer that is circuited parallel, mounted in separate bass reflex enclosure and four high efficiency power handling 6.5" Neodymium high mid-range transducers are mounted in a V-shaped configuration combined with two 36 mm exit throat Neodymium compression drivers coupled to individual Waveguides those are vertically aligned. The Line Source Former Horn produces wave front like ribbon driver. Advanced European transducers are providing high power-to-weight ratio.

Powersoft duecanali 804 and 4804:

Both of these new models are the latest additions to the Duecanali platform by Powersoft, which are designed for retail, leisure and hospitality fixed installations. The Duecanali 804 offers 2 x 400 watts and represents a lower total power solution for installations in retail, as well as bars and restaurants where a single two-channel amplifier is required — without the need for additional channels or power. This range offers over 16 different possible output configurations (Lo-Z, Hi-Z, bridge mode, parallel mode, and

be converted into dynamic rays of mid-air micro beams. Key features include: Mechanical dimming (linearly adjustable); electronic strobe (0- to 25-fps); 540-degree pan and endless

270-degree tilt; each color individually

and more can easily be integrated into your next interactive project just like the many well-known systems for building and home automation. Each input can be separately set as Analog-IN, Digital-IN, Counter, and other useful functions in the web



configuration page. Data is then sent over network with Art-Net or Streaming ACN (E1.31). The device also features 2 separate network ports to linearly daisy-chaining several devices together for better cable management.

HK Audio Element Gala:

This latest HK Audio's columnar system, combines stylish looks and sophisticated sound in a PA that rises to the lofty standards for up-market events. The new 15" powered subwoofer not only delivers persuasive, remarkably low-ranging performance; it also comes with custom electronics. At the heart of this circuitry is a painstakingly tuned digital controller that adds a touch of magic to the mix. Its sleek columns live up to the performance promise conveyed by their stylish looks. Their lush sonic image treats audiences to



a rich audio experience that begins directly in front of the stage, extends all the way to the back row, and satisfies even the most discriminating uptown standards.

OHM KX-3:

This system is designed with a small footprint, best suited for commercial installation projects that require audio quality with minimal visual impact. The extended bass response adds extra functionality without the need of separate subwoofers. The KX-3 has a coaxial driver design which achieves a 90° x 90° conical dispersion, the internal passive crossover ensures a flat, usable frequency response of 60 Hz to 20 kHz and a maximum SPL of 119 dB (peak). Its discreet look makes them fit any style of décor. The 1 x 8" coaxial mid-high driver + horn loaded tweeter creates a level of clarity and detail which is rare in a cabinet of this size. Weather



resistant version is also available with gland back plate, Polyurethane plus enamelled paint finish and metal grill front and 100 v transformer with 3.75, 7.5, 15, 30 and 60 W tap settings.

JTS E-7R System:

This affordable wireless microphone system is of latest wireless circuit design and provides 16 selectable channels. Stable RF link and good audio performance are assured. 7 segments display makes operation easy.

Although it includes established technologies from other Outline products, Superfly has been created using a truly integrated system approach. Designed from the outset to use our state-ofthe-art X8-series DSPequipped amplification, a Superfly rig is simplicity itself to deploy in any situation, relying on minimal crew and requiring very modest floor space to transport and store.

Part of Superfly's design is the wide 90-degree dispersion in the horizontal plane, which in many cases will reduce or eliminate the necessity for additional 'fill' cabinets. Where these are required however, Superfly will easily integrate with other Outline cabinets for example, the 120-degree horizontal dispersion of our Mantas 28 cabinet would make it the perfect downfill / nearfield option for Superfly since it not only uses the same

> rigging hardware but also shares the same Seamless Baffle concept, providing perfect acoustic



The new Superfly compact linesource enclosure sets new standards in performance for a loudspeaker of these dimensions. Weighing under 38kg (83.8 lb) per module yet with acoustic potential and dispersion control, Superfly integrates within the existing Outline portfolio and can be readily paired with any of the firm's subwoofer designs. Superfly's ultrawide bandwidth and clarity makes it the ideal solution without the need for additional subwoofers. However, when used with any Outline subwoofers, its full acoustic potential

The midrange and HF components (dual 8" drivers and a single 3" compression driver) are shared with comapy's GTO series, producing some remarkable performance figures.

compatibility.

Two proven Outline technologies featured in Outline's other line-source designs are also at the heart of Superfly: the patented DPRWG Dual Parabolic Waveguide and the V-Power Seamless Baffle Concept, both of which are essential components in delivering the power and control.

Its light weight has been achieved through a unique structural design made possible by advanced manufacturing techniques in our new, stateof-the-art woodshop.

With the combination of innovative manufacturing techniques, the very latest in automated machinery and Outline know-how, we can now produce thinner, lighter

of much heavier components.





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January - February 2019

IRAA 2019 Jury Committee and Award Categories announced

he 13th edition of the Indian
Recording Arts Academy Awards
(IRAA) which will take place at
BEC, Mumbai on 1 June 2019 has announced its esteemed Jury for the 2019
awards. The jury remains the same as
the 12th edition, but with the inclusion
of two more jury members - sound
engineer par excellence and Pro Audio
Application Specialist, AVID - Sreejesh
Nair and Globally Renowned Sound
Engineer and Chief Sound Engineer at
YRF Studio - Shantanu Hudlikar.

Anil Chopra, Founder & Executive Chairman, IRAA, Pramod Chandorkar, Honorary Chairman and Mujeeb Dadarkar, Award Director for IRAA 2019 will once again focus on scouting talent and bringing them into the spotlight and awarding them for superlative engineering work. The committee's efforts and vision is supported by the 12 member Jury comprising of top audio engineers, music producers and arrangers from across the country. Besides Pramod Chandorkar and Mujeeb Dadarkar, the Jury includes Aditya Modi, Ashish Saksena, Bishwadeep Chatterjee, Indrajit Sharma, Jim Satya,

For 2019, the esteemed IRAA jury has introduced several new award categories for content and music created for the web domain. The new categories have been created keeping in mind the increasing volumes of work being done

Sreejesh Nair, Shantanu Hudlikar,

Pradhan.

Vijay Benegal, Vijay Dayal and Yogesh

A total of 53 award categories finalized with the inclusion of New Web Categories

across studios for online streaming services like Netflix and Amazon Prime, for their rich library of original international as well as regional content.

The new categories Include:

- Sync Sound Recording Web Series
 Hindi
- Sync Sound Recording Web Series
 Regional
- Sound Designer for Web Series Hindi
- Sound Designer for Web Series –
 Regional
- Dialogue Editor for Web Series –
 Hindi
- Dialogue Editor for Web Series Regional
- Sound Editor Effects & Ambience for Web Series Hindi
- Sound Editor Effects & Ambience for Web Series Regional
- Music Producer Web Series Hindi
- Music Producer Web Series Regional

www.iraa.in/Category.aspx#Category

The Jury has also made other categories in the audio engineering, post production and music production segments open for nominations for content created for the Web.

Nominations have already started pouring in and the IRAA team expects a deluge of nominations by the **deadline date** which is scheduled for **April 30th, 2019.** Sound Engineers and Studios across the country are encouraged to send in their nominations before the deadline date. The Jury through a collective evaluation and judging process will ensure that all entries received are reviewed and judged fairly.

Winners will be announced at the IRAA award ceremony which will be hosted alongside the PALM Expo 2019 at the Bombay Exhibition Centre, Goregaon, Mumbai on 1 June 2019, 4 pm onwards.

Awards Process

The IRAA Awards 2019 nominations are open to Music producers, recording professionals and sound engineers. A full list of categories, award criteria and

deadlines can be found on www.iraa. in. Entries for the IRAA Awards will close on Tuesday, 30 April 2019. Submissions must be accompanied by Audio files which can be submitted to a dropbox link provided on the website.

Soundtracks released between January 1, 2018, and December 31, 2018, are eligible for nomination. The awards will be judged by IRAA's 12 members jury panel who are all invol=ved creatively and/or technically in the recording and music production industry. The jury will listen to the audio files submitted by the nominees and will determine the winner. There is no voting. Final authority is with Jury and their decision is binding on the nominees.

For further information on the IRAA Awards 2019, including sponsorship opportunities, please contact Smita Rai on srai@palmexpo.in. and / or Ankita Bhadrawale on abhadrawale@palmexpo.in

13th edition



indian RECORDING ARTS ACADEMY AWARDS

IRAA 2019 JURY COMMITTEE



Pramod Chandorkar



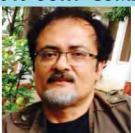
Mujeeb Dadarkar



Aditya Modi



Ashish Saksena



Bishwadeep Chatterjee



Indrajit Sharma



Jim Satya



Sreejesh Nair



Shantanu Hudlikar



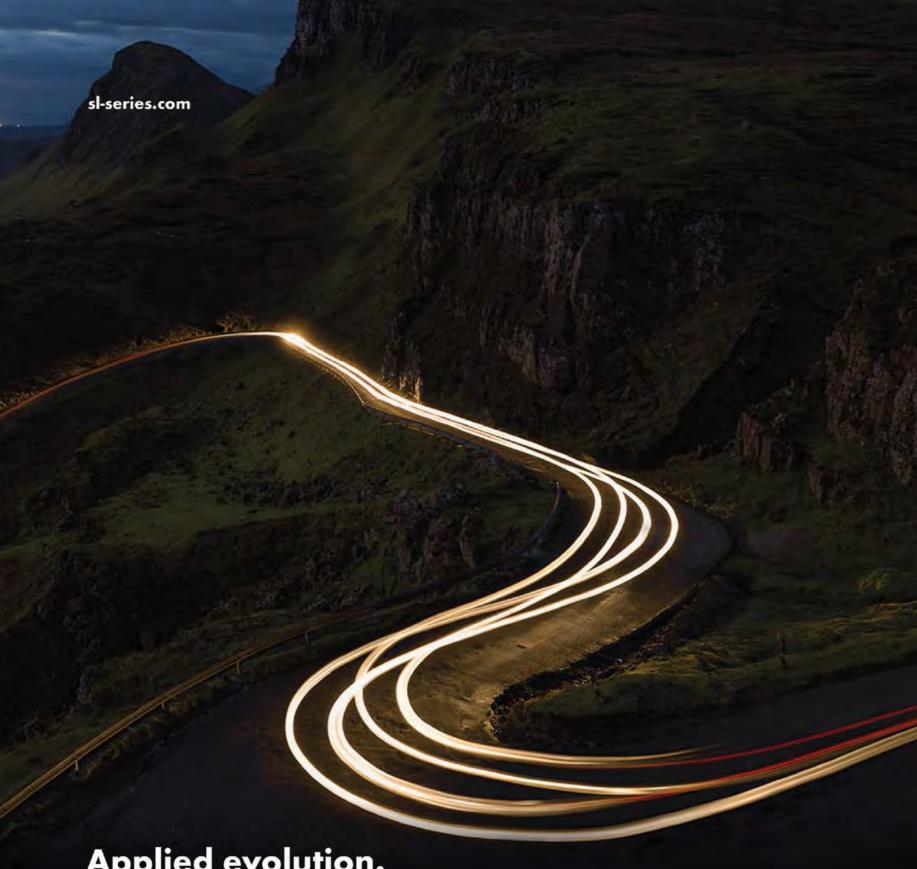
Vijay Benegal



Vijay Dayal



Yogesh Pradhan



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ARUN KUMAR TO SPEARHEAD GENELEC IN ASIA AND MIDDLE EAST

Genelec has appointed **Arun Kumar** as its regional business
manager for Asia and the Middle
Fast

Arun Kumar, a highly respected audio industry veteran whose depth of experience stretches back more than 20 years, has already played a key role in the development of markets in the region. He is perhaps best known for the many years he spent successfully establishing and driving one of the subcontinent's leading systems integration companies. eventually growing his team to more than 70 people. Later, he assumed responsibility for sales, marketing and operations for the Bose brand across the entire SAARC region.

Drawing on his expansive



Arun Kumar, Genelec

network of contacts and unique understanding of the market, Kumar will build on Genelec's already robust regional reputation to expand the customer relationship network within the fast-rising quality AV and home audio segments. Reporting directly to Sales Director Ole Jensen, he will be based in Delhi, while his work will complement that of longstanding Sales & Support Engineer Clifford Pereira, who will continue to build Genelec's studio business in India and beyond.

"Few members of our industry possess the level of knowledge, experience and commitment that Arun brings to his work and I fully expect him to create great opportunities for Genelec," commented Ole Jensen. "Asia and the Middle East are both extremely important markets for Genelec – in India alone the potential is huge. Arun will play a key role as we continue our efforts to develop our share of the international AV and home audio sectors."

"We are delighted to welcome Arun to the Genelec family," added Genelec Managing Director, **Siamak Naghian**. "During his career, Arun has developed a remarkable affinity for his customers – he knows their requirements and he understands the challenges that they face. He shares many of the values that we at Genelec hold dear, and I look forward to many successful years together."

DYNAUDIO PRESENTS NEW CORE SERIES STUDIO REFERENCE MONITORS

and

Dynaudio is launching **Core**, a new reference monitor series comprised of the 3-way Core 59 and a 2-way Core 7.

"The range uses our most advanced drivers – including all-new tweeters that feature the ingenious new resonance-defeating Hexis inner dome – plus innovative new DSP technology for even more features and surprising ease of use," states Dynaudio Pro product manager Rune Jacobsen. "In short, extreme consistency between speakers and intelligent, flexible cabinet design – plus the best digital amplifiers we've ever heard – bring the pinnacle of honesty, consistency and reliability to your studio."

Both Core 7 and Core 59 have digital inputs (AES3), support up to 24-bit/192 kHz signals, and the

internal DSP (digital signal processor) operates at the same level when using the analog inputs.

The series is also designed for flexible positioning. Depending on the studio environment, monitors might need to be placed sideways or upside down, which might mean

less-than-perfect contact with the surface area. Core addresses this issue with four indentations on each side and a set of Dynaudio-developed pads to fit them.

In addition, the 3-way Core 59 has a rotation flex system — the Orbit — which has been adapted from Dynaudio's AIR series. It lets users rotate the plate that holds the mid/woofer



tweeter to suit either vertical or horizontal positioning. The Orbit has been improved since the original with developments including an acoustically optimized back chamber.

Core also features Pascal class-D amplifiers chosen after a series of intensive listening tests, based upon high-frequency smoothness, ample power resources and stellar dynamics.

And, the Core range couple's extreme accuracy with consistency. When measured precisely, Core loudspeakers are stated to be tuned to match perfectly within a narrow 0.2 dB tolerance.

Core 59 is prepared for VESA mounting (optional), and Dynaudio has designed special brackets for Core 7 for wall or ceiling installation.

SSL RELEASES ENHANCED SSL NATIVE BUS COMPRESSOR

Solid State Logic has announced updates to its **SSL Native Bus Compressor plug-in** as part of a new **SSL Native v6.2 software release**.

The SSL Native Bus Compressor now features a Dry/Wet Mix control and side-chain High-Pass Filter. The Dry/Wet Mix control blends between compressed and uncompressed signal, allowing quick and easy parallel compression without using additional busses. The addition of the side-chain High-Pass Filter enables reduction of low frequency content triggering the compressor, reducing unwanted pumping effects.



V6.2 also includes the addition of Pro Tools gain reduction metering for the Bus Compressor, Channel Strip, X-Comp, X-Valvecomp, Vocalstrip and Drumstrip plug-ins, as well as improvements to the tooltip entry system for all plug-ins in the SSL Native range.





360 PRO SOLUTIONS



Multi Cable 4xCat.6F/UTP now available in 90 mtr reels worth Rs.1,62,000 for Rs.1,08,000 + 18% GST (special offer valid till stock lasts)



The Eurocable multiCAT6A flexible cables are built to answer the growing needs of running more data signals in mobile applications. Designed for transmitting high bandwith signals over long distances (typically 300 ft or 90 m as per the published standard)

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visit: avintegratedsystems.in/register





RESUL POOKUTTY ELECTED AS MPSE MEMBER

Oscar winner **Resul Pookutty** has been elected as one of the Board Members of The Motion Picture Sound Editors Guild of America (MPSF)

"Sharing my name and seat with some of the most prolific names in the Industry is a huge honor for Indian Film Industry. First of its kind for an Asian Soundman/ Designer. I feel, me personally and my fraternity is recognized through this selection to the highest body of Sound Designers in the world." Says, **Resul Pookutty.**

Resul Pookutty is Asia's most feted sound technician, he has etched his name in the annals of cinema history in a very short span of time. Pookutty has recorded, edited, engineered and designed more than 80 films in a short span of his illustrious career, and won national and international recognition for his work. His vast experience in Film Sound and its Design, now lends itself to his Sound Post facility, "Canaries Post Sound" in Mumbai that designs sound for national and international projects.

Pookutty is the recipient of numerous awards and honors for his contribution to cinema. His work in the film "Slumdog Millionaire" won him the prestigious- Academy Award of Merit, more popularly known as Oscars, given in recognition of the highest level of achievement in moviemaking.

Following his win in 2009 at the Oscars, he has been conferred 'Padma Shri' by the Government of India for

his distinguished service in his field. He has been accorded Honorary Doctorate by the Sree Sankaracharya University of Sanskrit, Kalady- Kerala. His work in Malayalam movie "Kerala Varma Pazhassi Raja" won him the 'National Award' for best Sound Design from the President of India.

He was also awarded the

"News Maker of the Year" by
Manorama News Channel and
India Today weekly's "News
Maker" in the regional context
for 2009. He holds the Limca
Book Of Records for the First
Asian to be winning an Oscar in
the technical category. He is in the
advisory board of IIFA (International
Indian Film Academy) and GIMA



Resul Pookutty, Board Member of The Motion Picture Sound Editors Guild of America (MPSE)

(Global Indian Music Awards) aimed at promoting Indian Cinema and Music to the growing global audience outside India.

RODE MICROPHONES LAUNCHES PODCAST-READY DYNAMIC MIC

RØDE Microphones has launched the **PodMic**, an XLR-connected, end-address dynamic microphone tailor-made for use with the RØDECaster Pro Podcast Production Studio and PSA1 studio arm.

The RØDECaster Pro Podcast Production Studio is an allin-one console solution for podcasters of every level.
Tuned
specifically
for use
with the

RØDECaster Pro, it has its own setting on the RØDECaster's touchscreen interface.

"This is the best end-address dynamic

RØDE Microphones PodMic

microphone in the world at this price and one of the best at any price," said RØDE CEO Damien Wilson. "Peerless quality and price accessibility have been the cornerstones of our success and continue to ensure RØDE is the choice of today's creative generation – the PodMic is a perfect example of that ethos. Together with the RØDECaster Pro, the PodMic will revolutionise podcasting."

PodMic Key Features:

• Richly-detailed RØDE dynamic

capsule

- Internal pop shield and doublemesh housing for plosive and sibilance control
- Solid brass construction finished in a hard-wearing matt black
- Integrated swing-mount for easy positioning. Works with boom microphone stands such as the RØDE PSA1
- Specifically tuned for use with the RØDECaster Pro but will work with any XLR interface

PRESONUS INTRODUCES STUDIO SERIES USB-C AUDIO INTERFACES

PreSonus has unveiled **Studio Series USB-C audio interfaces,** which includes five 24-bit, 192 kHz models: Studio 24c, Studio 26c, Studio 68c, Studio 1810c, and Studio 1824c.

All but the Studio 24c include DC-coupled outputs for sending control voltages, and every model offers MIDI I/O. In addition, USB-C to USB-C and USB-C to USB-A cables are provided for compatibility with most computers.

Studio One Artist music production software for macOS and Windows is included with the interfaces. Studio One configures automatically, no need to map inputs and outputs. Also supplied is the Studio Magic plugin suite, a collection from several leaders

in virtual instruments and effects.

The bus-powered Studio 24c 2-in, 2-out interface offers two front-panel combo mic/ line/instrument inputs with PreSonus XMAX-L solid-state mic preamps, two rear-panel line outputs, and onboard direct monitoring control.

Studio 26c, also bus powered, offers 2-in, 4-out as well as dual front-panel combo mic/line/instrument

inputs with XMAX-L solidstate mic preamps, four rear-panel line outputs, and a Cue Mix A/B button. Studio 68c — 6-in, 6-out —



provides four XMAX preamps, including two mic/line/instrument on the front and two mic/line on the back, as well as S/PDIF I/O.

Studio 1810c records up to 18 simultaneous inputs and sports eight outputs and four microphone inputs with XMAX Class A mic preamps.

Studio 1824c also records up to 18 simultaneous inputs, providing eightmicrophone inputs with XMAX Class A mic preamps. Its 18 outputs offer flexible routing with

> zero-latency DSP-based monitor mixing and control-room integration

> > with included Studio One Artist and UC Surface software.



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MAGIC

Interview with **POOCH**

Kenneth 'Pooch' Van Druten is the magician who makes Justin Bieber sound the way he does in a live concert. Popularly known as Pooch, he has been touring as FOH engineer with some of the biggest artists like Linkin Park, Whitney Houston, Jay-Z, Eminem, Beastie Boys, Guns N' Roses, Smashing Pumpkins, and many more. PT caught up with the man, who is today considered as one of the top FOH Engineers in the world to understand more about his craft, the gear he uses to get the perfect mix and insider info on the India leg of the Purpose World Tour.

inner of Tourguide Magazine Top Dog FOH engineer of the year award - for an amazing 6 times and two-time winner of the FOH magazine Parnelli FOH engineer of the year award, Pooch graduated from Berklee Col-

His first job as a Producer / Engineer in Los Angeles gained him three Grammy nominations, and a multitude of Platinum and Gold records.

Pooch has been a musician all his life. Starting with classical piano studies at the age of three





Pooch - 6 times winner of Tourguide Magazine Top Dog FOH engineer of the year award and two-time winner of Parnelli FOH engineer of the year award

arrived at Berklee I discovered that there were many bass players that were much better than me. I had to swallow my ego and realize that I was never going to make a living as a player. Around the same time, I discovered sound engineering and discovered that I was good at it." says Pooch.

From here on started Pooch's journey in sound engineering. After completing graduation with honours, he moved to Los Angeles to start his career as a Producer and Recording Engineer and managed to get involved with many projects. Initially, he thought a career as a recording engineer would be a long and lucrative one for him. However, this all changed after the invitation to mix one of the artists in a live venue. The band was Warrant, and the venue was the "Fabulous FORUM" in Los Angeles.

"I immediately fell in love with the instant gratification of thousands of people screaming for something you are a part of. It still gives me pleasure today. I have never really looked back. That was 1992 and I have been lucky enough to work as a live sound FOH engineer since then," enthuses Pooch.

Pooch is particularly proud of his stint as engineer for the KISS symphony. "Probably the concert that I am most proud of is the KISS symphony. It was the rock band kiss with a 60 piece orchestra, boys choir, and acoustic instruments. Lots of things going on. Nothing like mixing a 60 piece orchestra close mic'd at 105dBA weighted L-EQ over 10 at FOH." His other favourites include Guns N' Roses Rock In Rio 2001 and English heavy metal band Iron Maiden, whom he is mixing these days.

Since the beginning of his career, Pooch got opportunities to work in many genres of music. "Most of the engineers get pigeonholed into one type of music and spend most of their career mixing it. Since I began, I have walked this line between pop, rock, and R&B and I really enjoy doing it. I have been very blessed to work in many genres of music."

BALANCING ACT

The challenge a FOH faces of course varies depending on not only the genre, but also the artistes themselves. "Each artist comes with their own challenges. Solo artist vs. bands is always tricky. When the marque' says Justin Bieber, it is ALL about him. Whatever he wants, he gets. There is no question as to who the boss is." He explains, "When dealing with a band, there are multiple egos and often different opinions that I was an engineer have to negotiate thru. Most of the time I am a psychiatrist more than I am a mixer. The secret to my success is that I can walk into a room full of crazy people and communicate, understand, and negotiate."

According to Pooch the most challenging experience for him was as front of house for Jay-Z. "Mainly

because there is a bunch of inputs. Over 100. There is a live band plus lots of playbacks. Finding space for all the live instruments and some of the playback that is in the same EQ space, as well as stereo balance, is a different balancing act," says, Pooch.

INDIA CALLING

Pooch's first visit to India was for Justin Bieber's Purpose World Tour in the Summer of 2017. "The unique challenge of mixing a solo artist like Justin Bieber is that everyone is coming to hear him. They don't care about anything else. The crowd wants to hear him while he sings and while he talks in between songs. It's difficult to get him over the top while he is in front of the PA for most of the show as well," says Pooch.

A FOH plays a crucial role in engaging the audience in the musical experience and evoking emotions. "My goal in all of my mixes is to deliver a record quality mix with impact. I try to adhere to what the record sounds like as best I can. Everyone knows it and wants the music to sound like it. But I think that I give a little bit more by moving some air in the subrange, and also bring out some parts being played that are less noticeable in

the mix in the record to give it that real live feel. Mostly my focus is on vocals and trying to make it sound the best it can, with the most intelligibility."

Pooch describes his interaction with solo artists as "complex and vast". For Bieber, Pooch let American music producer, composer, songwriter, multiinstrumentalist and Bieber's musical Director - BHarv (Bernard Harvey) be the link between him and Bieber. "I worked very closely with Bharv and he was the conduit to Justin," says Pooch. He continues, "Another vital requirement on the technical front is to work handin-glove with the Monitor Engineer and Systems Tec. For the Purpose India Tour, I was fortunate to have Alex Macleod as my monitor engineer once again. He is amazing. I could not do my job without him. I work very closely with the monitor engineer. We are truly a team. It is best when both the monitor engineer and the FOH engineer are in sync with each other."

The Sound Set-Up

Justin Bieber India tour called for high production values in terms of great dynamics in venue sound. The superlative set-up and the sound technical for the concert managed by Sound.com, witnessed for the first time in India a 12 a side flown subwoofer rig of S28's in "Cardioid" augmented with the lowfrequency extension from the G28 subs on the floor. "This is what we requested from Sound.com," says Pooch. "I have used the JBL VTX25 systems extensively (especially with Linkin Park) and knew exactly what was needed for this show. It may seem like a lot of PA system, but when you deploy the system in this manner, you get the best coverage and power. Sound.com was very accommodating and provided exactly what we needed. They were excellent and provided me with all the tools necessary to make the show sound amazing. I was very pleased with the sound aspect of the show in India." he adds.

For the concert, the venue was deployed with Main PA –VTX V25II in a LR and an outer LR, Amplifiers T12000HD, Flown SUB-VTX S28 on a LR, Ground Subs –VTX G28, Front Fills – VTX V20, Side Fills LR- VT4888, Delay LR & Outer LR – VT4889. Other Gear that Pooch used for the Justin Bieber tour can be found on www.palmtechnology.in - May-June 2017 issue

Sweating it out

The superhot month of May in Mumbai was not at all easy for Pooch. The heat and humidity posed several difficulties. "Oh my goodness, it was so hot. The heat and humidity are very

(Continued on page 83)

My goal in all of my mixes is to deliver a record quality mix with impact. I try to adhere to what the record sounds like as best I can.

ELATION INTRODUCES RAYZOR SPARKLED 760

Elation has announced the launch of its new Rayzor 760 LED luminaire with SparkLED technology. Driven by seven independently controlled 60W RGBW LEDs with a 5° to 77° zoom, the Rayzor 760 can produce a well-defined mid-air beam of over 8000lm that stands out on any stage and then spread exceptionally wide for even wash coverage.

The fixture's seven oversized front

lenses create a large surface that is enhanced by SparkLED technology, 28x2W white LEDs strategically placed inside the lenses themselves to create a unique additional layer of effect.

The dedicated high-brightness pixels give lighting designers all new possibilities to create layers of effect through elegant lens illumination and eye-candy twinkle effects.

The new effect concept allows designers access to a fresh, fun and innovative way of creating interest and depth on stage, says the company.

Reportedly, SparkLEDs are controllable via the lighting console or driven by a multitude of internal FX patterns.



GLP EXTENDS ITS PORTFOLIO WITH ACQUISITION OF EHRGEIZ

GLP has announced the takeover of German lighting solutions manufactures **Ehrgeiz** and continues its expansion into new business areas. By taking over Ehrgeiz, GLP is resolutely continuing on its strong growth path and portfolio expansion, particularly in the outdoor sector, with innovative and high-quality solutions.

Stated **Steven Braun**, Managing Director of Ehrgeiz: "Since both companies are located in the same place and are active in the same market, there have always been points of contact. Ehrgeiz has been successfully developing and marketing products in an increasingly competitive market in recent years. This fact has not escaped GLP and there have been discussions as to

how we can combine the strengths of both companies. I am delighted to be joining the GLP family, along with the Ehrgeiz team, and continue to develop great and innovative products."

Udo Künzler, CEO of GLP, responded, "I am proud to welcome Steven and his Ehrgeiz team, and we look forward to working together. Ehrgeiz has developed a broad expertise in recent years and knows how to develop innovative products, and this is particularly evident in their outdoor products. The merger will expand GLP's portfolio in areas where we see great potential and will make us even stronger in the coming years. Taking on Ehrgeiz is a win-win and will drive us further in our global growth strategy."



HIGH END SYSTEMS RELEASES HOG OS V3.10

High End Systems has announced the latest upgrade to their **popular HOG 4 lighting console range, OS v3.10.** The new release reportedly Masters in the background and new Pixel Map stock content.

With Virtual Wings, multiple virtual wings can be opened on a single

inhibitiv backg chang adjus inhibitiv inhibitiv contractions of the contraction of the co

offers several new features and enhancements, including Virtual Wings, Playback Bar docking, Compound Fixture Explode, Inhibitive system, providing additional playback controls when needed.

Playback Bar Docking allows users to swap playback bars easily on

the console front panel and wings, providing quick access to more playbacks on a single surface.

It is now possible to 'leave inhibitive masters in the background', allowing page changes to happen without adjusting/restoring active inhibitive masters. When inhibited, groups in the Groups Directory will indicate their current maximum level and will also indicate if they are being actively inhibited.

Users can now touch a group in the directory and use an encoder to

raise/ lower the inhibitive on that group, and a new command Group + Release has been added to quickly restore all inhibited groups not controlled by the currently active page.

Compound Fixture Explode - users can use this command in patch to decouple the masters and cells of compound fixtures into their component parts, allowing for change type actions.

Other enhancements include various bug fixes, Disable Rem Dim option, Enable Fader option for Grand Master and new Gradient Shapes in Pixel Map stock content.

Senior Product Manager, **Sarah Clausen**, commented, "The HOG development team is stoked to offer these regular updates to our user base. The intent of v3.10's release is to provide a number of small adjustments that improve your daily programming life."



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'WYSIATI' ART INSTALLATION SHOWCASES THE ART OF LIGHT WITH HARMAN PROFESSIONAL SOLUTIONS

Design Matrix deploys HARMAN Professional Solutions lighting fixtures in 'WYSIATI' art installation to create unforgettable lighting effects

Design Matrix recently deployed Martin by HARMAN RUSH UV lighting fixtures in the **'WYSIATI'** art installation to create unforgettable lighting effects.

'WYSIATI' is an art installation created by **Harmeet Singh**

Issar and Sanjeev Nangia as part of iGuzzini's 'Light First' exhibit. 'WYSIATI' takes different forms depending on where you stand, stimulating people to stop, reflect and take a new perspective. In order to achieve this effect, Issar and Nangia hired India's leading architectural lighting experts, Design Matrix. After consulting with the creators, Design Matrix selected Martin by HARMAN RUSH PAR
4 UV and RUSH BATTEN 1 HEX fixtures for their high-output ultra-

of exciting looks.

"Martin lighting has long been associated with creative lighting art in the west. In India this is one of the brilliant instances when art has been presented with such creativity and

innovation. I thank Harmeet for bringing such works of creativity to Indian audiences." said Prashant Govindan, Sr. Director, India and SAARC, HARMAN Professional Solutions. HE further added, "Martin architainment lighting fixtures are flexible, extremely reliable and are backed with world class quality and support. It is therefore natural for lighting designers across the world to use Martin in several creative expressions in art and technology. Both RUSH PAR 4 UV and RUSH BATTEN 1 HEX were recently launched during Infocomm 2018 and have great potential for blacklight applications. The way WYSIATI install simulated cognition, it can be a fantastic

install unit at venues that have a long walk-ways such as Art Galleries, Museums, Amusement Parks, Heritage Sites, Theatre/ Auditorium Sound and Light shows, etc."

ABOUT RUSH PAR 4 UV & RUSH BATTEN 1 HEX

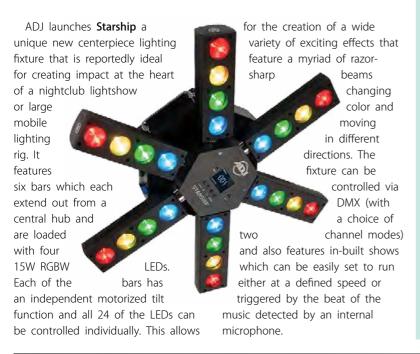
The RUSH PAR 4 UV is a bright single-lens UV LED PAR includes a 100-watt COB 400 nm UV LED mounted in a reflector for high-output ultraviolet light, and has regulated air cooling for quiet operation.

The RUSH BATTEN 1 HEX is an ultra-bright 12-cell batten color + UV wash fixture with full pixel control. Featuring 12 watt RGBAW+UV 6-in-1 LEDs, the RUSH BATTEN 1 HEX provides intense light for color, white, or blacklight applications. A removable diffuser/lens increases the beam angle from 25° to 32°, and brackets are available for floor or truss mounting.



'WYSIATI' art installation equipped with HARMAN RUSH PAR 4 UV and RUSH BATTEN 1 HEX fixtures for their highoutput ultra-bright UV light.

ADJ LAUNCHES STARSHIP



oright UV light.

"Our goal with this design was for no two people to have the same viewing experience," said **Harmeet Singh Issar**, creator of 'WYSIATI'. "Martin lighting fixtures were the obvious choice for this project, as they're the only professional blacklight fixtures on market with optics, allowing us to alter the directionality and intensity of light to get the perfect visuals."

'WYSIATI' is constructed using fluorescent pigment, wire mesh, and high-gloss mirror sheets strung across the tree-lined boulevard.
RUSH PAR 4 UV fixtures illuminate the wire sculpture with an ultrabright UV LED light, morphing the texture of each surface as viewers move around the exhibit. RUSH BATTEN 1 HEX fixtures provide controllable electronic dimming, strobe, and pulse effects, allowing the designers to achieve a variety

HIGH END SYSTEMS INTRODUCES SOLAFRAME 1000

Automated lighting manufacturer High End Systems has introduced its SolaFrame 1000, the new goto workhorse automated framing fixture for lighting designers. SolaFrame 1000 offers 20,000 field lumen output, full framing shutters,



rotating and fixed gobo wheels, a new CMY and CTO color mixing system, 12°-40° zoom, replaceable

color wheels and continuously variable animation effects

Available in Ultra-Bright and High CRI versions, SolaFrame 1000 ships with a TM30 Filter that boosts the Ultra-Bright engine to 85+ CRI. Other features include Iris and Light Frost, Rotating Prism and High End Systems' patented Lens Defogger System.

Automated Lighting Product Manager Matt Stoner commented, "SolaFrame 1000 brings a very wide feature set to the medium sized fixture range. In conjunction with the luminaire's efficient and bright optics, we look forward to users finding the SolaFrame 1000 to be the perfect fixture for their venue or rental inventory."

High End Systems Sales Manager Sean Hoey added, "We are excited to bring our latest framing fixture to our dealers and customer base. SolaFrame 1000 compliments and completes our product offerings in the SolaFrame family."

GLP LAUNCHES TRACK-MOUNT VERSION OF IMPRESSION FR1

Under GLP has released impression FR1 Track Mount version The compact LFD moving head offers a soft pencil beam, super-fast movement and continuous pan rotation for amazing 3D multi beam designs. Now modified to fit into 3-phase tracks, the popular FR1 provides a versatile solution for fixed installations, in particular museums and retail stores. Control is via wireless DMX

Stated key account manager Oliver

Schwendke: "For us ISE provides a great start to the year, as the show continues to grow, and integrate



designers over the four days."





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ALTMAN INTRODUCES AP-150 RGBW LED PAR LUMINAIRE

Altman has introduced its new AP-150 LED Par luminaire. As the next generation Altman Par, the AP-150 is a compact and lightweight, 135-watt RGBW LED wash which produces deep, saturated colors and soft,

a leading provider of quality and affordable lighting solutions, and we are proud to continue that tradition with introduction of the AP-150 LED Par," said Julie Smith, Altman Lighting General Manager. "Knowing



delicate pastels, while maintaining a smooth, uniform beam throughout the entire motorized zoom range.

"Since our inception in 1953, Altman Lighting has always been the challenges lighting professionals often face when selecting the ideal wash luminaire, we have included a number of new features into the AP-150 Par that will undoubtedly

accentuate any lighting design."

Weighing only 11 pounds, the AP-150 replicates the soft output of a traditional par wash light with control states from 8 Bit, 16, Bit, RGB, and HSIC. Its factory and custom color presets allow for the quick selection of the most widely used entertainment color choices, and it also adds the ability to record color presets directly to the luminaire for custom color playback.

"As we discussed the design behind the AP-150 RGBW Par luminaire, we always had the mindset of the designer at the forefront," added Pete Borchetta, Altman Lighting Product Innovation. "With that idea leading the way, we are very excited to be launching

our next generation Altman Par which provides a superior output and performance to other LED Par luminaires currently on the market."

In conjunction with its color output, the AP-150 also offers a variety of strobe options ranging from pulse and fade, to a 30 Hz strobe rate. With the motorized zoom which produces a beam spread between 12-65 degrees, the luminaire also has built-in stops at five different set points ensuring precise beam spread repeatability. Additionally, should a technician need to locate the luminaire while in the lighting rig, the AP-150 includes the new "Tech Identify" option which flashes the fixtures LED's without disrupting focus

PROLIGHT FURTHER EXPANDS ELUMEN8 MP FRESNEL RANGE

The Prolight Concepts Group has extended their eLumen8 MP Fresnel range with the MP 120 WW and the MP 15 DTW.

The MP 120 LED Fresnel WW is equipped with a 200mm lens and a 120W 3000K COB LED the fixture produces a soft edged beam adjustable manually between 19-37° whilst the supplied barn doors allow further adjustment.

Loaded with features including RDM (Remote Device Management), powerCON and 3 & 5-Pin DMX inputs/outputs, allowing multiple units to be daisy chained in an array. The 4-push button display on the side of the unit allows users to select between DMX and manual dimming modes along with adjustment of dimming curve/

profile settings.

The MP 15 LED Fresnel DTW is powered by a 15W amber and warm white LED (1900K/3000K) with 'dimto-warm' technology reducing the colour temperature along with light intensity to emulate a traditional halogen lamp with an amber glow. Housed in a compact all metal chassis the MP 15 features a 62mm lens which creates a 20° soft edge beam ideal for small stages, studios and display lighting applications. Barn doors and an additional 45° easy-fit lens allow further beam adjustment. The rotary knob on the rear of the unit allows for 0-100% dimming. For

further flexibility the MP 15 is triac dimmable and can be connected



wall dimmer for entertainment or commercial applications.

"These new fixtures further bolster the MP Fresnel range and our increasing commitment to this market. As with the rest of the range, Managing Director.



OBSIDIAN CONTROL SYSTEMS AND CAPTURE VISUALISATION PARTNERSHIP FOR ONYX CONSOLE LINE

Obsidian Control Systems and Capture Visualisation has announced a new global partnership agreement to include a Capture license with every ONYX console, allowing all NX console owners immediate access to the popular and powerful lighting design and visualization software.

Every NX2 and NX4 lighting console will include a download of the latest version of Capture

after a simple online registration. Users will receive an unrestricted standard license of a Capture Edition depending on console type. All licenses are eligible for upgrades through Capture or any of its authorized resellers.

Obsidian Control Systems and Capture Visualisation will be enhancing connectivity between ONYX and Capture over time for a



apture assibling

seamless workflow and true plugand-play experience, including synchronized patching and real-time

"Capture has been a great partner for Elation over the years and we

look forward to strengthening this even further as we evolve the ONYX platform," says Obsidian Control Systems product manager Matthias Hinrichs. "Visualization is an important

(Continued on page 70)



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- Sync Sound Recording (Web Series) Hindi

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- Documentaries/Short Films/ Web Series Mixing
- Foley Artist (Film or Web Release) – Hindi
- Foley Engineer (Film or Web Release) - Regional
- Broadcast Mixing (Dialogue Oriented) – Hindi
- Broadcast Mixing (Music Oriented) - Regional

- Sound Designer (Film or Web Release) — Regional
- Sound Designer
 Documentaries/Short Films
- Dialogue Editor Web Series - Hindi
- Sound Editor Effects & Ambience (Film or Web Release) Hindi
- Sound Editor Effects & Ambience (Web Series) Regional
- Foley Artist Documentaries/ Short Films
- Foley Artist (Film or Web Release) — Regional
- Mixing (Film or Web Release) - Hindi
- Broadcast Mixing (Dialogue Oriented) Regional
- Broadcast Mixing (Music Oriented) – Web Series

- Sound Designer Web Series — Hindi
- Dialogue Editor (Film or Web Release) - Hindi
- Dialogue Editor Web Series - Regional
- Sound Editor Effects & Ambience (Film or Web Release) - Regional
- Sound Editor Effects & Ambience Documentaries/Short Films
- Foley EngineerDocumentaries/Short Films
- Foley Engineer (Film or Web Release) — Hindi
- Mixing (Film or Web Release) - Regional
- Broadcast Mixing (Music Oriented) - Hindi





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CHAUVET PROFESSIONAL INTRODUCES COLORADO SOLO BATTEN

Chauvet Professional has introduced his new COLORado Solo Batten. Reportedly, it is a bright, one-of-a-kind IP65-rated fixture, which creates a uniformly homogenized wash, giving it the appearance of being a single bar broadcast and theatrical applications.

"This is a unique light that addresses a need that our customers have expressed for a batten that creates an edge-to-edge single bar of light," said Albert Chauvet, CEO of sections, each of which can be controlled individually. This allows the COLORado Solo Batten to go from presenting a single homogenized light source, to displaying an endless

variety of pixel



Chauvet.

with no pixels or "round eyes" visible, and no dark corners. This smooth, even look can add a distinctive aesthetic touch to any design, particularly in

"Designers tell us they're excited because this will allow them to create a whole range of new

Featuring 144 LEDs, the linear fixture has 12 equally-sized square

mapped effects and chase sequences with smooth

fades and wipes.

With a luminance of up to 3,870 lux at 5 meters, the COLORado Solo Batten has the output needed to make an impact at even the largest venues. IP65 rated, this extremely bright batten is well-suited for music festivals and other outdoor

applications

Due to its intense output, it will deliver stunning effects even during daylight hours. Adding to its flexibility, the fixture runs on DMX and RDM protocols.

The versatile COLORado Solo Batten can be oriented vertically or horizontally and used on set pieces, where its individually controlled squares can be employed to create visually dynamic effects. Producing a wide array of colors plus white (color temperature presets from 1800 to 8000 K), the fixture also excels as a downlight, toning strip, foot light and cvc.

"We are very eager to see more of what designers come up with when using the COLORado Solo Batten," said Chauvet. "This is truly a multi-purpose batten light that can be used in a wide variety of ways, not just for uplighting or in set pieces. There is really no limit to the creative possibilities it opens for designers."

ADJ ACQUIRES ELIMINATOR LIGHTING

Los Angeles based ADJ Products LLC has announced that it has acquired Eliminator Lighting in order to broaden even further its product range. All existing Eliminator Lighting fixtures are now available from ADJ USA, opening up the brand's equipment catalog to all current ADJ dealers with immediate effect.

A well-established brand supplying affordable lighting and effects equipment to the DJ and club market for over fifteen years, Eliminator Lighting has an extensive product catalog that includes LED pars, moving heads and free-standing illuminated letters as well as fog and bubble machines. ADJ dealers will now be able to purchase these products alongside equipment from ADJ Lighting, American Audio and Avante Audio, allowing for consolidated orders to minimize shipping costs.

Eliminator Lighting's long-serving Product Manager, Albert Paredes, will stay with the company ensuring continued excellent customer service for both existing Eliminator dealers



and those who choose to stock the line for the first time now that it is available through ADJ distribution. Paredes has extensive experience in the lighting industry and is no stranger to ADJ, having worked in the company's Service Department for many years prior to moving to Eliminator.

To welcome Eliminator Lighting to its new home at ADJ Products LLC it is to be re-branded with a sleek new logo. New products will continue to be added to the brand's catalog, continuing its focus on providing affordable lighting and special effect products to event professionals that



offer unbeatable value.

Commenting on the acquisition, President of the ADJ Group of Companies Toby Velazquez said, "This is an exciting development for ADJ Products LLC as Eliminator Lighting has a great range of value DJ products that fit into our diverse network of customers. It also means that the ADJ Group's product catalog now covers every type of application and budget; ranging from Eliminator Lighting at entry level, to ADJ covering the mid-market and Elation Professional serving top-end theatrical and touring productions."

OBSIDIAN CONTROL...

(Continued from page 66)

part of the console programming workflow and we are happy to partner with this leading visualizer. The Capture team is great to work with and is fully dedicated to the visualization needs of the market. We know our users will benefit from the increased cooperation between our companies."

"The team at Obsidian Control Systems and the ONYX platform come with years of expertise in advanced lighting control so the decision to bundle a standard Capture license with every console feels rewarding," adds Capture sales director Vangelis Manolis. "It must also be rewarding for ONYX users since on top of visualization they will be able to work with design, reports, paperwork and presentation features, amongst others. Elation has been a successful Capture reseller for years, and therefore we trust that the partnership with Obsidian Control Systems will also succeed in adding value when Capture and ONYX are used together by our mutual end users."



The headroom and sound characteristics possessed by the KSL System line array loudspeakers accurately convey any performance style, from a single voice or the fine detail of acoustic and orchestral music, to the low end rich, high power requirements of dance and heavy metal. The ability to address such a breadth of application scales and styles, both indoors and out, facilitates high return on investment through wide ranging venue utilization and flexibility of deployment.

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BOSE PROFESSIONAL MSA12X RESONATES AN IMPECCABLE SOUND EXPERIENCE AT MIT LONI-KALBHOR'S COLOSSAL DOME

The Maharashtra Academy of Engineering Education and Research's Maharashtra Institute of Technology, popularly known as MAEER'S MIT college, is home to one of the largest domes in the world. Measuring 160 feet diameter and 263 feet height, the colossal dome shaped structure at the Loni-Kalbhor (Vishwarajbaug)

campus symbolises the unity of the Indian identity through its religions, ideologies and literature; and houses the MIT World Peace Library which boasts a wide variety of books including few rare ones, along with a massive 3500 person capacity prayer hall which is adorned with 55 golden statues of saints, philosophers, scientists and intellectuals, all of which depict the message of world peace and humanity, as enunciated by the age-old Indian culture, tradition and philosophy. The structure, as affirmed by **Dr Vishwanath Karad**, Founder of MAEER'S MIT College Pune, is one of the largest domes in the world, and is also home to a subliminal audio experience thanks to the world's leading brand in innovative professional audio technology – Bose Professional.

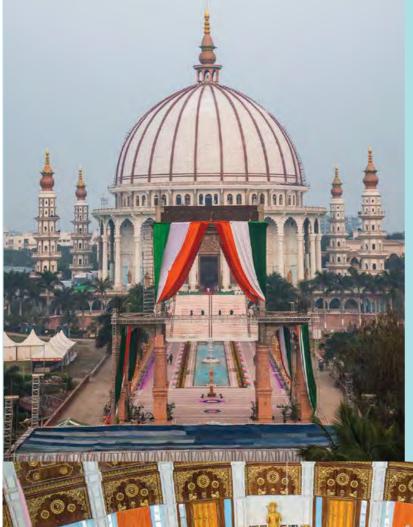
Mr. Kulkarni – IT Head at MIT Loni-Kalbhor, and the man in charge of the project in terms of its technological infrastructure including the acoustics and sound reinforcement, shares "MIT is a place where history and legacy meets science and cutting-edge technology; and this is a virtue that we are both proud of and abide by very strictly. This fact is amply demonstrated through the establishment of the massive dome structure at our Loni-Kalbhor campus. Thus, by default, it was imperative that we acquired only the best state-of-the-art pro audio system for the dome. There were several key considerations that factored in the selection for the appropriate sound system - from aesthetics to superior sound quality and unmatched distribution and coverage. After checking almost every available option in the market, we found the Bose system to meet all our requirements. We met with the

team that finally commissioned the sound system here, and they proposed a precise design sketched through their Modeler Presentation system. We must commend the fact that they went the extra mile in providing a live demonstration of the entire proposed solution which certified the modelled results; and that is when we were completely convinced about the positives of the system, and of the system being an absolute value for money investment."

The dome, in all its architectural glory, embraces cutting-edge audio technology with the installation of a state-of-the-art audio architecture from global pro audio leaders, Bose Professional - designed and integrated by the Bose Professional's in-house technical engineering team in association with their Indian distribution partners Cubix, and the system integration partner for the project - Intart TechSolutions. The audio system inside the dome comprises the avant-garde Panaray MSA12X self-powered digital beamsteering loudspeakers integrated and aligned in a Left-Right Stereo configuration cluster of three units each, following a detailed acoustical analysis of the space. The Panaray MSA12X, with Bose' proprietary Articulated Array transducer configuration, allows it to overcome several acoustical challenges posed by the dome's structural nuances; and deliver wide, 160° horizontal coverage throughout the room.

Intart TechSolution's Director, Nitin Deo, elaborates on the nuances of the Bose Professional Panaray MSA12X that made it the perfect system for the project, as he shares, "The Panaray MSA12X is a fantastic system offering a host of features that allows SI's and installers to achieve superlative sound even in the most challenging venues. Designing a great sound solution for dome shaped structures is always challenging, considering the acoustics of the space due to its geometry. Such spaces are highly reverberant in nature, and the larger the dome, bigger is the challenge! At the MIT Loni Kalbhor campus, we were met

(Continued on page 74)



The audio system inside the dome comprises the avant-garde Panaray MSA12X self-powered digital beam-steering loudspeakers integrated and aligned in a Left-Right Stereo configuration cluster of three units each.



DPA'S NEW VP OF SALES FOR APAC

DPA Microphones has announced the appointment of **Thomas Frederiksen** as its new vice president of sales for the **APAC region**.

Frederiksen will head up DPA's regional office in Hong Kong, which was opened in 2013 to support the company's sales partners throughout Asia.

Commenting on his appointment, DPA's CEO **Kalle**

Hidvt Nielsen, comments: "I am very pleased to have Thomas on board. APAC is a very important region for DPA. I know that, with his strong background in the pro audio market and his extensive experience in Asia, and in particular Japan, he will help drive the APAC team to develop even closer links with our distributors, dealers and customers across the region."

A fluent Japanese speaker and

formerly managing director of Shure Japan, Frederiksen is already a familiar face to many in the live sound, installation and pro audio industries. Throughout his career he has held senior sales and management positions for a range of high-profile companies, including a four-year tenure at Bruel & Kjaer, the company that was the forerunner of DPA microphones.



Thomas Frederiksen, VP of sales for APAC region - DPA Microphones

NEXT-PROAUDIO INTRODUCES THE NEW LA122.V2

Next-proaudio has added a new LA122.v2 to its LA family. According to the company, it is the redesigned version of the popular LA122, integrating exactly the same internal components into a smaller and lighter box.

It also incorporates advanced neodymium speakers, custom made by B&C (12"+1.4"), capable of generating 1120W of high-definition power for a very high acoustic pressure for medium to large scale applications.

(Continued from page 72)

This system is ideal for use in permanent installations as well as in touring systems. The new system comprises three models, two-line arrays elements, with different coverage angles (8°x90° - LA122. v2 and 15°x120° - LA122W.v2) and a companion subwoofer system allowing a wide configuration versatility – LAs118.v2.

The Hybrid-Horn subwoofer LAs118. v2 is equipped with a custom-made B&C, long excursion, 18" neodymium woofer. As it shares the same rigging

technology with the LA122.v2 and LA122W. v2, a flexible integration, both on the ground or on the top of the LA122. v2 arrays, is possible.

For touring applications, LA122.v2 can be associated to the N-RAK, a universal distribution platform for power, audio signals and network.

With the dedicated factory presets, the Powersoft X8 and X4 amplified controller integrated on N-RAK constitutes an extremely advanced and precise drive system for the enclosures.

The cabinets reportedly can be finished in a variety of colours to suit fixed installations.



BOSE PROFESSIONAL MSA12X RESONATES AN IMPECCABLE SOUND...

with the same dilemma. Due to the geometry of the venue, the loudspeaker system had to be installed at a height no higher than 4 feet from the base; and achieving consistent coverage with uniform SPL and tonal balance in such situations is highly unlikely with conventional sound systems. However, with the Panaray MSA12X's Flat Floor Optimized Beam Steering pattern, which is optimized for venue with evident height restrictions and flat floors, we could ensure that the sound is projected unobtrusively throughout the dome with consistent coverage from the front row to the back row of the room, across the audience area, and with impeccable tonal balance and uniform SPL. This is what makes the MSA12x a truly revolutionary system, and an absolute delight for any install sound professional!"

The Panaray MSA12X loudspeaker system is controlled and managed

through a Bose ControlSpace ESP1280C processor, which highlights the system's Dante digital audio network interfacing capability and ensures smooth and easy control of the system.

Mangesh Karad praises the quality of the new Bose system, as he quotes, "The sense of presence is astounding thanks to the amazing quality of sound. And the overall feel is absolutely spectacular. Bose has given us everything we needed in a sound system; and we are extremely pleased to have opted for Bose!"

The dome was inaugurated on 2nd October 2018 by the honorable Vice-President of India **Shri Venkaiah Naidu**, in commemoration of the 150th birth anniversary of Mahatma Gandhi; and also witnessed announcement of the path-breaking World Parliament of Science, Religion and Philosophy, where Maharashtra's Governor Vidyasagar Rao presided over the function along with chief minister Devendra Fadnavis and

deputy chairman of NITI Ayog Rajeev Kumar as guests of honor. The occasion witnessed the attendance of over 120 distinguished speakers from across the world, consisting of scientists, philosophers, scholars, educationalist, Nobel laureates, religious and spiritual leaders, in addition to almost 3,000 delegates. According to Mr Kulkarni - the entire program unfolded smoothly, much to the delight of everyone in attendance, with special commendation towards the subliminal sound experience thanks to Bose, where the primary FOH system comprising the Bose Panaray MSA12X loudspeakers delivered a flawless performance, along with the revolutionary Bose L1 System deployed as fills along the flanks of the dome during the function.

Vibhor Khanna - Country Manager - SAARC, Bose Professional expressed his thoughts about the brand's association with the project as he asserted, "The MIT is an iconic institution in our country's education legacy, and the MIT Loni-Kalbhor campus is now a symbol of excellence for the world, as it is now home to an architectural marvel. The dome depicts the advancements in design and technology that we as a country have achieved; and it is a matter of such great honour and pride that the management at MIT Loni-Kalbhor decided to partner with Bose Professional for an unmatched sound experience. We would like to thank and commend the entire management at MIT Loni-Kalbhor for investing their faith in our brand; and a special vote of thanks to the entire audio commissioning team for a job well done in commissioning a truly state-of-theart audio architecture at the dome. We are proud to deliver the kind of world-class audio solution that an iconic and exemplary structure like the MIT Loni-Kalbhor dome truly deserves."

MEYER SOUND UPDATES UPQ LINE

Meyer Sound has updated its popular **UPQ point source loudspeakers** with a new class D amplifier, new on-board signal processing for optimized frequency and phase response, and a 13-pound overall weight reduction.

The current UPQ-1P (80° x 50°) and UPQ-2P (50° x 50°) have been re-designated as, respectively, UPQ-D1 and UPQ-D2. A third variant, the UPQ-D3, offers a new 80° x 80° coverage option. All three variants retain the same exterior cabinet dimensions and rigging points as current UPQ models, allowing use of the same mounting and rigging accessories

"Our UPQ series has been enormously successful, but we decided the time had come to offer a new coverage variant while updating the entire series with the latest amplifier and signal processing technologies," says **Pablo Espinosa**, Meyer Sound's vice president and chief loudspeaker designer. "This

greatly extends the versatility of one of our most widely used loudspeaker lines in a lighter package."

All three new variants incorporate the same proven driver complement as the prior versions. The low frequency section relies on a 15-inch neodymium magnet cone driver while high frequencies are reproduced by a 4-inch diaphragm compression driver. Both drivers are manufactured at Meyer Sound's Berkeley campus.

The new two-channel class D amplifier is designed for high efficiency with reduced current draw, yet produces a total peak output power of 1800 watts. A new generation of phase-corrected signal processing results in flatter frequency



The Constant-Q horn exhibits a gentle and uniform rolloff characteristic for predictable behavior when plotting room coverage. Performance specifications are the same for all three variants except for the high frequency horn patterns.

and phase response for superior transient reproduction and precise imaging.

All UPQ-D series models have an operating frequency range of 53 Hz to 19 kHz with phase response of 80 Hz to 18 kHz ± 45°. Linear peak SPL is 133 dB measured with M-Noise, free-field at 4 m referred to 1 m.

The new input module provides loop-through XLR-F and XLR-M connectors for balanced audio, as well as parallel powerCON 20 AC line connectors. The optional RMS remote monitoring system module provides comprehensive monitoring of loudspeaker parameters from a host computer running Compass software. An optional XLR 5 pin connector is available to accommodate both balanced audio and RMS signals. Note that, due to significant changes in the internal cabinet structure, the new amplifier and processing module may not be retrofitted into current UPQ loudspeakers.

The redesigned cabinet retains the original size, grille frame, and is compatible with all the rigging options of previous UPQ products.

The new UPQ series loudspeakers are suited to a wide range of portable and installed applications ranging from main loudspeakers in small and mid-sized venues to fill systems in larger venues.

BOSE PROFESSIONAL INTEGRATES DANTE TECHNOLOGY INTO POWERSHARE AMPS WITH NEW PS404D AND PS604D MODELS

Bose Professional expands its line of PowerShare adaptable power amplifiers with two new models: the Dante-integrated PS404D and PS604D, joining the recently introduced models with AmpLink connectivity, the PS404A and PS604A.

With the release of PowerShare adaptable power amplifiers in 2016, Bose Professional armed installers with a powerful new advantage - the freedom to put amplifier power where it's needed and waste less of an amplifier's drive potential where it's not. "The notion of a multichannel amplifier that breaks free

from the fixed-power-per-channel architecture has been well received," reports Bose amplifier product line manager **Ashraf Elghamrawi**. "Integrators told us that 'power-sharing' makes their projects more responsive, and they asked for digital input options for even more flexibility." Answering the call, Bose Professional has added these four new digital models.

The new PS404D (400 watts divisible into 4 channels) and PS604D (600 watts divisible into 4 channels) PowerShare amplifiers feature



integrated Dante audio networking for increased connectivity flexibility, while giving installers the freedom to place the amplifier away from the source. The recently introduced PS404A and PS604A offer AmpLink connectivity.

AmpLink is Bose Pro's in-rack Cat 5/6 digital audio distribution solution and is supported in their latest DSP units. The Dante models allow mixed inputs using either digital or onboard analog audio connections.

AHUJA INTRODUCES SUB-300A

Ahuja has introduced **SUB-300A**, a powered sub-woofer designed for excellent low frequency reproduction in music programs and PA applications at venues like Restaurants, Lounges, Fast-food outlets, Gymnasiums, Showrooms, etc.

Driven by a heavy duty 12" speaker in a painted plywood cabinet, it is a perfect blend of contemporary design and breath-taking performance backed by Ahuja trust. In addition to a built-in 300W RMS amplifier, the SUB-300A also has a built in active crossover with 100Hz high pass filter. The SUB-300A can be driven by any standard mixer making it an easy-to-integrate add-on to even an existing sound-reinforcement system.

Other key features are link/loop-

through Output to connect an additional SUB-300A, built in Clip Limiter to guard against accidental overloading of the input, Ground Lift Switch and Phase Reversal Switch.

Feature packed SUB-300A is an ideal partner for Ahuja's vast range of high-fidelity wall-speakers (ASX and SMX series) or two-way



ceiling speakers (CSD series) for high performance sound reproduction at small sized indoor venues. **BOSE PROFESSIONAL INTRODUCES ARENAMATCH** LOUDSPEAKERS FOR OUTDOOR INSTALLATIONS

Bose Professional is introducing ArenaMatch DeltaQ array loudspeakers and ArenaMatch Utility loudspeakers for outdoor installations.

ArenaMatch arrays incorporate DeltaQ technology, to bring improved sound quality, consistency, vocal clarity and flexibility to outdoor installations - sports stadiums, arenas, outdoor entertainment centers, and more. Featuring an IP55 weather rating, ArenaMatch DeltaQ modules make it easy to create durable and reliable outdoor loudspeaker arrays that bring consistent, intelligible sound to listeners.

DeltaQ array technology allows directivity, or "Q," to vary in each module to more precisely match coverage to audience area. With nine coverage patterns available, designers can choose from modules with 10-, 20- or 40-degree vertical coverage and easily swap between 60-, 80- or 100-degree horizontal waveguides even in already-assembled arrays to adjust horizontal coverage and create asymmetrical patterns where needed.

By reducing the number of modules required, ArenaMatch loudspeakers can help improve sight lines, reduce array weight, and lower overall system costs compared to some conventional arrays. Most importantly, the coverage flexibility of ArenaMatch loudspeakers means more sound going where it is needed.

ArenaMatch offers a turnkey solution for entire outdoor sound systems. Designers can employ 40-degree ArenaMatch array modules for point-source applications and 10-, 20- and 40-degree modules for line arrays all with the same transducers for consistent tonal balance. Combining ArenaMatch loudspeakers with ArenaMatch Utility loudspeakers, which blend seamlessly to deliver complementary and consistent zonefill coverage, makes equalizing the system much easier.

ArenaMatch loudspeakers also interface perfectly with Bose PowerMatch amplifiers, ControlSpace DSPs and ControlSpace Designer software (as well as Dante®

Bose ArenaMatch Loudspeakers

connectivity), which simplifies setup and monitoring, saving users time with loudspeaker presets for EQ, limiter and crossover settings.

For outdoor sports complexes, ArenaMatch loudspeakers provide clean audio for the entire spectator area - delivering announcements and play-by-play calls clearly. 14inch neodymium woofer and six Bose EMB2S titanium-diaphragm neodymium compression drivers in each module deliver superior intelligibility. And when it comes to music. ArenaMatch loudspeakers deliver crystal-clear long-throw music reproduction.

Weather-resistant features include a three-layer stainless steel grille, water-resistant woofer cone coating, industrial polyurethane exterior coating and a molded input cover.

All ArenaMatch models ship standard with bi-amp capability, a passive crossover, and 70/100V transformer inputs, so they're adaptable to a variety of configurations.

They also include M12 threaded inserts with internal steel link bars for use with Bose accessory mounting hardware or custom array frames.

MARTIN AUDIO ANNOUNCES NEW SXC118 CARDIOID SUBWOOFER

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During a trade show this year, Martin Audio has announced the launch of a cardioid subwoofer, SXC118, as part of an overhaul of its subwoofer strategy.

Designed for installation and touring sound, the SXC118 is a compact, high performance cardioid subwoofer. It features an 18" (460mm) forward facing driver and a 14" (356mm) rear-facing driver, each driven independently by separate channels and DSP from an iK42 amplifier. Each driver has

its own chamber with optimised bass reflex porting.

This arrangement produces a cardioid dispersion pattern which

maximises the front radiation and reduces unwanted radiation behind the subwoofer. The recommended iK42 amplifier optimises the DSP parameters for front and rear drivers to maximise the rear rejection from 21dB at 43Hz to 28dB at 75Hz. In front of the enclosure, the output from the two drivers is additive, giving an extra 2dB of output when compared with a

Martin Audio SXC118 Cardioid Subwoofer

conventional 1 x 18" subwoofer.

Dom Harter, Managing Director, explains further. "The benefit of this cardioid subwoofer is the ability, as standard, to focus more bass where you want it and have less go where you don't. That can mean keeping bass away from neighbours, off stages, away from turntables or keeping it from reflecting off walls and causing destructive interference elsewhere in a room. In the case of SXC118, it delivers more punch and significantly more control over a standard single 18 subwoofer."

The enclosure is constructed from plywood and finished with a hardwearing textured paint. It is equipped with four grab handles, and foambacked perforated steel grilles protect the front and rear drivers. It can be used individually, stacked or flown by means of threaded flying inserts

The SXC118 is an ideal partner for WPM line arrays or point source loudspeakers where low frequency pattern control is required. Interlocking skids prevent movement

when stacked and a threaded plate in the top surface facilitates pole-mounting of up to four WPM enclosures or a single point source enclosure. With the weather kit accessory, the product can also be installed outdoors.

The SXC118 launch is also part of a wider subwoofer strategy overhaul by Martin Audio.

Harter explains, "We have now introduced a very clear strategy to benefit our customers and end users. At the entry level we have our range of BlacklineX subwoofers and at the premium end we have our MLA system self-powered subwoofers. For everything inbetween, we now have an SX Series of subwoofers designed to meet the multitude of installation and live sound applications, including everything from a single slim line 10" subwoofer all the way through to a double 18" Hybrid horn loaded/reflex subwoofer to complement our complete line up of loudspeaker enclosures."

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HARMAN PROFESSIONAL SOLUTIONS EXTENDS THEIR INDIAN ENTERPRISE PORTFOLIO DISTRIBUTION RIGHTS TO BRIGHTSTAR TELECOMMUNICATIONS INDIA LTD

HARMAN Professional Solutions, the global leader in audio, video, lighting and control systems, including networked AV, has announced their distribution partnership with Brightstar India to include HARMAN installed solutions for their enterprise portfolio in India

Brightstar India manages various business segments including Lifestyle Products & Accessories and Consumer Business (including cloud cameras, 4G data cards and hotspots). In addition to their existing portfolio, reportedly they have also developed CMS (Cloud Managed Services), VCaaS (video conferencing as a service) and SecaaS (security as a service) to further enhance value for our enterprise partners in a connected smart-world.

Brightstar India has an existing relationship with Harman Lifestyle division and this partnership will enable Brightstar to deal in the complete range of professional Installed audio and video products for the enterprise business.

"HARMAN is a global leader in

end-to-end AV solutions, and we are excited about this partnership," said **Mr. Sanjeev Chhabra**, Managing Director, Brightstar India. "Inclusion long time. We will also be the onestop-shop for all HARMAN preferred partners in enterprise business."

"HARMAN Professional India values

across multiple geographies. In keeping with our goals of continuous improvement and improving ease of doing business,



of complete range of JBL, AMX, SVSi, BSS, Dbx, AKG, Crown, and Soundcraft will now help our partners to supply a complete audio-video automation solution from Harman which end-customers have been asking for a

its relationship with the existing partners and continually strive to make it stronger. Brightstar is a leading technology distribution business in India and one of HARMAN's largest distribution partners we have appointed Brightstar India as our distribution and fulfilment partner for enterprise business in India," said **Prashant Govindan**, Sr. Director, India and SAARC, HARMAN Professional Solutions.

MACKIE'S NEW DRM SERIES LOUDSPEAKERS

Mackie has announced their all-new flagship **DRM Professional Powered Loudspeakers** packed with up to 2300W of power, cutting-edge DSP, and built-in full color displays. Reprtedly, this series offers incredible sound quality and reliability for a wide range of applications.

This range of speakers are designed for install, mobile DJs, bands, Houses of Worship, rental systems, and more. Available in the 1600W 12" DRM212, 1600W 15" DRM215, 2300W 15" 3-Way DRM315, 2000W 12" DRM12A Array, and 2000W 18" DRM18S Subwoofer – plus all models are available in passive versions.

DRM Series Professional Powered Loudspeakers deliver class-leading power up to 2300W via ultra-efficient Class-D amplifiers with next-gen system protection.

Universal power supplies (100-240V) feature Power Factor Correction technology that regulates incoming

voltage for peak performance even with unstable AC power.

At the heart of every DRM Series loudspeaker, is Mackie's Advanced Impulse DSP module. Precision crossovers, transducer time-alignment, and meticulously tuned FIR filters overcome inherent physical attributes that can contribute to poor sound, especially at high SPL. The result is crystal clear, punchy sound typically experienced only with massive touring systems.

"Advanced Impulse DSP is the result of countless hours of testing, tuning, and comparing," said **Matt Redmon**, Mackie Director of Product Marketing. "It's almost like the speakers disappear and you get an incredibly immersive listening experience, even at wall-shaking levels."

"Mackie has always made intuitive control and ease-of-use a top priority," says Redmon. "We needed a display that was easy to read and always shows you what is important at a glance. DRM Control Dashboard was the answer."

The unique ported design of DRM cabinets allows for punchy, responsive bass while simultaneously helping to keep the amplifier cool.

DRM Series Loudspeakers offer all the configuration options for professional applications. Equipped with M10 flypoints, dual angle pole mounts, and available line array



Mackie DRM Series Loudspeakers

configurations for maximum versatility. Both the DRM212 and DRM215 feature angled cabinet designs to allow for use as high-powered floor monitors.

GE Show

Guangzhou Entertainment Technology Show 广州(国际)演艺设备、智能声光产品技术展览会

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BOSE PROFESSIONAL INTRODUCES NEW BUSINESS MUSIC SYSTEMS

Bose Professional significantly expands its Business Music Systems portfolio with redesigned loudspeakers, amplifiers, DSPs, controllers and software products. This new, modernized line comes together to build a range of cohesive systems that raise the bar in meeting the expectations of system integrators, consultants and their customers in terms of aesthetics, function, quality



Bose Business Music Systems

and budget.

Reportedly, 12 models of new easy-to-install DesignMax loudspeakers in a range of sizes (ceiling and surface models, black and white, with subwoofer options); five new cost-effective PowerSpace amplifiers (two with onboard DSP); two Commercial Sound Processors with a simplified configuration tool: three new digital ControlCenter controllers; and an upgraded online

Business Music System Designer

software tool to facilitate quicker and better system designs.

Adam Shulman, Market Category Lead at Bose Professional, commented, "We listened to our partners, and every aspect of our new solutions has been designed directly from their feedback. These products were engineered to better meet the needs of a wide range of installation projects - from small to large, simple to complex. They reflect our latest advancements in terms of audio technology and design aesthetics, while also focusing on our customers' everyday needs with greater ease of design, configuration and installation."

POPE PROFESSIONAL SLASHES PRICES

The POPE Professional is one of the leading brands in India has slashed the prices of the Speaker's models. The company had made headlines when it was introduced as the most affordable in the field of Professional Sound. This was quite a bomb that The POPE Professional

manufacturer has been notorious for its ginormous price tags.

The prices of the Speakers, Subwoofers, Amplifiers, Line Arrays

are slowly sizing down thanks to the POPE Professional India Manufacturer Making models locally translates to lower taxes. So, here's to hoping that The POPE Professional will be expanding this Products slashing theory to other Active series in the lineup. How big is the price

cut, you ask? It's difficult to contain happiness, I say. Beginning with Active Speakers- It really is a news that makes my eyes soggy. The



reduction in The POPE Professional prices enthused Indian manufacturers. which had been on the fringes of the business and had been desperately trying to prove their mettle.

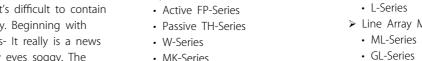
The POPE Professional has slashed prices of all the Speaker's models:

- > Speakers Models
 - Active FP-Series



- ML-Series
- X-Series L-Series
- Subwoofers Models
 - · LD-Series
 - MI -Series
- ➤ Line Array Models

POPE



COAXIAL ENCLOSURE **ULTRA-COMPACT** X41

L-Acoustics has announced the launch of X4i, a powerful yet superbly unobtrusive and highly weatherized coaxial loudspeaker for installation applications. In a convenient enclosure weighing less than a kilo, X4i, the smallest loudspeaker the company has ever manufactured, measures only 3.9 inches/99 mm deep, yet still offers the L-Acoustics world-class sonic signature.

Designed for dimensioned ease of integration into conventional construction materials, X4i is ideally suited to fill applications in performing arts centers or

houses of worship, matching the sonic signature of main L-Acoustics



L-Acoustics Ultra-Compact X4i Coaxial Enclosure

systems such as ARCS and Kiva. X4i can be hidden in walls, stair risers,

> stage lips, pit rails, under balconies or any other tight spot with ease, says L-acoustics.

The enclosure can additionally provide vocal reinforcement in settings such as conference rooms, museums and exhibits, and hospitality

Combined with Syva Sub, X4i constitutes an ideal solution for indoor or outdoor background music in restaurants, bars, hotels, and retail locations. Furthermore, the robust, weather-resistant X4i boasts an IP55 rating and becomes

watertight with a rear sealing plate, allowing integration in challenging climatic or outdoor environments.

Complemented by a versatile mounting accessory, X4i delivers extreme flexibility of use for optimal discretion in a high-performance package, purpose-built to integrate into conventional construction.

Jeff Rocha, Director of Product Management at L-Acoustics, concludes, "In developing X4i, our aim was to provide unsurpassed utility without compromising on sound quality while catering to known architectural constraints. X4i is quite literally the perfect fit for the integration needs of today's installation markets."



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Mixing Indian Classical Music

A Front of House mix varies substantially depending on various factors including genre of music. Since, India is a land rich in the tradition of classical music, PT urged FOH engineer Ajay Vijendra who has been mixing FOH for Indian Classical acts since several years to give our readers a brief insight into classical music live mixing. In this article, Vijendra discusses the Workflow for mixing Indian Classical Concerts.

he greatest feeling for an FOH mixing engineer is when the musicians trust the ability and knowledge of the engineer. One such incident I can recall is when the world famous flautist Sri. Rakesh Chaurasia had come to perform at the Sree Ramaseva Mandali 2017 season held in Bengaluru, a 80 year old music festival where legends like M S Subbulakshmi, Pt. Bhimsen Joshi, Ustad Amjad Ali Khan have performed over the years. The catch in a concert like this is that the artists do not have a chance for a pre-show sound check. The sound check happens in

front of the capacity crowd of 3000. We usually keep all the mics line checked and there are times the minimum equalisation for the instruments are also done (I am aware this is generally frowned upon but a minute wasted is 50 man hours wasted!). I was mixing FOH and monitors and Sri. Rakesh Chaurasia was Mic'd with the reliable Shure SM58. I requested him to play for a couple of minutes for me to check the parameters and was waiting for him to give his inputs on the tone but to my surprise he asked me if I was happy with the way his flute sounded. I said yes, to which he



Ajay Vijendra

Ajay Vijendra is an engineering graduate with a certification from Berklee College of Music as 'General Music Studies - Specialist'. He works as an AV Consultant for M/s M M G Acoustical Consultants and M/s Deim Consultants. He also works as a mix engineer for classical music for M/s Prabhath Sound System and a technical consultant for Abhinava Dance Company.

said "I am happy if you are happy".

Unless we have a liking towards the genre of music we are mixing, the mix will always miss out on something. In my personal experience, I have seen my mix improve over the years since I have started listening to classical music whenever I commute or am working.

Workflow for mixing a Indian Classical Concert:

The one important rule I follow while mixing Indian Classical Music is that none of the instruments and vocals are technology dependent and the main goal would be to make it sound as natural as possible.

a. Before the artists arrive, I make sure the monitors are rung out and use my RTA microphone to equalise the venue for a flat response. The important point here is that the system is absolutely noise free as the concerts start off at a very slow pace with just the lead artist doing an 'alap'. Any noise in the system will definitely kill the mood.

b. I start off by setting the levels of Tanpura in the monitors and FOH. Since they are relatively loud on all the monitors, bleed into the microphones and are heard on FOH with sending them intentionally. It is usually played through a phone or a tab which is connected to a DI box or by a physical Tanpura which is Mic'd.

- c. **Gain Adjustment:** I take the lead microphone (it could be the vocals or the instrument which would be the highlight of the show). As this will act as a reference for the follow instruments and the percussions, I make sure the gain structure is set properly and first send it to the monitors. At this point the FOH is shut off and only the monitors are turned on. Once the artists are satisfied with the levels, I open the FOH for tone adjustment. Once the lead microphone is completed. I move on to the lead instruments, then back up vocals and then to the percussions. Most of the concerts are usually with monitor wedges and fills Classical musicians seldom ask for In Ear Monitors unless it is a fusion concert and involves a lot of western instruments.
- d. **Equalisation:** Indian classical music does not require too much EQ as the nature of the music and instruments

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is such that it has a very full tone FO would be to compensate for the loss of certain important frequencies which are lost due to the amplification and acoustics and to set the High Pass Filter to avoid unwanted noise from the stage. For example, I have found that 1k is an important frequency for a Sarangi with an AKG C411 L and by boosting it by 2-3 dB makes a lot of difference. Of course, this is completely system and venue dependent. But there is a problem when it comes to an instrument like flute. A flautist usually carries flutes which are of different scales and octaves. Due to which the EO for one flute might not suit the other. In such cases, we have to be alert and make sure the EO is altered accordingly.

e. **Compression:** Indian Classical Music is very dynamic due to which there are times when certain notes get boosted beyond control. Also, the mic technique displayed by the artist adds whether the channel has to be compressed. I avoid compressing vocals unless it is absolutely necessary. If it is an instrument which is the lead in the concert such as a violin with a transformer

pickup, I would compress it at 3:1, with a slow release time and a soft knee.

f. FX: As we know, classical music does not rely too much on the electronics of the sound amplification system, I always use some FX on the leads and instruments to compensate the flatness of the tone, unless requested by the artist otherwise. There are musicians who have embraced FX as part of their ensemble to make them sound more vibrant. Understanding the acoustics of the room will always help in setting the parameter of an FX. By knowing which frequency is reverberating more in the hall, we can cut those in our effects processors to make it sound even. The wet to dry ratio is usually between 80:20 and 70:30.

My goal in a show is to complement the hours and hours effort put in by the performers by making sure they are heard right and for a true tech crew, being felt in the production gives more joy than being seen in one. There are times when we are in disagreement with the artists for many aspects before the show, and those disagreements facilitate the betterment of the art of mixing.

MIX MAGIC

(Continued from page 61)

hard on the gear too. We had a couple of computers (Macintosh minis) that just didn't want to work when the sun was out. A lot of gear really struggle when you have those temperatures. I don't like it either. I much prefer the cold. I was drinking a lot of water," he says.

Commenting on the infrastructure for this tour he says, "It seemed like the infrastructure of the concert area itself was lacking. Not enough maintained restrooms, not enough dressing room space, not enough catering choices. The staging seemed a little dangerous as well. I was glad that I was at FOH. The safety standards need to be raised. Human life is precious, and no one should get hurt at a concert," he cautions.

TECHNOLOGY – BOON OR BANE?

"ABSOLUTELY a boon," exclaims Pooch. "With the amazing advances in technology in the last 20 years, I can be way more creative and really get things to sound like you are sitting in front of some near fields, when in actuality you are sitting in a soccer stadium. I have always wanted every seat in the house to sound the same, and we are approaching actually achieving this. That is really exciting."

Talking about the evolution of technology down the years, he says, "As a studio engineer, he I watched the digital age come to fruition. I remember the first Mitsubishi X850 32 track digital tape machine being wheeled into the studio that I worked at in 1992. We all stood around it, not really knowing what to do with it. The first attempts at digital audio in the studio were really bad. The technology was not ready in my opinion and the sound of records suffered. The same thing happened in live sound 10 years later. The technology just didn't sound great at first. Just now in the last five years, I think that the tool and convenience of digital audio has come into its own and the result of what you can achieve is amazing. The fact that I can have 300 parameter changes happen in a snapshot, allow me to achieve whatever I can dream up in my head. It opens the doors of creativity, and the end-result are some amazing sounding shows. In fact, I stand by the statement that there should not be ANY bad sounding shows out there (at this level). If there are - it is the fault of the engineer, not the gear."

NEW AGE CONSOLES

There is no denying that the live sound industry is in the midst of the golden age of digital live sound. This also presents a new set of challenges to aspiring engineers. "I think the main challenge currently is that there is a lot of computing power to get a good sounding result. With plugins and outboard computers, networking, etc. Sometimes I am having to network (and clock) 6 different computers together. This is a hard thing to do without failure. I tell young up and coming engineers to learn networking and RF if they want to keep working in this business. These are the things that are always in need of good people," says Pooch.

Explaining what he would ideally like to see in new age digital consoles, he says, "I would like to see some of the tasks normally offloaded to plugins to become better on digital consoles. Multiband EO and compression for example. We are starting to see some console manufactures making leaps and bounds in this area. Plugins will always be needed, but can now be focused on super specific tasks. Also – I think that artificial reverbs are the hardest thing to make sound fantastic. They are very DSP intensive. I think as technology makes faster, more powerful processers. I would like to see great sounding, highend reverb show up on the console themselves."

SOUND ADVICE

"NEVER GIVE UP and hard work is the key to this front of house career. Push yourself to be the very best you can be and it will be get noticed with time. While talking about his initial days,

Pooch mentioned, "I had to work very hard early on in my career. I didn't make a good wage until several years into my career. Learning how to get along with people is also an essential part of this career. This business is not so much about talent as an engineer, but how one is interacting with other people. Hone your skills and be good at what you do but study the psychology of humans and how to best advance your career by being the best at communication and giving people what they want. If you become the guy or girl that is the hardest working, easiest to get along with, a talented engineer, there is room for you in this business. If you don't push yourself to be the best, there are too many people that will take your spot. Network with everyone that you can," he asserts.

Addressing the young live sound engineers in India, he says, "If you want to work with American bands, you should move to America and work with one of the many national touring companies. This is a word of mouth business. If you are good and working with the right people, your name will quickly be known. There are lots of different ways to keep working in this business. If you want to work and have work for many years to come. Learn RF and networking. Be skilled at both of these things and there will always be work. Use this as the platform to jump off into mixing," he concludes.

Touring Console

Stage Sound Managers

Allen & Heath SQ-7

SQ-7 is the 33-fader flagship console in the SQ series, powered by Allen & Heath's revolutionary 96kHz XCVI FPGA engine. Created to excel in demanding scenarios such as AV, corporate events, live productions and houses of worship, SQ-7 offers pristine high-resolution audio quality and an ultralow latency of <0.7ms. The console features 32 exceptional onboard mic preamps, plus 8 stereo FX engines with dedicated stereo return channels and access to the renowned RackExtra FX library.

Main features include:

- 96kHz FPGA processing
- 48 Input Channels
- · DEEP Processing ready
- 33 Faders / 6 Layers
- 12 Stereo mixes + LR
- 3 Stereo Matrix
- 8 Stereo FX Engines + dedicated stereo returns
- 7" capacitive touchscreen
- SLink port for remote audio / expansion
- 64ch I/O Port for audio networking
- 32×32 USB audio interface
- SQ-Drive direct recording to USB
- AES output
- Chromatic channel metering
- Integrated LED illumination
- Dedicated physical controls
- 16 Assignable SoftKeys
- 8 Assignable Soft Rotaries
- Channel LCD displays

Technical Specifications:

- Width x Depth x Height: Desk mounted 804 x 514.9 x 198 mm (31.7" x 20.3" x 7.8")
- Unpacked weight: 17.8 kg (39.3 lbs)
- **Packed weight:** 21.9 kg (48.3 lbs)



Ashly Audio digiMIX18

The digiMIX18 is a digital mixing solution that maintains all key features of the digi-MIX24 in a more compact, rack-mountable model. It offers 18 inputs and 12 output buses (18x12) and maintains the same powerful real-time live control that give users instant access to all major functions.

Main features include:

- Precision Alps motorized 100mm fader
- Responsive, 7" color LCD touchscreen for graphical viewing, assign, and setup
- FREE iPad App for wireless remote control
- EZ-Mode for secure, simplified touchscreen or iPad control with EZ-Mode mixer
- Ships as desktop console, rack rails included
- 16 low noise microphone preamps with dedicated trim controls, +48V phantom power, phase invert
- · Gain-sharing automixer
- Stereo AUX sends for stereo monitors
- 2 dedicated line-level inputs
- TRS inserts on channels 1-8
- 8 AUX sends, 6 DCA for fader or mute groups
- 2 internal stereo FX with fully editable reverbs, delay with tap tempo, tremolo, flange, and chorus
- Pan control
- High resolution delay (0.2mS) on every input, AUX, or FX
- Expander/noise gate on every input and FX channel
- Comp/limiter on every input, output, and FX channel
- 4-band parametric/shelving EQ filters plus HPF/LPF on every input, output, and FX channel
- 31-band Graphic EQ on main and AUX outputs
- Stereo link for adjacent inputs and AUX outputs
- Solo/PFL on every input, output, AUX, or FX
- Stereo main outputs on XLR and phone



jack with dedicated level control

- Headphone and control room outputs with dedicated level controls
- User presets for Scene, DSP channel, FX or GEQ settings, plus channel copy function
- 24-bit A/D and D/A converters, 32-bit DSP processing, 48kHz sampling rate

Technical Specifications:

- Microphone Input Class-A Discrete Balanced, 7.3k Ohm Input Impedance
 - ➤ Frequency Response to Main Output: 20Hz - 20kHz, +0.0/-0.5dB
 - ➤ Distortion (THD&N) to Main Output: <0.01% at OdBu, 20Hz – 20kHz
 - ➤ Equivalent Input Noise: -126dBu, un weighted, 20Hz 20kHz, 150 Ohm source
 - ➤ **Gain (Trim):** 0 dB +50dB
 - > Maximum Input Level: +20dBu, balanced
 - ➤ Phantom Power: +48VDC, 14mA per channel, assignable to channels 1-16
- Weights and Dimensions
 - ➤ Unit Dimensions: 19.3"L x 5.65"W x 14.0"H (486 x 144 x 356 mm)
 - ➤ **Shipping Dimensions:** 22.0"L x 8.15"W x 17.1"H (559 x 207 x 434 mm)
 - ➤ **Unit Weight:** 17.0 lbs (7.7kg)

Cadac CDC seven-s

The Cadac CDC seven-s is the new flag-ship console in Cadac's digital lineup. It is not only physically larger than its sister consoles, the CDC six and five, but it also has a greater channel count, with 128 input channels and a configurable bus count of 56. It shares the same operating system and feature set as its smaller siblings meaning that show files can run across all three.

Main Features include:

- Classic Cadac Mic-pres
- Sub 0.4 millisecond latency from analogue inputs on stage to analogue outputs on stage
- Automatic latency management system
- 128 input channels
- 64 busses, 56 are assignable as Group, Stereo Group, Aux, Stereo Aux or Matrix
- Unique Cadac Monitor Mode



For any live setup the requirements are many and varied and typically include mic, line and instrument sources etc. But whether the setup is simple or complex, live console is always the heart of any stage show. The ideal console offers maximum flexibility, efficiency and control, making it easy to mix any type of performance. This product focus lines up five latest small or large format live consoles launched in 2018. This section does not endorse any product and is intended as a guide for future purchase.

- · Custom Fader Layers
- · 4 band fully parametric EQ
- · Extensive dynamics
- 16 VCA groups including 'VCA unfold' navigation
- 16 assignable buttons with OLED displays
- 16 stereo on-board effects
- 31 band graphic equaliser on all outputs as well as 4 band fully parametric EQ
- Compressor/limiter on all outputs
- Input and output delays
- Snapshot automation system with Cue Ripple and Cue Preview
- Dugan Automixer post fade Insert for Waves

Technical Specifications:

- General Specifications CDC Seven
 - ➤ **Faders:** 36 x 100mm motorised faders
 - ➤ Screens: 2 x 23.5" 16:9 HD + 1 x 6.5" Touchscreens
 - > PSU: 1 x external 19" 2U rackmount PSU
 - ➤ Inputs: Up to 192 (inc local I/O)
 - > Channels: 128 with full processing
 - ➤ Busses: 56 configurable in pairs as group/aux/st aux plus dedicated LCR, monitor LR, headphones LR and talkback
 - ➤ Matrix: Up to 67 x 48 with full processing
 - > Outputs: Up to 192 (inc local I/O)
 - ➤ **Graphic EQ:** 32 band +/-16 dB on all 55 outputs
 - ➤ Internal FX: 16 high-resolution 96 kHz stereo effects processors
 - Local IO: 8 x XLR Mic Inputs (inc 48 V, PAD and 1 dB gain steps), 8x XLR Balanced outputs, 4 x XLR AES/EBU inputs and 4 x XLR AES/EBU outputs
- ➤ Comms: 2 x Cadac MegaCOMMS
- · Audio Specification
 - > Sample Rate: 96 kHz
 - > ADC/DAC: 24-bit
 - ➤ Frequency Response: 20 Hz to 44 kHz + 0.5 / -1.5 dB
 - > THD+N: better than 0.005% @unity gain, 10 dB input at 1 kHz
 - > Channel Separation: better than 90 dB
 - ➤ Residual Output Noise: < -90 dBu (20 Hz 20 kHz)
 - ➤ MIC EIN: < -127 dB with 200 Ohm source impedance
 - > Maximum Output: 21 dBu
 - ➤ **Dimensions:** 1555.7mm wide x 766mm deep x 259.12mm height
 - ➤ Weight: 60kgs / 132lbs (approx)

Studer Vista 5 Black Edition

The Vista 5 Black Edition (BE) is a cost-effective mixer surface that combines a Studer control surface with support for the industry-leading Infinity Core processing engine. The Vista 5 BE is a highly flexible, compact digital mixer, with a superbly-conceived control surface that will find favor amongst users in broadcast production, live sound, and performance venues...

Main Features include:

- Infinity Core Studer's immensely scalable Infinity Core brings unprecedented processing power on standard CPU hardware, available as either a standalone appliance or as software for use with a COTS server.
- Vistonics Vista 5 BE incorporating the unique Vistonics user interface which ensures quick and easy console operation—the key to a smooth workflow, short production time, and trouble-free live transmission.
- FaderGlow During a hectic live production, FaderGlow provides the operator with an instant overview of the console status by illuminating each fader in one of eight, freely-assignable colours.
- Vista FX Studer offers as a cost option Lexicon PCM96 Surround (up to 6 Engines) high quality surround effects for the Vista 5 BE, controlled directly from the Vistonics user interface.
- Loudness Meter The Vista 5 M3 makes use of dual colour bargraph meters on each fader, along with integral loudness metering in the master section. This keeps the surface as compact as possible whilst providing metering info for mono, stereo, as well as front and rear maximum levels of surround channels.
- Surround Sound Studer's unique Virtual Surround Panning (VSP II) fits the Vista 5 BE perfectly. It allows the operator to take mono sources and create a realistic sound field (stereo up to 5.1), modelled around a few simple parameters.

Yamaha RIVAGE PM7

A RIVAGE PM7 system is based around the CSD-R7 Digital Mixing Console with built-in signal processing for mixing and effects. Other required components are one or more I/O racks for input and output, and a dedicated interface card for network connectivity.

Main Features include:

- Two I/O Rack Categories to Ideally Capture the On-stage Sound: Yamaha offers two types of high-performance I/O Rack units for RIVAGE PM7 input and output, each providing compatibility with a different audio network.
- The Complete Yamaha Selected Channel Interface: The Selected Channel section of the RIVAGE PM7 inherits the full-featured configuration of the RIVAGE PM10, providing direct, fast access to all channel parameters.
- Touch Screen and Fader Strips Merge for Intuitive Control: Its control surface features three groups of 12 faders. The two leftmost fader groups work with large touch panel displays in the top panel, providing an enhanced version of the Centralogic operating environment.



Technical Specifications:

- · Mixing Capacity:
 - > Input Mixing Channels: 20mono
 - ➤ Mix Buses: 60
- > Matrices: 24 (Input to Matrix supported)
- Input Channel Functions:
- > Digital Gain: Yes (-96dB
- ~+24dB
- ➤ HPF: 20Hz~2000Hz, -6/-12/-18/-24dB/oct Selectable
- > **PEQ:** 4 Band Full PEQ (4 algorithms, RTA overlay support)
- ➤ Dynamics 1: Legacy Comp / Comp260 /Gate /De-Esser /Expander /Ducking
- ➤ Dynamics 2: Legacy Comp / Comp260 / Gate / De-Esser / Expander / Ducking





here you look is where you control" – One of the unique features of the Vi series mixing consoles is Studer's 3D Vistonics touch screen functionality which makes them one of the easiest-to-use digital console to handle complex mixing workflows in the market. Vi consoles are extremely well built, with a sturdy aluminum chassis and a unique fader glow technology. This all adds up to why these desks are favored by hire/rental companies, mixing engineers, festival stages, in-house desks, touring acts, etc.

There isn't a person in the industry who doesn't love the Vistonics UI as it marries controls and touchscreens seamlessly. Soundcraft Vi series encompasses large format digital mixing consoles on which one can mix from 64 inputs upto 128 inputs and upto 32 Mono/Stereo Busses. They are meant predominantly for Touring and mid - large format installs such as Performing Arts, House of worship, Stadium, Broadcast, etc.

"The Soundcraft Vi Series digital consoles have been the mainstay for leading touring and rental companies across the world for its legendary sonic signature, extended feature set including Vistonics and ViSi remote capabilities all combined with the same easy and intuitive workflow across models. With the second generation of Vi consoles such as Vi1000, Vi2000, Vi3000, Vi5000 and Vi7000, we have seen more

users choose Vi as their main FOH and monitor console for venues and performances across genres and themes," said **Prashant Govindan**, Sr. Director, India and SAARC, HARMAN Professional Solutions.

"The things I love about the Sound-craft VI consoles is the 'Walk up and mix approach'. The interface is straight up and simple to understand. All relevant information about the channel is always upfront. The Gate and Compressor are really smooth," said **Johnston D'souza**, FOH Engineer for bands Kabir Café and Alien Chutney.

Following in the footsteps of the Vi6 (used for touring and large-scale installations in major venues) launched in 2006, and the medium-sized Vi4 in 2007 respectively, in 2010 Soundcraft launched the Vi1 digital mixing console. This moved the Vi range into a far more affordable price bracket intended for use in small installations, but still with Vistonics, Lexicon FX, BSS EQs, and the sound quality. Marketed as a complete standalone console package, the Vi1 was designed as a 'drop in solution', which meant that sound engineers more used to analogue consoles could upgrade to the digital desk with no additional hardware required outside of

"We have had an extraordinary experience with our Vi Desks. We really appreciate the workflow and ease of use", said **Navneet Wadhwa**, Director – Audio

Design and a proud owner of Soundcraft Vi1.

Eight years after Soundcraft first launched the Vi series Vi6 and Vi4, the company launched its new Danteenabled Vi3000 console in Mar 2014. When designing the Vi3000, Soundcraft focused heavily on creating a new look with dramatic cosmetics and industrial design changes, as well as a modernised version of the popular Vistonics user interface technology previously seen on Soundcraft's Vi4 and 6 consoles

The Soundcraft Vi3000 has received tremendous response in India over the years.

"The Soundcraft Vi3000 is efficiently designed with full complement of analog and digital inputs and outputs. The console provides Dante/ MADI record feed outputs, UAD & Waves Plugins Capability, Redundant power supplies and other Nice Features. Great Board and Priced Excellent for the features provided, Excellent for Monitor Mix & for big corporate gigs," says Santana Davis, Managing Director & Chief

Over the years Soundcraft Vi Series, has gained popularity globally for its user-friendliness. HARMAN Professional Solutions, India recently announced that Soundcraft Vi series digital mixing consoles had successfully established 150+ impressions in India and the footprints continue to grow organically. As the digital mixing console continues to find constant success and wide acceptance in India, PT takes a look back.

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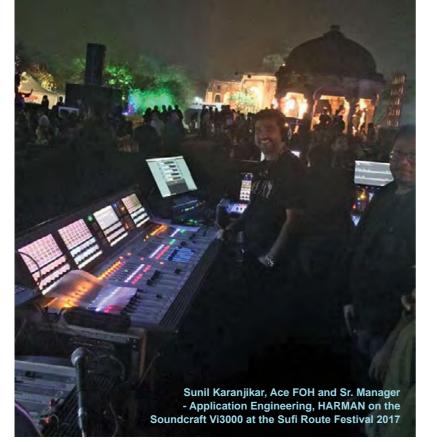


MT-1601...3000+3000W RMS@20hms MT-1201...2500+2500W RMS @ 2 0hms MT - 701....1600+1600W RMS @ 2 0hms

> 6/7, Dongre Building, 1st Floor, Kiln Lane, Off Lamington Road, Mumbai - 400 007.

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Sound Engineer – J Davis Prosound & Lighting.

"I started my digital career in FOH on the Soundcraft VI 3000. Until then I used to use analog consoles extensively. My friend and senior Nitin Joshi once suggested that if I don't shift to digital consoles, I will soon be thrown out of the industry. I was skeptical about the sound of the digital consoles as we were using analog consoles in the studio also. Then there was a situation where I had to mix a massive gig where I had no choice but to use a digital console. Manish Mawani suggested that I use a Soundcraft VI 3000. I really was happy to mix the show on it. All my doubts were cleared on seeing the headroom. Now I use almost all the digital consoles. They are good. But my first love still is the VI series. What I like about Soundcraft consoles is the ease of a digital console and the sound of an analog one. One more thing I always appreciate is Vistonics technology which gives you the feel of analog world (Where you see there you do). Now with the Soundcraft VI 7000, we have unlimited possibilities and

freedom to expand," says **Vijay Dayal**, Sound Engineer - Yashraj Studios & FOH Engineer for Ajay-Atul

"It provides superior sound quality through its advanced engineered pre-amps. Professional sound engineers are enthusiastic about the Soundcraft Vi3000 features. The Vi3000 is one of the best Monitor mixers in the market, it captures the moment perfectly; it is a value for money product," enthuses **Purvaze Buxy**, Director – Vibrations Unlimited & FOH Engineer for artiste Armaan Malik.

"We recently got the Soundcraft VI 3000 console to explain to our students the practical workflows in the live sound industry. The VI3000 was one of the boards that was loved the most by our students because of its simple layout and yet such advanced features like Vistonics Touchscreens, integration of Soundcraft Realtime Rack, onboard processing, etc. The students felt at ease to operate the VI3000 and the anxiety to use a new board vanished quickly," explains Dilip Achtani, Associate Director, Seamless Education Academy Pvt. Ltd., Goa



The most compact member of the Vi series - the Vi1000 Digital Mixing Console being used for the live album recording of fusion rock band Kabir Cafe



In 2015 Soundcraft replaced the popular Vi4 and Vi6 consoles with the Vi5000 and Vi7000 offering significant technology, feature set improvements whilst retaining, and building on the user interface and sound quality characteristics that had made the Vi4 and Vi6 consoles a favourite on riders for eight years. With the introduction of the Vi5000 and Vi7000, Soundcraft proved that they had taken a cue from their customers by offering a significant step up with the user interface features customers need and the world-class audio quality and processing tools they expect.

"The SNL Pro and Soundcraft Vi console partnership goes back over a decade. It feels good to own one of the largest Vi inventories in the country, backed by great product reliability & amazing after sales service from HAR-MAN Professional India," says **Manish Mavani**, Director – Sound & Light Professional and a proud owner of Soundcraft Vi7000, as well as the Vi6.

"I started touring with various brands almost 17 years ago. I used multiple analogue consoles. With the introduction of digital consoles came a solution which would be compact with multiple channels onboard. Shifting to a digital console from the analogue world became a compulsion at a point in time and the Soundcraft Vi series gave me the most amount of comfort. After using various digital consoles, I can say that what I love the most about the Vi series consoles is the ease of use. The layout is simple and everything is right in front of my eyes. Sound check is a breeze. My current set with Arijit, where I am the Music Producer and FOH engineer, has over 200 inputs and we cascade a Vi7000 and Vi3000. Same goes at the monitor world. It's super smooth to handle the gig. Plus, with functions like HIQNET controlling the console becomes easy when you are taking a round of the venue With onboard optical MADI. recording and plugin processing is phenomenal. I record a total of 128 tracks (64 on each console) and use

another local rack input for plugin processing over MADI. I also use a lot of analogue hardware and an alternate input switch on the console helps to change to the direct stage input just in case any of my hardware gives up and is a great backup option. All in all, Vi series consoles have been my favorite and I love working on them," says

Sunny M.R., Music Producer and FOH Engineer for Arijit Singh.

End of 2017 HARMAN introduced the most compact member of the Vi-000 family - the Vi1000 Digital Mixing Console. Representing the culmination of the rich feature sets offered by Soundcraft's acclaimed Vi Series, the new V11000 at just 86cm x 81cm (34" x 32") in size retains all the mixing and processing power of its two larger siblings, the Vi2000 and 3000, launched in 2016 and 2014 respectively.

The Vi1000 designed for live touring, music venue and corporate AV customer ticks many boxes thanks to its specification delivered in a compact and friendly package. Employing Soundcraft's unique and highly intuitive Vistonics II channel strip user interface, together with FaderGlow, the console combines the operating principles and workflows from the highly successful Vi3000, 5000 and 7000 consoles with Soundcraft SpiderCore —a powerful built-in DSP and I/O engine based on STUDER technology, offering 40-bit floating point processing for classleading audio quality. The Vi1000 also comes into its own as an additional remote-control surface for any of the larger consoles in the range, using their Mirroring feature

"The fact that we have surpassed the 150+ milestone is not surprising given the level of training, support and service that HARMAN Professional India have extended to customers. I am personally thrilled to be part of the team that surpassed this milestone especially in an emerging market like India. I wish to thank all our customers including rental companies, end-users and all our well-wishers who have made this possible," concludes **Prashant Govindhan**.

SAMSON

AIRLINE 88 UHF Wirless System





AIRLINE 88 AG8 GUITAR

UHF Wireless System

Rule the Stage with Confidence

- Frequency agile UHF wireless system
- 16 operating channels across 24MHz bandwidth
- Up to eight simultaneous systems per frequency band (region dependent)
- Rackmount kit included





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UHF Wireless System

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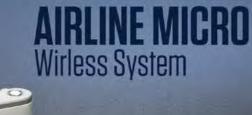


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THE LIVE MUSIC INDUSTRY IN INDIA

ince time immemorial, music has known to not just surpass barriers of language or culture but is known to be a soul-stirrer. A series of sound creates melody, which strikes a direct chord with our emotions and energizes us like no other alimentation. Music is a form of art and expression that has the power to make both, its creators and its listeners, rejuvenate and connect with one and another

Over last one decade, the adoption of audio technology and market for international music has evolved manifold in India. The exposure to global music and internet penetration via smartphone has acted as a gamechanger for the audio industry. The needs and preferences of the Indian audience, particularly the millennials, have changed significantly, as Indian consumers are now preferring global artists. The audience today are in constant lookout for an irreplaceable factor of music - a memorable experience, which is only possible with passionate artists and world-class audio technology. The dire need for worthwhile experiences has seeped into the music consumption patterns of the listener. Music has been an unparalleled part of the consumer's life, special thanks to headphones/ earphones which allow music on-thego and speakers at home. Every now and then, consumers wish to experience the music to the fullest with live concerts. It's like watch a movie on theatre or your television, while the content is same, the experience matters

If you contemplate, considering the hectic and deadline-driven lives of today's generation, it is natural for consumers to look for ways and opportunities to de-stress and rejuvenate themselves. Increasingly, we have witnessed that millennials are looking for a holistic experience that would help them keep their spirits alive and escape from



the monotonous routines. The setting of a live concert or a live stage performance takes you to yet another world – a world full of passion and excitement where army of music lovers come together, sharing synergy in music preference and join the bandwagon with their favourite artist performing live in front of them. This vibe is electric, contagious and idiosyncratic.

So, while recording is an important aspect of the music industry. live entertainment as a format has also gained momentum. Over the past decade, the popularity of music festivals has increased drastically in India. Bacardi NH7 Weekender and Sunburn are two of the biggest and most popular festivals that see large numbers of footfalls from across the country. In 2012, Sunburn drew over 1.5 Lakh people, a number that has been steadily increasing since then. They have also laid the foundation for smaller festivals to take root. Over the past couple of years, these festivals attract loyal audience, who act as brand evangelists for such events and further attract more music lovers to festivals nationwide.

 Vipin Pungalia, Director - Professional Segment, Sennheiser Electronics India.

The emergence of conventional and non-conventional venues for live music has led to a healthy demand for both home-grown and international live entertainment in the country. Despite the industry-wide shift in consumer spending, the growth of live music looks to continue unimpeded for years to come, as real-life experiences encounter a surge in popularity.

A FICCI-KPMG 2016 report sated the size of India's music industry at Rs 1,080 crore in 2015 is expected to grow to Rs 2,060 crore by 2020. Social media buzz has also contributed to the growth of the music festivals in India. Approximately nearly 25 festivals are held each year in India. With music festivals going mainstream in India, event producers over the past two to three years have recorded millions in ticket sales and sponsorship revenues, ensuring the sustainability of these events in the future as well. As a direct consequence of the rising popularity of music festivals, there is an unprecedented surge in the number of independent artists across genres who are making the most of digital platforms and live events to find their audience. While Bollywood dominates music consumption in our country, the indie music scene in India is gradually maturing, and things are looking up for independent artists.

As advertisers look to reach out to young audiences in more immersive ways, they are increasingly cashing in on emerging trends such as music streaming and multi-day music festivals to make sure that their brand is present and visible where the millennials are. Today, India has become a high-potential market for experimental and experiential music events,

In fact, talking about the re-

cent times itself, a huge number of international and national bands and artists alike, have performed in live concerts and shows. Every second weekend there is a Fest being organised, with one of its key element being the experience of watching a popular artist perform. ALT J, Marshmello, AR Rahman, Lucky Ali, Martin GarrixAre some of the very popular live concerts that have enthralled the audience here in India and the list is endless

Having said that, despite the live music industry growing at an unprecedented rate in India today, what tends to often go unnoticed is the importance and significance of the professional equipment that contributes in numerous ways the overall experience. It is the perfect amalgamation of technology and equipment with music that can create a masterpiece. Every single artist takes their professional instruments and equipment extremely seriously, focusing a lot on their quality, because it could make or break their performance. In other words, professional equipment is indispensable to any artist.

Understanding the needs of the live performing industry, multiple live performance gear is available in the market that cater to those needs and requirements.

India has always been a music loving country. Considering the way today's audience is seeking memorable experiences and the ever-increasing footfalls at music concerts, the live music industry will continue to grow in India in the coming years. This will have a direct impact in the demand for superior professional equipment with cutting-edge technology, making it important for brands like us to constantly innovate and create the best to provide an impetus to this growing culture.



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30.05 - 01.06.2019

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THE SECOND LARGEST MARKET IN ASIA FOR THE AUDIOVISUAL AND SYSTEMS INTEGRATION SEGMENT CONTINUES TO EXCITE THE MARKET.

Over the years, PALM Expo has witnessed phenomenal growth in the number of Systems Integrators & AV consultants sourcing products and solutions for entertainment venues and home theatre projects.

Being highly invested in the audiovisual domain PALM launched AV Integrated Systems Expo in 2019 with an aim to grow the industry and provide the stakeholders a single platform for all Audio Visual & Integrated Systems Solutions. Leading the charge AV-ISE launched a 3 day certification course in AV Install & Integration -CAVS, designed to provide knowledge of audio and video fundamentals and enhanced troubleshooting skills, while promoting best-practices and technological expertise of systems technologies.

This course is aimed at providing knowledgeable manpower, replacing the 'electrician' with a 'qualified integrator' and creating talent with specific learning for AV integration.





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Stage Microphones

Live Sound Essentials

AKG C636

AKG C636 master reference handheld vocal condenser microphone has a custom-tuned capsule. It is made to capture a vocal performance in all its nuances while rejecting feedback, handling noise, and pops..

Main features include:

- Its proprietary double shock suspension system greatly reduces handling noise, even during the most energetic on-stage performances. Its capsule sits on a highly absorbent rubber bearing, eliminating any structure-based noise, while an adjustable balancing network cancels vibration over a wide frequency range.
- The protection system spares no expense and consists of the grille, a foam layer behind the grille and a magnetically attached computer-modeled mesh layer on top of the capsule. This triple-layer protection system is virtually unique to AKG and is not found in any microphone remotely near this price range.

Technical Specifications:

- General Specifications
- > Type: 3/4" Back electret condenser
- > Polar Pattern: Cardioid
- > Sensitivity: 5.6 mV/Pa
- ➤ Audio frequency bandwidth: 20 20000 Hz
- > Electrical impedance: 200 Ohms
- ➤ Recommended load impedance: 2000 Ohms
- ➤ Equivalent noise level: 20 dB-A
- ➤ Signal to Noise: 74 dB-A
- > Max. SPL for 1 % THD: 150 dB
- ➤ Operating temperature range: -10 to 60 Celsius (14 °F - 140 °F)
- ➤ Bass cut filter: 80 Hz, 12 dB/octave
- Dimensions
 - ➤ Length: 185 mm
 - ➤ Diameter: 51 mm
 - ➤ Net Weight: 312 g
- Powering Interface
 - > Voltage: 48 V
 - ➤ Current: 4 mA

Aston Microphones Stealth

The Aston Stealth for stage with 4 switchable voices delivering unparalleled performance in almost any situation. A Class A built in mic preamp with autodetect 48V Phantom power (a world's first!) and featuring a unique Sorbothane internal shock mount system and Aston's legendary build quality.

Main features include:

- Four settings, four different voices: There are 2 vocal settings, optimized for different vocal tones, a guitar setting which is equally suited to Spanish guitar, Electric guitar cab and steel string acoustic, and a dark, vintage setting, reminiscent of classic ribbon mics.
- Active & Passive modes with 48V Autodetect function: Stealth works with or without 48V phantom power. In passive mode (unpowered) the active circuit is completely bypassed, and Stealth operates with the simplest possible signal chain to give a beautifully clean sound
- Built-in Class A Mic Preamp: When in active mode Stealth features a high-
- quality built-in Class A Mic Pre, dispensing with the need for an expensive external gain lifting device. Stealth features a fully balanced signal path from capsule to output, yielding a superior reduction of 'Common Mode' noise compared with single-ended (unbalanced) designs.
- Unique Sorbothane internal shock mount: Sorbothane is a synthetic viscoelastic urethane polymer used as a vibration damper and acoustic shield used in computing, hi-fi and many industrial applications.



• Exceptional side rejection: Stealth's acoustically tuned headstock provides a highly focused cardioid polar pattern with enhanced off-axis rejection.

Technical Specifications:

- Transducer Type: Moving coil
- Directional Polar Pattern: Cardioid
- Frequency Response: 20Hz 20kHz (+/-3dB)
- Equivalent Self Noise Level: 10dB Aweighted
- Sensitivity at 1kHz into 1kohm passive mode: Average 1 mV/Pa (varies across 4
- Sensitivity at 1kHz into 1kohm active mode: Average 150 mV/Pa (varies across 4 voices)
- Maximum SPL for THD 0.5%: 140dB
- Product length: 196 mm / 7.72 in
- Product width: 58 mm / 2.28 in
- **Product weight:** 692 g / 1.52 lb

Audio-Technica ATM510PK

The ATM510PK vocal microphone pack offers a set of three ATM510 cardioid dynamic handheld microphones that are tailored for smooth, natural vocal reproduction

The ATM510 features a cardioid capsule that reduces pickup of sounds from the sides and rear. maximizing isolation from other sound sources and minimizing feedback. It is equipped with a rare-earth magnet for improved output and transient response and has specially designed internal shock mounting for reduced handling and stage noise. The microphone's durable, all-metal construction ensures longlasting performance, while its multi-stage grille design offers excellent protection against plosives and sibilance without compromising high-frequency clarity.

Main Features include:

 Pack includes three ATM510 cardioid dynamic handheld



A microphone is perhaps the most important link, in the audio chain that transmits an artist's voice to the audience. Clear audible sound is what excites the audience and to achieve this kind of sound, a microphone par excellence is a must. In this product focus PT profiles some live microphones launched in 2018 - state-of-the-art and some new to Indian market.

microphones, three AT8470 Quiet-Flex stand clamps, three 5/8"-27 to 3/8"-16 threaded adapters, and three soft, protective pouches

- Superior internal shock mounting reduces handling and stage noise
- Tailored for smooth, natural vocal reproduction
- Cardioid polar pattern reduces pickup of sounds from the sides and rear, improving isolation of desired sound source
- Durable performance for professional applications
- Rare-earth magnet for improved output and transient response
- Excellent off-axis rejection for minimum feedback
- Multi-stage grille design offers excellent protection against plosives and sibilance without compromising high-frequency clarity
- Quiet-Flex stand clamp provides silent, flexible microphone positioning
- Corrosion-resistant contacts from goldplated XLRM-type connector
- Rugged, all-metal design and construction for years of trouble-free use

Technical Specifications:

- Element: Dynamic
- Polar Pattern: Cardioid
- Frequency Response: 90-16,000 Hz
- Open Circuit Sensitivity: -55 dB (1.7 mV)
 re 1V at 1 Pa
- Impedance: 300 ohmsWeight: 258 g (9.1 oz)
- **Dimensions:** 170.0 mm (6.69") long, 53.7 mm (2.11") diameter
- Output Connector: Integral 3-pin XLRMtype
- Accessories Furnished: AT8470 Quiet-Flex stand clamp for 5/8"-27 threaded stands; 5/8"-27 to 3/8"-16 threaded adapter; soft protective pouch
- Audio-Technica Case Style: T6

Ehrlund EHR-H Microphone

EHR-H is a handheld condenser microphone that is optimized for live performances. The core of its ability to reproduce sound is the same as in all Ehrlund microphones: A unique triangular Ehrlund membrane combined with our patented phase and frequency linear electronics. The triangular shape of the Ehrlund membrane dampens resonance faster than a traditional round or even square membrane. The positive effects of this construction design are unparalleled. Sharp tones sound more natural, the intricate resolution of sound-waves travelling along a triangular surface allows complex signals to be reproduced in their natural form.

Main Features include:

- · Handheld condenser microphone
- Optimised for use in live environments
- Patented triangular capsule design
- · Transparent and natural sound
- Great low-noise performance
- · Phase and frequency linear
- Natural reproduction of fast transients
- Colouring of sound is negligible and true to the original source
- Frequency range spans from infrasonic bass to ultrasonic treble
- Low energy consumption, ~2.0 mA

Technical Specifications:

- Type: Handheld condenser microphone
- Pickup pattern: Cardioid
- Frequency range: 7 87,000 Hz
- Sensitivity at 1kHz: -42 dBV/Pa (8 mV/Pa)
- Impedance: Handles all impedances
- Equivalent noise level: < 9 dBA
- Signal-to-noise: 85 dBA
- Dynamic range: 127 dB
- Max SPL (peak) Clip: 155 dB

0.5% THD: 131 dB
1% THD: 136 dB
Power supply: 48 V Phantom power
Current consump-



MXL POP LSM-9

The MXL POP LSM-9 Microphone is a brightly colored dynamic stage mic that bridges the gap between the professional stage and at-home entertainment systems. Perfect for on-stage performers looking to stand out, the POP LSM-9 uses high-quality components to produce a remarkable sound, and is specially crafted to cancel vibrations and handling noise for a clean, clear performance. Bands, vocal groups, and pro karaoke singers alike will be impressed with the POP LSM-9's clear sound and durable, all-metal construction that is built to last night after night.

Main Features include:

- Available in four bright colors: Blue, Magenta, Yellow, and Green
- Premium dynamic capsule for high-quality vocal performances
- Super cardioid polar pattern for clear sound and reduced feedback
- Designed to actively cancel vibrations and handling noise
- Durable, all—metal construction
- Perfect for stage and home use
- Professional XLR input

Technical Specifications:
• Type: Dynamic

• Frequency Response: 50Hz -18kHz

• Polar pattern:
Cardioid

Sensitivity: -74dB (0dB=1V/

μbar at 1KHz)Impedance: 600 ohms

• **Size:** 54.9mm x 200mm/2.16 in. x 7.87 in.

• **Weight:** 363g/0.80



The Bright Spark

HAPPY NEW YEAR

Viraf Pocaha

Our Industry is always looking for the **Next Big Thing**. Some new sensation to grab people's attention.

Trouble is we have already gone as big and as bright and as loud as we can possibly get. Massive Building facades of Palaces, the world's most iconic monuments have now been reduced to mere backdrops for the Great Indian Wedding.

Some concerts have even been held in the foothills of the Himalayas so that Everest Itself forms a backdrop for the Concert.

How do you Top That? On the other hand there is a huge concern of Sound Pollution. In certain countries it is mandated by law on how loud music concerts can get - even in Indoor venues where disturbing the neighbours is a non-issue.

Not far in the future - as soon as they get to reliably measure light intensity - that Health and safety restrictions will govern how bright things can become. Not just in concerts but increasingly in Airports, Malls and certain public squares.

I am sure all of us have gazed upon a city from a long distance away where no detail is discernible but the glow its streetlight, and street spills cause, can be seen from miles away. We already know of the health hazards of staring into computer screens. How soon before we have measureable data that shows that LED streetlights and hoardings - beyond a certain limit are damaging us in some way.

We've said it - we may or may not accept it and lets all wait and see how that unfolds.

We Event Lighting Types can head off in that direction - and enjoy a first mover advantage here. I personally don't know of any initiative in that direction in our Country. But with so much work going on in that area I am sure there will be some movement in the coming years.

But for us salty old dogs who have built our entire body of experience on conventional lighting it may not make sense to head down that path. While it may be an off shoot of our skill sets - this journey calls for a totally different

body of knowledge and training.

So how do we adapt conventional lighting principals to new age LED lighting?

Conventional lights were bulky as the heat generated would burn through anything flimsy. So when it came time for them to move, the motors were naturally heavier and slower. Lenses were thicker so transmission was not as efficient

What they did provide was a sharp beam with well defined shadows. Gentler colours that seemed to be more harmonious with daylight. Warmer, softer times

LED fixtures gather the luminescence of many, many individual diodes and direct light over wider areas. Diodes by their very nature formed white light by combining different diodes. This gave the first LEDs an unnatural hue.

The colour rendition was markedly different from 'Daylight'. Colours under LED started looking different. Shadows became softer and sometimes disappeared.

This property was great for the home and some work spaces. But very difficult to manage on stage that depended on angled lighting to accentuate shadows so that even for a distance objects looked three dimensional.

Suddenly everything we had learnt so far came to Naught.

And then they started placing LED walls behind the stage. And that made a lot of the details we killed ourselves over pointless.

Thank God the visual boredom that lack of dimensional lighting dictated irritated some people (I been trying to find who, but not been successful - If you know - Please reach out and let me know) and they developed LED technology that made both focussed lighting possible in some of the higher end fixtures as well as warmed the led's so that some degree of colour rendition was returned.

To me - It had the added benefit of trimming some of the 'Froth' the useless luminescence cold LED's create that dries your eyes and drains all subtle colour from any object in its field

For me personally - These are great steps as the new fixtures return to the basics that our generation grew up with and welcomes the return of detail.

Very sadly (and this is the result

of most lighting engineers learning on the job, as there is very little opportunity to learn the theory) does not make any difference to younger designers as they have little or no experience on managing those parameters.

This leads the standard 'Lighting Design Plot' of today which basically floods the front areas (where the performers restrict themselves in white light - so the cameras and / or VIP audience can SEE the stars faces clearly and then the background disappears either in LED walls or some pattern of shifting beams.

I've had so many young ones turn to me and say - 'But Rock Concerts always had moving Lights'. They are right. But to understand the subtlety and understand the music - see a concert in its entirety and not just the highlights off YouTube. Study the build up. How the Designer would carefully set up the big moment. It was that journey that topped with that final BIG movement that made the journey satisfying.

Just bouncing from Highlight to Highlight without building some emotional link or progression makes for a boring concert. It's like if you eat a bite of every dish on the menu, you are going to end up with an ache and an ultimately unsatisfying meal experience. No matter how great each individual dish is.

That's where I urge you to look this year for new experiences to wow the jaded event gower who has overdosed on too loud and too bright stages.

Step back and let your story unfold. Easily and gently. And finish up with a huge finale that makes everybody on the console high five you.

This Issue is focussed on FOH. I understand given the nature of this magazine - it will be mainly the wonders of technology and the easier, crisper, lighter way today's amazing technology will help you get to where you want to go faster and more efficiently.

That's great and a round of applause for the great job the technology boys are doing. But remember the pressure on you at the FOH position to deliver a perfect show as you have less opportunity to hide behind and the degree of separation between a great operator and a decent to Good operator becomes slimmer.

I urge everybody to take the challenge. Go on to be great. With Long careers.

Remember the console is usually the best view of the concert. The best sound, usually the best point for a visual scale... in the short - physically the most immersive spot in the entire venue.

I have always considered it an honour that someone has entrusted you to make it all happen for huge audiences. You may not be the star - but you do control a large portion of the responsibility that the star delivers on a great show.

Finally I want to end with a tribute to a whole lot of technicians and designers I have had the privilege to share the FOH position with. I have learnt from them and shared many tense moments with them. Had adrenalin levels peak, sugar levels drop. Shared stale pizza and on occasion gourmet meals. Consumed far too many unhealthy things that can be good for anybody, while the loving wife's carefully packed salad and oil free khana remains in the box.

Too many to even remember half of them. What I do remember are the laughs, the excitement and the sheer joy of being a part of a well knit FOH team.

Thank you, all of you for sharing some of the best moments of my life... and I dearly wish all of you newbie's experiences at least match mine.

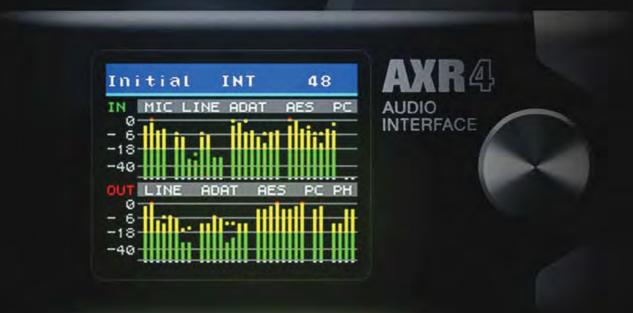
If you come close to topping mine - Please please call me - I wanna be a part of the fun.

(The views expressed by the author are his own personal comments and the magazine does not subscribe to them).









AUDIO XCELLENCE REDEFINED



28x24 Thunderbolt 2 Audio Interface with 32-Bit Integer Recording and RND SILK

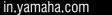
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WH'NAMM - MAKE IT BIG!

Made it to NAMM 2019 this year after a decision to go there irrespective of how busy I am back home. There are things one must do sometimes and I not just did not regret it but also simply loved it.

The best things about trade fairs are that they are a human zoo of creator & enterprise all talking to each other for a better technological future and what gripped me the most about this show is that the organizers have everyone in the sonic food chain take interest in coming to the show, this meant that there was artists, producers, engineers, dealers, distributors, buyers, exhibitors, publications, press, musicians & manufacturers and the list goes on.

Now here is the difference we aren't attending specifics, we are all communicating with each other, learning of each other and socializing and getting to know each other better than we did because at the end of the day its about relationships that take businesses to greater heights the products are a pile of dumb metal without the people.

Every show has its own charm and pros and cons and if there are a few cons it's only how we draw parity to the other shows. The one thing that was simply amazing was the AES@NAMM Symposium is the manner in which the workshops, trainings, lectures & panel discussions were organized is the thing that impressed me the most about the show. I just could not attend all I wanted to, there be so much to learn. I barely made it to the exhibitor halls, I would only finish at around 2 to 3 PM at the NAMM

learning center, needless to say that the instructors were simply the best, icons and leaders in their craft. Even the panel discussions had me learning so much about the business yet, we were all in splits with the anecdotes.

The only thing that's good about our industry is change and its constantly evolving to make better audio and better music. Taking from here I just wanted to highlight the most important aspect of what we do. Most of us who joined the sound industry, almost all of us did because we are passionate about this and we have made our passion our business, nobody told us at the time we started that by the time we grow we will have to manage an organization, take care of our accounting and administration and loose a lot of our valuable time in account receivables and client related matters. We can all agree we never signed up for this and now we all have to talk ourselves into doing this correctly.

So how do we make money at the end of the day? I personally never got into this racket to make money, money has always been the by-product of my efforts so guys like me will always shell out our savings to buy a better piece of hardware and the honest truth is that we cannot change that, its in our DNA. I am trying to answer these questions just like a sage is looking for enlightenment. Do you want to hang your boots and say your done or do you want to die in the battlefield working till the last day you can, it's the choices we make.

Moving up in India the times have

changed, accounting, taking care of your books, companies valuation has become an integral part of ones framework, making statutory payments on time and keeping our debt realistic has become so important post GST era that "in the long run those who take care of their backend and bottom line will make it to the finish line". Wanton decisions on purchases, making procurements without a plan or work in hand will be detrimental to ones success and I am talking from experience too.

Now what I would like to see that if everyone in the ecosystem come together in one big show discussing tech and business, why don't trade fair organizers form their own trade fair or consortium of discussions and panels and workshops as to how they can make their shows better, exchange and share knowledge and work with each other just like AES globally works with many shows as well as conduct some of their own. Now this will be the best thing in the future and hey then we can have these out of bound brands and eminent speakers in our end of the woods. How about that thought organizers?

I too would love to talk about emerging markets on panels globally and how manufacturers grow their businesses in India and understand holistically pricing and entering into the Indian market. It's always the case that the manufacturers are beginning initial talks with their potential distributors and not their customers. I am sure in the near future these things will happen, what definitely changed is that now even

top tier audio manufacturers are putting up our testimonials on their products, endorsing our artists and engineers and the India story globally is growing.

Rewards and Recognition is very important and PALM has initiated that with their own awards namely the PALM Awards for the live industry & IRAA Awards for the recording professionals. Just like NAMM have the Parnelli for Individuals and TEC for products? Only over the years one will realize how important are these calendar dates.

We all want recognition and respect for what we do and awards validate our efforts. I was happy to be invited at Parnelli this year and there were a lots of learning's from the coveted awards and the manner in which the show was conducted and whilst I attended it dawned upon someone that I should be invited to the TPI awards in the UK and invited me so that there would be are greater global reach to the awards function. How wonderful and I gladly accepted.

See you soon PALM & TPI it will be a privilege and honor to attend the same!

.....

Warren D'souza - Founder,
Managing Director, & Working
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#AudioEvangelist
#SoundGuyForLife



11 QUESTIONS WITH Amnon Harman

PT got in touch with Amnon Harman, the man behind the rise and rise of d&b audiotechnik in the last half a decade. In this interview, Harman discusses d&b's fundamental philosophy behind cutting-edge R&D, product design and growth strategy

d&b sound systems are today considered among the best in the industry, in terms of technology. Any specific philosophy that helped the d&B achieve the status and growth?

From the very beginning, the founders of d&b - Mr Daubert and Mr Belz - had a 'system approach' in mind. This approach came from the understanding that loudspeakers do not perform in isolation, they are one element of the signal chain. The system approach comprised loudspeaker boxes and amplifiers meticulously designed to complement one another, to get the very best performance from the technology. Later, this was extended to include software tools for simulation, optimization and control. The software tools improve efficiency from the start of a project, through planning and simulation, configuration and operation of the system. We call this "the d&b System reality".

Today, components of the d&b system extend past the loudspeaker and amplifier boxes up the signal chain towards the mixing desk, for example the DS10 Dante audio network bridge, as well as the new DS20 Milan audio network bridge, and the DS100 Matrix processor.

In essence, the d&b philosophy is to deliver complete systems that deliver great sound right out of the box

Tell us a about the R&D process at d&b. And what is your definition of a 'good design' in line arrays?

Great d&b products are always guided by our experience in the market and driven by our primary objectives: to deliver exceptional sound, while making things as easy as possible for the end user and delivering an outstanding return on investment for the system owners.

Product development is always a collaboration. The d&b Research and Development department works closely with Product Management and end users to ensure we meet - and exceed - the real demands of day-to-day work with the product.

The teams are guided by direct experience in the field, plus the information brought into the company by product management, sales, market intelligence, partners and users. There are many passionate and dedicated audio people contributing to the process. d&b hardware engineers, and a growing number of software engineers, work closely with many other departments to constantly update a three-year product pipeline.

Some products are specifically requested, while some others are ones that the market

didn't even know that it needed yet – for example the SL-Series, with its exceptional directivity control. The important thing about this customeruser-audience perspective taken by our product management and R&D is that it drives the team to deliver great products, but also what we call the 'd&bits' – the thoughtful, insightful value-added features and enabling tools that make our systems truly d&b.

'Good design' covers a whole range of factors. Of course, the starting point for d&b is great sound – the system must deliver the experience for the audience that the artists, the sound designers and the sound engineers expect. But there are many other considerations – real-world practicalities like ergonomics, logistics, economics and the environment all have an essential part to play in good design.

Ease of use is important. Touring systems have to be rigged, configured, tuned, de-rigged and transported, often on a daily basis. The quicker and more easily this can be done, the better, as time and labor costs can be drastically minimized. Size, weight and energy consumption must be considered. Enabling technologies, such as planning, simulation and optimization software, also streamline the process and save valuable time on-site. Likewise, fast, safe rigging processes. A great deal of ingenuity went into the compression rigging system used in the new d&b SL-Series systems.

Then there is the customer to consider. We expect our rental partners to make a significant investment in our systems, so we must understand their business needs. The total cost of ownership (TCO) of the system is brought down to a minimum – an investment in a d&b system actually gives a great return on investment. You have less equipment overall, and fewer people needed to rig, configure and

d&b systems are very affordable. We may require a higher initial investment, but over the period of 3-5 years the investment of a new d&b system is already amortized.

CEO, d&b audiotechnik GmBH



tune it. Good design results in an exceptional sound experience, excited audiences and happy customers.

Three main milestones in terms of product development in the history of d&b?

There have been so many milestones.

The **Q-Series** is a major one. It was the first d&b line array; a versatile system which fulfilled a huge range of applications, from touring and corporate events, to installations. It embodied the d&b holistic approach to sound reinforcement solutions, integrating loudspeakers, electronics, mechanical deployment assemblies, remote control functions and set up design tools for precise calculation of array performance. It was first introduced to the market in 2003 and was only discontinued in 2015 after the launch of the Y-Series, which succeeded the Q-Series with an improved feature set

The **D80** was the first of our latest generation four-channel amplifiers – it's a benchmark high performance amplifier especially for the touring market. You will find the D80 in many high end installations in theatres, mega churches, stadiums etc. The D80 holds a DSP that powers software like ArrayCalc with its broad feature set, including ArrayProcessing, our line array optimization software that enables individual steerability of all loudspeakers in

an array, which leads to the same listening experience for every seat in a venue.

Our latest generation of line array systems, the **SL-Series**, comprises the GSL, the KSL and the SL-SUB. It's a product family born out of the d&b obsession with directivity. The SL-Series is the next step in the d&b cardioid journey. GSL is a large-format line array with full band directivity control and cardioid behavior even in the top boxes: this is a state-of-the-art functionality. The smaller KSL delivers the same characteristics. Sound engineers and artists are delighted by the performance of the SL-Series.

And, of course, I would have to name the **d&b Soundscape** as a major milestone for d&b. This is a technology which brings us into a new field for immersive sound experiences. Based on the DS100 Signal engine – a 64x64 matrix processor platform, it provides powerful sound object positioning and room emulation capabilities, and it enables sound experiences which are completely new, quite unlike anything audiences have experienced before.

Are there any concrete changes in the way the company is run since Ardian acquired d&b from Odewald and Cobepa?

No principle changes. Ardian became the major shareholder with the plan to support the strategy that the d&b management team had already defined and were executing before the acquisition. The investment team from Ardian completely recognized the value of it. The business is doing well, with double-digit average growth year on year for the last twelve years, so the global strategy is proving to be the right one.

Ardian is not interfering with the day-to-day management of the company, but they are of course important stakeholders in the business and we appreciate their role in realizing and further developing the strategy with us. Ardian and its network is also supportive of our large business transactions. In our recent expansion of the d&b Group into China, for example, Ardian supported us with research, legal and transactional support, that we do not necessarily have on board. The relationship is built on mutual trust. In my opinion the cooperation with financial investors for the last twelve years have challenged us to always think beyond the obvious 2-3 years and have contributed that we could develop in this successful way.

What is it that makes the new KSL a versatile, no-compromise line array and if you have to name one single component most responsible for vocal clarity in the KSL System, what would it be? When will the product start shipping and what would be the price range in INR?

The key feature of the SL-Series, which the new KSL embodies, is the full bandwidth pattern control. The cabinets have a cardioid performance pattern which delivers unprecedented rear rejection, meaning that the areas behind the loudspeaker arrays – including the stage, where the artists do their work – are quieter, more comfortable environments than ever before. This

'Good design' covers a whole range of factors. Of course, the starting point for d&b is great sound – the system must deliver the experience for the audience that the artists, the sound designers and the sound engineers expect. But there are many other considerations – real-world practicalities like ergonomics, logistics, economics and the environment all have an essential part to play in good design.

improves the performers' experience, but also the work of the monitor engineers who no longer have to battle with the PA to deliver the artists' stage mixes.

But perhaps more importantly, this accuracy of pattern control reduces the unwanted, uncontrolled reflections and reverberations in the room, which makes for far greater clarity, and far greater efficiency.

No single component is responsible for that performance; it's more like an orchestra. The achievement involved many players, providing solutions to many challenges, and drew on all the d&b knowledge and experience developed on our journey. How to drive seven loudspeakers in each cabinet using only two amplifier channels. How to configure the high, mid and low frequency drivers in the cabinet to ensure maximum output to the front, and cancellation to the rear. And, as I have mentioned, it is a full system approach: everything from transportation to rigging to configuration to cost of ownership has been optimized.

The KSL has been shipping since December 2018 and is already out on some major tours. As for pricing, we don't deal in 'per box' prices: it is, of course, all about the 'system approach', and d&b systems are designed for the application. d&b sells on value, not cost.

d&b sound systems – rather expensive or quite affordable?

d&b systems are very affordable. We may require a higher initial investment, but over the period of 3-5 years the investment of a new d&b system is already amortized. Because d&b systems are versatile and rider friendly, the utilization and profit that can be generated is higher than with other systems. The lower TCO is maximizing the profitability for the users and last but not least the resale value of a used d&b system is quite high, and makes the investment again more attractive. Our rental partners will no doubt confirm that.

Why is ArrayProcessing 'the next level of

democracy for listeners' and will there be updates on this front in the near future?

ArrayProcessing is a powerful optimization tool. It ensures that every seat in the venue gets the same high quality of sound. This means that everyone is in the best seat, which is of great benefit for audiences and venue owners. This fits with our aim of "democracy for listeners". For promoters and venue owners it means that, sound-wise, the bad seats are now good seats and can be sold at a higher price. Win-win!

Which product is d&b currently pushing most aggressively in the pro audio market?

d&b has a wide portfolio of products for rental and installation markets. Rather than pushing particular products, we are listening to our customers and addressing the changing expectations of artists and audiences.

There has been a rapid rise in demand for immersive sound experiences, and the d&b Soundscape addresses that market pull. We introduced Soundscape just over a year ago and the range of applications in which it has already been used is incredible, from musical theatre and magical masses to classical concerts and corporate events.

Your vision for d&b for the next five years?

The d&b vision is to further establish ourselves as an Audio Technology and Solutions company. We have state-of-the-art audio technology, which we will continue to develop and deliver. We have already started to put technology directly in the hands of a new audiences, including artists, sound designers, consultants and venue owners. This is a shift for d&b and it gives us an opportunity to engage in a whole new way. With the expansion of our services toward the end user, d&b is growing and evolving to include many more activities that could be described as 'solutions'.

What do you think are the peculiarities of the Indian market for d&b and what is the greatest challenge that d&b faces there?

My first observation is from a geographical and cultural perspective. We recognize that a lot of life is lived outdoors in India and the scale of some of the events is remarkable. We have also recognized an appreciation of good sound in the Indian market – which is great news for us, of course, since that's what our products deliver! We have also seen that Indian customers are not afraid to invest in good technology, which, again is good for us because we've got some of the best available.

India is an important market for d&b and our business growth in the territory is consistent. With our new products, such as the SL-Series and new product offerings, including weather resistant options, we are addressing some key points that might positively influence buying decisions.

Any message for your customers in India?

It's the same as our message for our customers worldwide: **More art. Less noise.**

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DENON DJ DEBUTS PRIME 4

Denon DI has announced the introduction of the new Prime 4, 4-Deck Standalone DJ system with 10-inch multi-touch/ gesture display, dual-zone output, pro-mixer section, powerful performance pads, dual mic channels and a 2.5-inch built-in SATA drive bav.

10 inch multi-touch/gesture display

Denon states that, Prime 4 features a glorious 10-inch multi-touch/gesture display for the most advanced DJ music library interaction experience available. DJ's can touch, feel, move and play their music with the elegant swipe of a finger for the ultimate, technology driven tactile experience. Prime 4 will deliver that Mainstage experience to any DJ, and in any venue or gig scenario.

Eight performance pads

Prime 4's eight performance pads bring the most advanced and easy to use creative expression for DJ's to hot-cue juggle, remix tracks, roll and slice up their tracks for dancefloor and crowd energy. It combines class-leading timestretch for DJs to radically mix any track tempo and genre, with real-time musical pitch shifting, matching musical keys with just the tap of a finger.

Independent Zone Output

Reportedly, another industry 'world's first' is Prime 4's independent Zone Output, empowering DJs with the ability to send a full playlist of music to a completely separate room or location, all while the DJ rocks the dancefloor in the main venue. Also, keeping the music flowing, Prime 4 can access literally unlimited music files and media sources with no less than four USB inputs, one SD and also a built-in SATA drive bay - A DJs full gig/music set can also be recorded 'live' to any connected media source.



Command Audio & Visual Effects

Prime 4 empowers DJs to manipulate 14 on-board, pro-club DJ Effects, with three quick access parameter adjustments for instant gratification 'in the mix.' DJs can quickly access and manipulate single encoder, dual-function control too for Sweep FX and Filter, across all 4 channels. In addition, any DJ in any venue now has total command over impactful visual elements with lighting and video control via Denon DJ's StagelinQ connectivity and Denon DJ partners

Soundswitch, Timecode and Resolume applications.

with the launch of the Prime 4 into the DJ marketplace," said Denon DJ's Creative Director, Paul Dakeyne. "The global DJ community has been eagerly waiting for a truly standalone, 4-channel DJ system, with performance features that will bring a Mainstage experience for any DJ and venue. Prime 4, without doubt is the ultimate, all-in-one DJ system to cater for all DJ needs and performance demands"

"Our excitement is off the chart

BPM SUPREME LAUNCHES MUSIC DISCOVERY APP FOR DJS

BPM Supreme has announced the official launch of new mobile application, the BPM Supreme mobile app. Alongside features that match the record pool website, the app offers tools that will help to redefine the way DJs discover music.

"Our app is going to revolutionize the way that DJs search for music.

Not only will they find everything they already love about BPM Supreme in the app, but they'll also have access to stream curated sets and our entire HQ music library from anywhere," said BPM Supreme CEO and founder, Angel "A-Rock" Castillo.

BPM Supreme has one of the

largest libraries of downloadable audio and video files built specifically for DJs. Now all of that content can be found neatly packaged within an easy to use, beautifully designed app. Users can browse new releases and top downloads, discover valuable content like exclusive edits and remixes.

become inspired by new Curated Sets, and read industry news and headlines, all while listening to high quality audio on the go.

While you need a paid subscription to BPM Supreme to get unlimited access to the app, non-members can also stream, listen to audio, and discover new music.

TECHNICS INTRODUCES DIRECT DRIVE TURNTABLE SL-1200MK7 SERIES

Technics has unveiled its new SL-1200MK7 Direct Drive Turntable. As per Technics, this new model inherits the traditional design of the same series and maintains the same operating ease, reliability and durability, while newly adding a coreless direct drive motor and

other sound-enhancing technologies. It also features new DJ play functions, such as reverse playback.

Integrations to Enhance the Operational Ease of the SL-1200 Series

Starting Torque/Brake Speed Adjustment Function: The SL-1200MK7 employs the newest



motor control technology refined through the development of Blu-ray disc products. Utilizing a microcomputer, this advanced motor control technology ensures high performance in normal rotation and also responds accurately to a wide range of DJ play styles, such as scratching. The starting torque and brake speed can be adjusted individually to suit the user's preference.

Pitch Control Function Enables Accurate and Stable Pitch Adjustment: The rotation speed can be set to 33-1/3 rpm, 45 rpm or 78 rpm. The pitch control function allows fine adjustment of the rotation speed within $\pm 8\%/\pm 16\%$. This function achieves accurate and stable pitch control due to full digital

control with improved tracking performance and accuracy.

Reverse Play Function Expands the Breadth of DJ Play Styles: The platter rotates in the reverse direction when the speed selector button and Start/Stop button are pressed simultaneously. This expands the breadth of DJ play styles.

Stylus Illuminator Featuring a High-brightness and Longlife LED: The stylus illuminator features a new push-type structure and employs a highbrightness and long-life white LED. The illumination area and intensity were reviewed to provide improved visibility of the stylus tip compared to previous models even in a dark environment.

RELOOP UNVEILS RP-8000 MK2, THE ADVANCED DJ TURNTABLE

This new TRP-8000 MK2 turntable by Reloop is reportedly designed for a seamless integration with Serato DJ Pro, offering the possibility of controlling up to 7 different performance modes via the pad section. Due to the its unique Platter Play mode, the pads can be used to control the platter's rotation speed to create melodies and authentic musical performances.

Key Features of RP-8000 MK2

- Pad Section With 7 New Performance Modes: The 8 large pads with RGB illumination can control over 7 different performance modes (Cue, Sampler, Saved Loops, Pitch Play, Loop, Loop Roll, Slicer), as well as 2 user modes, which can be custom assigned with individual preferred functions
- Balanced S-Shaped Tone Arm with Upgraded Tone Arm Base: The RP-8000 MK2 features a statically balanced S-shaped tone arm with hydraulic lift and anti-skating mechanism. The newly developed

Akai Professional has unveiled

- tone arm base provides improved stability and adjustable height/ vertical tracking angle (VTA). The low-resonance tone arm comes with a universal connection for pick-up cartridge systems (SME).
- Platter Play Creative Platter Pitch Control: Platter Play mode allows users to control the platter's pitch via the performance pads, opening new possibilities for musical live performances and turning the RP-8000 MK2 into a legitimate musical instrument. A total of 22 scales and 34 notes are at your disposal with an option to create up to 9 userdefined scales. The two speed select buttons can be used for pitch bending in Platter Play mode and also to respectively increase or decrease the audio material's pitch in steps of one half-tone
- High-Resolution Pitch Section with Digital Fader: By using the highresolution pitch fader, users can adjust the platter speed in the



classic turntable pitch range +/-8%. The rp-8000 mk2 is also cable of a wider, dj-friendly +/- 16% pitch range and a massive +/-50% ultra-pitch, allowing for increased creativity when manipulating and mixing records. If quartz lock is active, the platter speed will remain unaffected by the fader position and will spin at zero pitch (0%).

Powerful Motor with Extensive Adjustment Possibilities: The fine-tuned, quartz-driven motor

with digital pitch correction operates at a starting torque of 2.8kg/cm, which can be adjusted up to a maximum of 4.5kg/ cm. This makes the rp-8000 mk2 an extremely smooth-running turntable. Also, the turntable break speed (platter stop) can be adjusted from 0.2 - 6 seconds and the precision-machined, heavy die-cast aluminium platter is lined with vibration-reducing rubber to eliminate unwanted vibrations and resonance.

AKAI PROFESSIONAL INTRODUCES FORCE STANDALONE PRODUCTION INSTRUMENT

its new standalone Force music production/DJ performance device, with clip Force features an 8x8 RGB displays, two audio

launching, step sequencing, sampling, synths and a 7-inch multi-touch display. As per Akai, Force is designed for the user who wants a standalone product with the latest in modern workflow techniques, free from being connected to the computer.

> clip launch matrix, a 7-inch full-color touch-capacitive multitouch display, 8 touch-sensitive knobs with graphical OLED

inputs, four audio outputs, MIDI and CV I/O. Together, this

comprehensive versatility affords the user an unprecedented degree of creative freedom and expression, while remaining totally free of the constraints of being tethered to a computer.

Additional features include time stretching/pitch-shifting in real time, a comprehensive set of on-board effects by AIR Music Technology, plus the TubeSynth, Bassline and Electric synth engines. It also boasts an additional synth called Hype, a preset and macro-based synth combining several different synth engines into a single easy-to-use package. Force also has the ability to record eight stereo

"Force is aptly named, since this unit truly delivers a new level of creative force and energy to the music production/ DJ performance world," said Dan Gill, Akai Professional Product Manager. "With its Ableton Livestyle workflow, 8x8 clip launch matrix, touch-sensitive knobs with graphical OLED displays and 7-in multi-touch display and total freedom from the computer, users will experience a degree of creative expression and spontaneity they simply can't find anywhere else."

AUDIO-TECHNICA DEBUTS AT-LP140XP DJ TURNTABLE

Audio-Technica has introduced AT-LP140XP DJ turntables.

The new professional DJ turntable is designed with the aim to deliver exceptional sound quality and reliability. Its high-torque motor ensures quick start-up and exacting speed stability for 33-1/3, 45 and 78 RPM playback.

AT-LP140XP is equipped with an S-shaped tonearm with height adjustment, tracking force and antiskate adjustment and is supplied with the new high-output AT-XP3 DJ cartridge. Its die-cast aluminum platter and anti-resonance hybrid steel/ polymer deck further contribute to the turntable's rock-solid performance.

Available in silver and black, the AT-LP140XP offers DJ-friendly features such as a start/stop button, forward/reverse play, selectable pitch change, a stylus target light and more.



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