PALM EXPO

MAGAZINE

Pro Audio | Stage | Studio | Broadcast | AV Integrated Systems | Di

Feature Story: Sound Reinforcement
MEGA SOUND India's comprehensive sound deployment for a G-20
Summit Meet in Gandhinagar, India

Professional Focus: Live Sound Engineer
Vishrut V. Joshi on his profession & passion for live sound engineering

Product Focus: Line Array Speakers
A lineup of six efficient line array speakers from 2023

Global Pro Audio & Lighting Technology

TOP 50 PRODUCTS

PALM TOP 50 PRODUCTS OF 2023
PALM EXPO MAGAZINE SELECTION OF PRODUCTS FROM WORLD OF PRO AUDIO & LIGHTING

By **Hyve**

60 Mega Sound India designs and delivers an elaborate sound system for the 3rd G-20 Finance Ministers and Central Bank Governors (FMCBG) Meeting in Gandhinagar, India. PALM Expo Magazine reports.

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CELESTION LAUNCHES TEN SQUARED (TEN2) LOW-FREQUENCY PRO AUDIO DRIVER SERIES AT ISE 2024

Celestion, one of the leading designers and manufacturers of loudspeakers for sound reinforcement applications, introduced **Ten Squared (Ten2) Series** of pro audio drivers at ISE 2024.

The Ten2 Series have been born out of a specialist development program at Celestion's UK-based R&D facility. These cast aluminium frame based, neodymium magnet low frequency pro audio drivers are designed without compromise to deliver consistently superior levels of performance in the most demanding professional sound reinforcement applications even after hundreds of hours of use.

The Ten Squared Series comprises five loudspeaker driver models, each engineered for applications in subwoofers or as bass units in two- or three-way loudspeakers and larger format line arrays. The line includes the flagship 24-inch TSQ2460, 21-inch TSQ2145, 18-inch TSQ1845, 15-inch TSQ1535, and 12-inch TSQ1230.

The Ten Squared (Ten2) Series features five loudspeaker drive models - 24-inch TSQ2460, 21-inch TSQ2145, 18-inch TSQ1845, 15-inch TSQ1535, and 12-inch TSQ1230

Key Features

Constant airflow through Precision Tuned Venting (PTV), provides highly efficient cooling around the magnet assembly and voice coils of the Ten Squared Series. The cooling potential is further optimized through custom coil winding that utilizes a hybrid multilayer, inside/outside methodology. In the 21-inch TSQ2460, the cooling benefit was as much as -30° C, versus conventional designs. Ten Squared's PTV and proprietary coil structure synergistically combine for significant reduction of power compression and thermal stress, maximising product lifespan and performance longevity.

The TSQ2460 has a continuous power rating of 4800W (estimated continuous), thanks to the enhanced cooling offered by the PTV system together with a proprietary voice coil featuring advanced heat resistant adhesives. Ten Squared Series Reconfigured Magnet Assembly allows much greater cone excursion and a high Xprotection level. The driver's motor strength and mechanical compliance reach their defined Xprotection limit at practically the same point, achieving a low distortion performance, even during high excursion. This capability is complemented by Ten Squared's unique, Polysiloxane Laminated Dual Suspension design that enables the driver's suspension system to work much harder without losing stiffness, providing better coil control and reduced likelihood of DC shift, while simultaneously increasing speaker longevity.

In ordinary drivers, the high power and long cone excursion would cause eventual fatigue of lead out wires and joints, but Ten2 addresses this concern through laser-cauterized holes in the suspension to reduce whipping. Ten2 drivers are further built to last, with protections against the elements through solvent application on the loudspeaker cone to protect against water and humidity.

"The Ten Squared Series reflects Celestion's unwavering commitment to excellence over the last one hundred years. Not satisfied to rest on our laurels, these drivers redefine the standards of performance and durability, setting a new benchmark for professional low-frequency audio," commented Ken Weller, Head of Marketing, Celestion. "It's a testament to our dedication to delivering superior audio solutions for the most demanding sound reinforcement applications, today and for years to come."

LED SOLUTIONS, AHMEDABAD INVESTS IN DAS AUDIO EVENT SERIES

LED Solutions, one of the leading audio video and lighting rental companies from Ahmedabad, has recently acquired 16 nos of **DAS Audio Event-212A** and 12 nos of **DAS Event-218A loudspeakers**, adding them to their impressive portfolio. These audio systems have been designed to meet the needs of all types of events, showcasing the incredible sound quality and having been used in thousands of venues globally.

DAS Event loudspeakers have become an ideal option for professionals seeking reliable sound solutions for concerts, events, and conferences.

DAS Event-212, a versatile and powerful line array system known for its pristine audio

LED Solutions

reproduction and impressive coverage. Designed to deliver exceptional sound in large-scale events, the DAS Event-212 ensures that every note and nuance is heard with precision

and clarity.

The DAS Event-218A powered subwoofer, featuring dual 18" drivers, utilizes the renowned LX series long excursion transducers that were initially introduced in the high-end LX-218 model. The enclosure is explicitly crafted for horizontal deployment, constructed with high-grade Birch plywood, and finished with the durable ISO-flex coating. Additionally, the subwoofer's upper panel features a pole mount socket, making it easy to mount and position.

"We are happy to welcome LED Solutions Ahmedabad to the DAS AUDIO," says **Karan Nagpal**, director of **StageMix**. "They have made a reputation as a rental company that consistently invests in new innovative gear, and we look forward to supporting them in their mission of providing premier systems to their customers."

HAWK®

TOTAL MUSIC SOLUTION

ABOUT US

Hawk, is one of the leading brand of Musical Instruments and Pro Audio accessories. Hawk products are used by musician, studios, rental, project integrator & etc. Over the years, the brand has grown to include over various products in multiple categories like Guitar, Microphone, Keyboard, Speaker, live sound and more. Today, professionals and amateurs all over the world put their trust in hawk pro audio.

DEALS IN :

STANDS

MICROPHONES

CABLES

POP FILTERS

NX AUDIO LAUNCHES NEW DIGITAL AUDIO PROCESSORS

Nx Audio launched **DX480** and **DX260 Digital Audio Processors**. These new processors offer precision operation and are designed for maximum versatility – providing all the processing and control necessary for both live and fixed installation use.

The DX Series' high-end digital speaker management systems combine a sampling frequency of 96kHz with Floating 32-Bit AD/DA converters to provide immaculate sonic performance. The DX260 has two analog inputs, six analog outputs and an AES/EBU input. The DX480 offers four analog inputs, eight analog outputs and two AES/EBU inputs, widening the options available to the users, making it versatile for many setups. The Series has a dynamic range of >100dB 20Hz to 20kHz and low distortion of less than 0.02% at 1kHz, +18dBm. The maximum delay can be set up to 650 mS in 2.6uS Steps.

Each channel output of the DX480 and DX260 has a parametric equaliser of six bands, each channel input has with start-up time of 0.3 to 100ms.

Easy setup is assured with the intuitive front panel controls and an interactive LCD display for local setup or dedicated PC control interface or remote monitoring and configuration via USB or RJ45 (LAN) and dedicated control software. DX Series control software has easy-to-use drop-down menus, giving the user the ability to comfortably setup the processors at the touch of a mouse, with a well-organised display for user convenience. The DX Series supports a full matrix mixing mode where inputs may be routed/mixed in any ratio to any output.

The DX Series Digital Processors use advanced long-distance technology, it can set all the functions and be controlled by connection software and LAN connector to produce strong function and steady quality. The DX260 and DX480 will store up to 30 user programs, and settled parameters can be found in the memoriser for future use, to save time and effort.

The DX480 and DX260 Digital Audio Processors from Nx Audio are designed with precision and versatility of use in live as well as installed sound applications
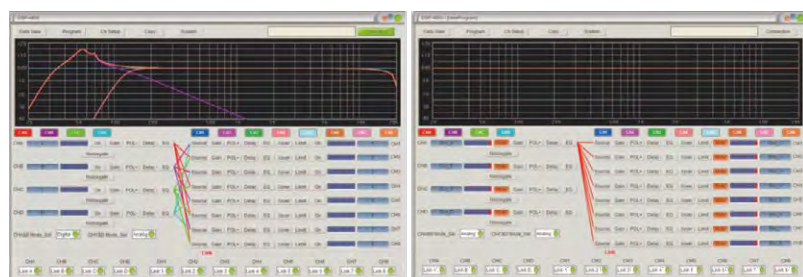
a parametric equaliser of eight bands, and the processors have a central frequency of 20Hz – 20kHz at 1/36 octave (368 positions). The output gain is ± 15dB to – 40dB with 0.1dB step distance. The input gain is +6db to -40db. The limiter/compressor threshold range is +20dBu to -30dBu,

LOLLAPALOOZA WAS HERE

Viraf Pocha offers a glimpse into one of the biggest global music festivals – which took India by storm

Depression has set in. Don't want to do anything. Why get out of bed?

Like a much cherished, long-distance love affair, she whirled into town and now she's gone.

For a short while, we could forget about pollution, traffic snarls, and depressing headlines. Lolla was coming. Bringing promises of a bright and colorful future. Loud, melodious, swinging.

She was all that. Lolla came, and before you knew it, she was gone. Leaving lifelong memories and leaving us thirsting for more action.

Love, affection, and respect.

To the producers who probably worked a full year to bring the details together.

To the artists who rehearsed and honed their craft over countless performances.

To the technical crew who slaved through the aforesaid pollution and traffic to assemble all the nuts and

bolts, bulbs and plugs, speakers and microphones, pixels and panels and safely set off fireworks and smoke throwers.

Finally, to the production crew who cheerfully guided the visitors through construction sites, narrow roads, dusty fields, safety barricades, through ticket turnstiles, myriad stages and a village of attractions.

Everybody came for the music. To cheer their favorite stars and introduce themselves to the new ones. Thirsty work. Needed the wonderful food and drinks available to round out two great days.

..... and now they all gone back to their lives. Heads and hearts full.

Thank you, Lolla. Can't wait for you to come swinging through town next year.

Watch out this space in the next Issue of PALM Expo Magazine, where I dissect and deep dive into the technology that brought Lollapalooza to town and ensured we enjoyed every minute of her stay.

SEKAR AUDIO ELEVATES ITS AUDIO SERVICE WITH DIGICO QUANTUM 338

Chennai has a thriving music culture with a blend of Kollywood compositions, Carnatic music, and today's upcoming Tamil hip-hop music. But besides the commercial music scene, Chennai has a huge market for television and

Mahesh took forward our father S.A. Sekar's vision about Sekar Audio to a new level of recognition", shares D. Selvam, co-owner, Sekar Audio. He continues, "We saw the opportunity of providing audio inventory services to TV entertainment channels. That's when we approached Rajan Gupta,

"In the world of professional audio, the DiGiCo Quantum 338 stands as a testament to innovation and excellence. Its state-of-the-art technology, intuitive interface, and unmatched audio quality make it a top choice for audio professionals across the globe. However, what truly sets us

DiGiCo Quantum 338 brings to their setups."

"The South Indian live industry has taken a gigantic leap in audio production. Extremely massive production setups are becoming a staple in this industry. Using Quantum 338

L-R: Piyush Joshi (Hi-Tech Audio & Image), D. Selvam (Co-owner of Sekar Audio), D. Mahesh (Co-owner of Sekar Audio) and Mahesh Kambli (Hi-Tech Audio & Image)

Hi-Tech Audio & Image Application Engineers with Sekar Audio team

broadcast shows. Sekar Audio, one of the leading veteran audio rental companies in Chennai has been catering to TV channels and broadcast studios with ace audio inventory. Recently Sekar Audio decided to upgrade its digital console inventory by investing in its first DiGiCo Quantum 338 which is delivered by DiGiCo's India distributor Hi-Tech Audio & Image.

Sekar Audio was founded by S.A Sekar in 1950 who was providing audio and light inventories for prominent South Indian artists and music composers. "In 2000, I along with my brother D.

CEO-Founder of Hi-Tech Audio & Image, who encouraged us to invest in DiGiCo Quantum 338 with 2 SD-Racks and Optocore cables. Moreover, DiGiCo's broad acceptance in the touring and installed sound markets was a major factor in the decision-making process."

Some of the top rental companies in India have selected the Quantum 338 console due to its complete platform, which boasts a 128-input channel count, highly dynamic routing capabilities, and a rich feature set of FX. Sekar Audio has used their Q338 console for popular entertainment channels like Star Vijay TV, Sun TV, and Zee Tamil which are based in Chennai.

apart at Hi-Tech Audio & Image is our commitment to customer credence and support," explains Rajan Gupta, CEO-Founder of Hi-Tech Audio & Image. He adds, "We are proud to share success stories where our clients have not only embraced the Quantum338 but have also elevated their audio experiences to new heights.

Nirdosh Aggarwal, Managing Director of Hi-Tech Audio & Image adds, "The Quantum 338's exceptional performance is best appreciated through direct interaction, and our approach allows our clients to witness firsthand the transformative impact it can have on their audio productions. This hands-on engagement has proven to be a key driver in convincing clients of the unmatched value that the

within an Optocore ecosystem is undoubtedly the most scalable approach available. The console improves the efficiency of the engineer's workload as they can get greater channel counts and nodal processing. With hardly any outboard gear, musicians may now produce record-quality soundscapes with the aid of mustard processing and the spice rack. The hands-on training session with Sekar Audio's team on the Q338 surface enabled them to identify multiple ways to run their sound", concludes Piyush Joshi, Senior Application Engineer (DiGiCo) of Hi-Tech Audio & Image.

NEUMANN LAUNCHES NEW LIVE SOUND PRODUCTS

Expands range of condenser capsule heads for wireless systems and expands the MCM system

Neumann.Berlin launched several new products for stage use at NAMM 2024. The **KK 104 U** and **KK 105 U** condenser capsule heads make the famous Neumann sound accessible to users of third-party* wireless systems. In addition, Neumann expanded its **Miniature Clip Microphone System (MCM)** with an omnidirectional capsule as well as goosenecks and cables in various lengths.

Neumann.Berlin's KK 104 U and KK 105 U along with the expanded line of Miniature Clip Microphone System add to the brand's commitment to deliver exceptional sonic clarity to its consumers

Neumann Sound for all Wireless Systems

Neumann's true condenser capsule heads for Sennheiser wireless systems have been popular for many years. Until now, however, the sound quality of Neumann capsule heads was exclusive to users of Sennheiser handheld transmitters. With the new capsule head variants KK 104 U (cardioid) and KK 105 U (supercardioid), studio sound on stage is now also available for wireless systems from third-party manufacturers: Sony (all models), Lectrosonics (all models), MiPro (ACT Series), Shure (Axient Digital, ULX-D, QLX-D und SLX-D Series).

"Although we are convinced of the superior quality of Sennheiser wireless systems, many users have no option to change because the system is a given," explains **Stephan Mauer**, Head of Product. "The new KK 104 U and KK 105 U capsule heads now also offer genuine Neumann sound in conjunction with third-party* wireless systems. So there is no longer any reason for our customers to settle for anything less than the original."

The new capsule heads are available in black, silver and also in individual designs (made to order).

New Options for Neumann's MCM System

Also presented at NAMM 2024 will be the KK 13 omnidirectional capsule for the Miniature Clip Microphone System (MCM) as an alternative to the standard KK 14 cardioid capsule. The sound of the KK 13 is similarly balanced but appears more open than that of the KK 14 cardioid capsule due to its omnidirectional pickup pattern. In addition, there is no proximity effect.

The KK 13 is recommended for quiet stages or pure recording scenarios where a particularly natural sound is required and the low feedback resistance of an omnidirectional capsule presents no problem. The KK 13 will only be available as a separate item; all MCM instrument sets continue to be supplied with the KK 14 cardioid capsule.

The MCM system is complemented by two new goosenecks SH 100 and SH 250, which are 50 mm shorter and 100 mm longer respectively than the standard gooseneck SH 150 at 150 mm. The popular MCM 114 set vio/vla for violin and viola will from now on be supplied with the shorter gooseneck SH 100. All other sets will continue to include the standard SH 150 gooseneck. Available as separate items will be cables of different lengths. As an alternative to the standard cables of 1.8 m (ca. 6 ft), there will be short cables of 0.6 m (ca. 2 ft) and extra-long cables of 3.0 m (ca. 10 ft) for all four connector types (Mini

NEW: KK 13   KK 14

Jack, LEMO, Microdot, Mini-XLR4).

"We are looking forward to increasingly serving the live market with reference solutions to bring Neumann sound to the stage," explains Neumann's CEO Ralf Oehl. "The MCM system has quickly become the new benchmark in instrument miking and is now being successively supplemented with additional elements. The KK 13 omnidirectional capsule is a great option for quieter stages and recording. And the new capsule heads finally give all users, across all wireless systems, a vocal sound without compromise that seamlessly matches the studio recording."

* Sony (all models), Lectrosonics (all models), MiPro (ACT Series), Shure (Axient Digital, ULX-D, QLX-D und SLX-D Series)

ELECTRO-VOICE LAUNCHES EVERSE 12

Electro-Voice (EV) introduced EVERSE 12, a larger and louder 12" two-way option for users looking for bigger sound – along with the best-in-class battery performance and wireless-friendly features that made its 8" counterpart a success.

The EVERSE 12 boasts a maximum SPL rating of 126 dB (compared to the EVERSE 8's 121 dB), low-frequency response reaching deep down to 45 Hz and wide 100º x 60º coverage, EVERSE 12 defies its compact form to establish unparalleled performance parameters in its product category.

EV's signature sonic clarity with SPL capability and quality bass reproduction makes it suitable for an array of scenarios, whether it's a rooftop DJ set, a patio gig, an outdoor wedding, expos and events, busking by the beach, or making a backyard party sound like a professional production – wherever users need a PA, inside or outside. It's perfect for musicians, DJs, rental companies and any audio enthusiast looking for big sound that's good to go, no power cord needed.

EVERSE 12's custom-designed high-capacity Li-ion battery pack further enhances its appeal, optimized for audio use and providing

Electro-Voice (EV)'s EVERSE 12 features a maximum SPL rating of 126 dB, which makes it an ideal option for a spectrum of outdoor events

plentiful power for 12+ hours at an average SPL of 100 dB with typical program material or 6+ hours at the maximum output level before limit indication, surpassing the EVERSE 8's equivalent performance at 95 dB. Protection circuitry reduces the risk of the battery discharging to such a low voltage that it can no longer be recharged – for example, after long periods in storage. Tool-free screws facilitate effortless removal of the battery pack.

TK-608

Performance Microphone

TK-608: It is a modified version of the TK-600 microphone without a switch that eliminates user error of not switching on the microphone before any performance. Suitable for handheld and stand mounted applications.
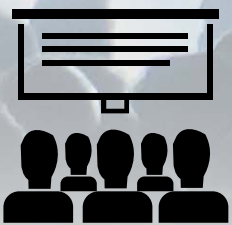
Presentation   **Karaoke**   **Vocal**

JTS ®

RAGAM PRO AVL UPGRADES AUDIO INVENTORY WITH INDIA'S FIRST DIGICO Q225

As **Biju KV**, owner of 50-year old, Kerala-based rental company, **Ragam Pro AVL**, planned to upgrade the company's mixing console, he found himself leaning more and more towards the **DiGiCo** console. Thus, by purchasing **DiGiCo Quantum 225**, Ragam Pro AVL became the first rental company in India to own it. "Recently we have planned to upgrade our audio inventory to meet the growing demands of clients. At first, we wanted to purchase one of the SD series from DiGiCo. Meanwhile, DiGiCo introduced Quantum series 338 and 225 in India which are supplied by Hi-Tech Audio & Image who are the authorized distributor for DiGiCo. This is when **Azhar Meem** from **AVL Marketing**, Kerala, who is the dealer partner of Hi-Tech Audio & Image, informed us about the powerful Quantum 225 that incorporates all the new design features of the Quantum 338 but in a compact, robust work surface", commented Biju KV.

Rajan Gupta, CEO/Founder, **Hi-Tech Audio & Image**, said that the combination of DiGiCo's technical excellence and support plays a pivotal role in converting prospects to clients. "DiGiCo has been challenging its limitations while innovating new product range. From S, SD, and now the Quantum 225, DiGiCo has put a ton of power and versatility into a compact work surface. Definitely, Quantum 225 is a rider-friendly solution for Ragam Pro AVL."

In the Indian live industry, Quantum 225 had never been used by any mixing engineer. Though Ragam Pro AVL is keen to invest in Q225, they were initially uncertain. Azhar of AVL Marketing took the initiative to help the client in every possible way. He shared, "We connected with a few sound engineers from our state who got the chance to work with Q225 console in European countries. Their feedback about the console was positive and they were happy with the console's upgraded features. Hearing this, the client was confident to invest in the console. Furthermore, the support provided by Rajan Gupta and **Nirdosh Aggarwal** of **Hi-Tech Audio & Image** motivated Ragam Pro AVL about Q225."

"We have been associated with Azhar for a decade now. He has been instrumental in Kerala in promoting brands like DiGiCo among his clients. The inventory requirements for pro audio brands are extensive and it becomes hard for us to cater to everyone. We have a wide span of trusted dealer partners across India like AVL Marketing who are boosting our sales by supporting our brands. Investing in DiGiCo Quantum 225 is aligned with Ragam Pro AVL's future business plan." explained Nirdosh Aggarwal, Managing Director, Hi-Tech Audio & Image.

When choosing the Quantum 225, Biju had the future in mind and wanted a console that would give him the edge in the current market and have longevity for many years ahead. With the Quantum 225 on board, Ragam Pro AVL is now able to provide touring engineers with a much more comprehensive and user-centric mixing workflow.

Being the first DiGiCo Quantum 225 in India, hands-on training was immediately planned for the client. **Piyush Joshi**, Application Engineer, DiGiCo shared his experience with conducting a well-structured training for Ragam Pro AVL's team. "Q225 is the best-packaged beast in the industry with such efficient technology. Features like nodal processing, spice rack, true solo, DMI slots for protocol integration, have redefined the digital audio console's capabilities. What impresses me most, is that after all these extraordinary added features, operating the console is a breeze, and switching between SD and Quantum range of consoles is seamless. Ragam's choice of acquiring a Q225 with MQ-Rack got them on the latest platform of digital audio protocols. MQ-Rack has set yet another benchmark in terms of AD/DA converters on MADI protocol. MQ-Rack sounds absolutely phenomenal."

From Left to Right: Azhar Meem, AVL Marketing; Piyush from Hi-Tech Audio & Image LLP; Biju KV, Owner, Ragam Pro AVL; Taris, AVL Marketing; Boney, Sound Engineer, Ragam Pro AVL

ELECTRO-VOICE LAUNCHES EVERSE...

EVERSE 12 is equipped with an array of premium features including weatherized design, a high-output titanium-diaphragm compression driver, true wireless stereo streaming and app control/mixing. EVERSE 12's woofer and high-output titanium-diaphragm compression driver are coupled to a patented SST (Signal Synchronized Transducers) ported waveguide, enhancing low-frequency extension and delivering even vertical and horizontal coverage across all frequencies – all while allowing a significantly smaller enclosure. An ergonomically designed soft-touch handle and advanced lightweight construction simplify moving and mounting the EVERSE 12, whether it's onto a tripod for an extended throw, set long-side-down as a stage wedge with a 55° monitor angle, or placed upright with a 25° kick-back angle to project upwards off the performance area. Built-in feet with no-skid rubber pads also ensure the system stays put.

DIGITAL SPEAKER MANAGEMENT SYSTEM

Nx Audio

DX-480......4 IN \ 8 Out

DX-260......2 IN \ 6 Out

- 8 band parametric EQ on each Input
- 6 band parametric EQ on each Output
- Adjustable Delay time upto 1000 ms on each input and output
- Noise gate and phase on each input
- Password Protect Security

- RS485 connection
- Crossover filters from 12 to 48 dB/Octave including Butterworth, Bessel, Linkwitz-Riley
- Limiter and phase of each output
- Full matrix routing
- 30 Presets with Copy function

Software Included

1.5V Battery
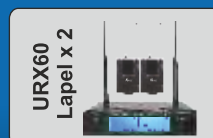
URX-60

PROFESSIONAL DIGITAL UHF WIRELESS MICROPHONE SYSTEM

URX60 Handheld x 2

URX60 Handheld x 1 + Lapel x 1

URX60 Lapel x 2

- ➤ Fully Integrated SMT circuit board
- ➤ DSP based Audio Processor for Enhanced Accuracy
- ➤ ACT Infrared Data Synchronization Technology
- ➤ Phase Locked Loop Frequency Synthesizer
- ➤ Balanced XLR and Mixed Unbalanced 1/4" Output
- ➤ Multiple Noise Control Circuitry for a High S/N ratio of 96dB
- ➤ Effective Open use distance of 400 Ft with 30mW power Output

Narain
Audio & Lighting LLP.
Exclusive Distributor in INDIA

The year 2023 was abundantly layered with new innovations and technologies emerging from the world of pro sound and lighting.

As the demand for better pro audio and lighting products skyrocketed, the year gone by witnessed established brands reinforcing their commitment to delivering novelty with quality and promising new brands marking their presence with innovate, game-changing products and solutions. The PALM Expo Magazine Team, as always, has performed its due diligence and put together a deck of The Top 50 Products of 2023 - 50 defining products, launched between January - December 2023, from the pro audio and lighting industry around the globe. These products were judged by the selection committee of the PALM Expo Magazine on various criteria – including product quality, market penetration in India, and product suitability for the Indian market – and gauged products which fuel adoption of higher quality equipment in rental sound, install sound, studio sound as well as PA sound. Read on.

TOP 50 PRODUCTS & TECHNOLOGY

Global Pro Audio & Lighting Technology

Ahuja Radios XDA – 7002

The XDA-7002 is a power amplifier from AHUJA Radios designed and made in India for the harsh Indian operating conditions. Its revolutionary Class-D technology offers hi-fidelity sound coupled with maximum reliability but at a

pocket friendly price. The high damping factor of XDA-7002 makes it suitable to drive high-power loudspeaker systems especially sub-woofers at live events as well as at indoor venues.

Amphion Amp400.12

The Amp400.12, specifically designed for immersive audio setups, promises an exceptional level of multichannel amplification. With a total of 12-channels, the amplifier can be used to power a 7.1.4 Atmos setup, while still allowing the user flexibility with extra open channel. Since all channels are identical and discreet, the amplifier is also ideal in a 2-channel environment for driving up to 6 pairs of passive speakers. The Amp400.12 is built on the Class-D platform, which delivers quick, controlled, low distortion power. The in-house designed buffer-stage complement the features of the Class-D technology. The Amp 400.12 drives both 8ohm   and 4ohm loads. The Neutrik XLR and Speakon connectors for each channel provide easy and secure connectivity across the system.

ATC SCM25A Pro Mk2

The SCM25A Pro Mk2 is a compact 3-way high-performance active studio monitor loudspeaker, featuring a 6.5"/164mm bass driver. The monitor comes with exceptional mid-range clarity, high output, extended bass response and modest size, which makes it ideal for nearfield monitoring in a spectrum of critical applications. The latest Mk2 version is updated with ATC's latest SH25-76S 'Dual Suspension' tweeter, extending the high-frequency response and reducing distortion.

Audeze MM-100 Professional Headphones

Designed in collaboration with award-winning engineer/producer Manny Marroquin, the MM100 Professional Headphones feature Audeze planar magnetic drivers and magnesium and steel composed chassis to deliver production grade accuracy. With gel-filled earpads and feather-light suspension straps provide seamless comfort to the wearer. The MM-100's single-sided cable enables the user to connect it to either side of the headphone.

Audient iD24

Audeint iD24 is an audio interface made for producers and engineers. Featuring two Audient Console Mic Preamps, class leading converters and an intuitive layout, iD24 effortlessly combines impeccable audio performance with ease of use. Add to that professional must-have features like balanced inserts, ADAT expandability and customizable monitor control, iD24 makes getting studio quality results easier than ever.

Avantone Pro Planar The II

Planar The II Reference-grade Open-Back Headphones with Planar Drivers is designed as the ideal solution for mix engineers, musicians, podcasters, live-streamers, and hi-fi enthusiasts. Planar the II employs a nicely tuned open-back architecture that eliminates the pressure build-up, acoustic resonance, and frequency curve found in closed-back headphones. Planar the IIs also come with a high-grade, removable, two-meter, noise-free 3.5 mm cable that can be plugged into either side to suit the users' workflow. The headphones ship in an eco-friendly shoulder bag with room for other accessories — along with a pouch for the cable.

AVID Pro Tools | MTRX II

Pro Tools | MTRX II features 64 channels of built-in DigiLink I/O, 256 channels of Dante, and 64 channels of MADI. It is fully modular to accommodate any ADR, Foley, sound design, re-recording, or mixing session. Users can configure its eight card slots with all the I/O—the same option cards as MTRX, plus a new Thunderbolt 3 option— replacing multiple I/O, routing, and monitor control interfaces. Users can also route any signal between the various I/O formats and connect multiple HDX systems and DAWs together with a single interface.

Beta Three Audio VR112

VR112 is a full range speaker of medium sized array system. It has 1*12" Ferrite LF driver & 2*44mm Neodymium HF drivers and built-in-crossover with T-shaped cabinet and easy installation and uninstallation with lockpin 10°adjustable cabinet angle range. Multiple VR112 can work with a subwoofer to make up excellent point source system. The array system is also easy to install and uninstall.
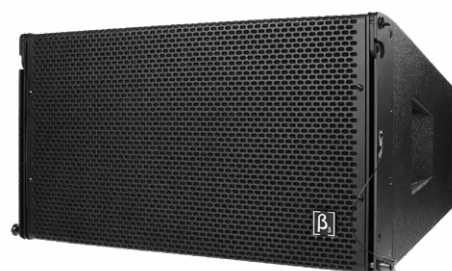
Canara Lighting Chroma Wash Light (160W)

Canara Lighting's Chroma Wash Light – 160W is a high-quality Canara LED Panel light used as a key light, back light, fill light and chroma wash with dimming option for creating many effects for multiple applications, such as stage and auditorium lighting, studio and film lighting, and more. The 160W Chroma Wash Light comes with an integrated dimmer which enables instant dimming from 0 to 100%, high grade aluminum and MS housing with black powder coated matte finish paint. The Wash Light's brightness is controlled through DMX mode and Manual mode. The temperature of the lighting fixture is controlled by passive cooling heatsink system.

Celestion PowerProX18

PowerProX speakers from Celestion are built for maximum performance and reliability. They feature dynamic airflow venting which delivers the desired heat management with an average 20C lower voice coil temperature. The loudspeakers' Polysiloxane laminated dual suspension provides greater stability and improved cone displacement symmetry and the aluminium demodulation ring reduces distortion caused by voice coil displacement. The loudspeaker is also equipped with double-sided, weatherproof cone coating for protection from moisture.

CHAINMASTER D8 1000 kg

CHAINMASTER's D8 1000kg model is now even safer thanks to a second brake fitted as standard. These compact units leave nothing to be desired when used in the entertainment sector. The products are supplied in standard with flip-bag chain bag - usable in normal and climbing position, with eco-friendly water-based matt paint and original EU DAT chain according to EN818-17.

Clarion Audio JM-LA 1205 with JM-LA-SUB 1802(800)

The JM-LA 1205 with JM-LA-SUB 1802(800) is a 12" full range with 18" sub line array system is an impressive sound equipment set-up, designed for loud and powerful audio output. This configuration delivers excellent low-frequency response making it a great choice for high-demand audio environments like music concerts, festivals, or even for clubs and lounges.

Cranborne Audio Carnaby 500

Carnaby 500 is a 3-band parametric EQ, designed for the 500 series format, featuring a unique EQ concept conceived and created by Cranborne Audio. Carnaby 500 is the world's first Harmonic EQ™ - it is an analogue EQ that utilizes harmonic saturation to elevate and cut frequency content. It enhances the users' sources, stems, and mixes with analogue harmonic saturation with the feel, familiarity, and control of an equalizer.

DAS Audio SARA-100

SARA-100 is a compact line array system featuring 3000Wrms of power, delivering a linear performance of 138 dB SPL MAX and a wide dynamic range, making it ideal for events and medium-sized installations where sound quality and uniformity are a priority. SARA features two custom designed 8" loudspeakers for mid and low frequencies and a compression driver for high frequencies with a 100° horizontal dispersion waveguide. SARA's Class D amplifier integrates a switch-mode power supply with power factor correction (PFC).

Denon DJ Prime 4+

Made by working DJs, for working DJs, the PRIME 4 + combines the creative possibilities of four standalone decks with great professional features and rugged build-quality to ensure solid DJ performances every single time. The PRIME 4+ features over 25 fully customizable Main FX and 4 dynamic, knob-controlled Sweep FX. The Touch FX mode converts the 10.1" touchscreen into an XY controller that puts live FX manipulation at the users' fingertips. With the on-board power of Engine Lighting, users have full access to customized or automatic light shows for saved or streaming tracks and full control over color, dimming, sequence, moving head chase position, strobe, blackout, and even on/off control over cold spark fountains, dry ice machines, and haze or fog.

DPA Microphones 2017 Shotgun Microphone

The 2017 Shotgun Microphone from DPA Microphones deliver accurate, clean sound from the primary sound source that combines effortlessly with natural sound captured off-axis. The microphone's durability offers reinforced construction to perform in challenging environments, including high humidity ambiences. The microphone's off-axis rejection means optimal isolation of the desired sound source. The microphone also features directional pick-up pattern with an effective interference tube in a compact housing. The Shotgun Microphone is easy to set up, position and use in fixed positions, on booms and on camera systems.

EAW NTX210L

The NTX210L from Easter Acoustic Works is designed to support medium to large outdoor festivals, corporate events, houses of worship, performing arts centers, and theaters. Different from other powered line array products, the patented Opti-logic technology within the NTX210L allows each loudspeaker to communicate with the loudspeakers around it. This reduces setup and tuning time, opportunities for errors, all while maximizing array performance.

Eve Audio SC2070

The SC2070 is a compact 2-way system featuring the brand-new Air Motion Transformer RS7, which has been specifically developed for SC2070 to achieve a crossover frequency at 1800Hz that is astonishingly low for a 2-way monitor. An enclosure with a reinforced front baffle houses the Air Motion Transformer RS7 and a 6.5" SilverCone woofer, as well as the amplifier unit with an output power of 250W.

Genelec 8381A Point Source Main Monitor

The 8381A is a flagship floor-standing Adaptive Point Source design that provides unrivalled LF control, huge headroom and high-resolution imaging. Designed for high end music recording and mastering, the 8381A will intelligently adapt to any acoustic environment, producing accurate full-band mixes that translate consistently to other rooms and playback systems.

JBL Professional VTX A6

The A6 is JBL's smallest VTX line array to date, which brings flagship VTX A mance in a subcompact form. The two-way line array element is solution for small to mid-size rental corporate events, theaters, clubs, of worship or any application that deno-compromise sound reinforcement. A6 is engineered for outstanding sonic performance and easy integration and deployment. Custom-engineered dual 6.5" Differential Drive® woofers and a new 3-inch compression driver are two acoustic features that elevate the A6 to newer heights.
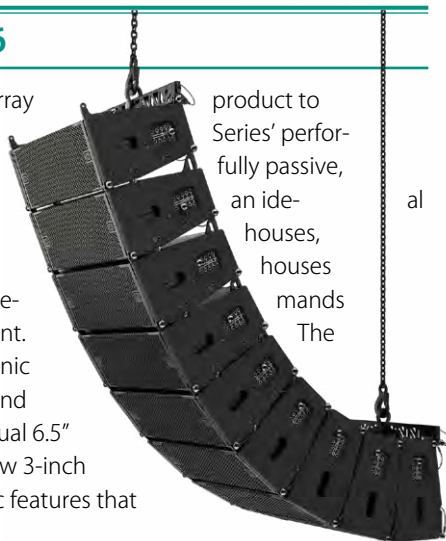
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L-Acoustics L-Series

L Series from L-Acoustics comprises two elements that are designed to work together or on their own: L2 and L2D. Each element contains eight three-inch high-frequency drivers with eight ten-inch low-frequency drivers, complemented by four side-loaded 12-inch drivers with front and back exits to deliver the desired broadband coverage with a choice of cardioid or super-cardioid patterns. L Series also features L-Acoustics Panflex™ technology, which provides sound designers with quick access to a choice of four horizontal directivity patterns: 70° or 110° symmetrical, or 90° asymmetrical on either side. Each L2 element includes four Panflex modules, while L2D contains two Panflex modules on the top elements and two fixed L-Fins progressing from 110° to 140° on the bottom elements.

Lewitt Audio MTP W950

The Lewitt Audio MTP W950 is one of the most premium handheld microphones that feature 1" true condenser capsule, cardioid and supercardioid polar pattern, 12 dB attenuation setting, and 120 Hz low-cut filter, offering crystal-clear live mixes with 90% rear rejection. The MTP W950 also comes with a detachable capsule, allowing customers to use the microphone in its wireless form.

Lightning Boy Audio Dark Storm

The Lightning Boy Audio Dark Storm is a 75dB, JFET powered, 4-transformer preamp featuring dual outputs - a 600 Ohm balanced XLR output and a Hi-Z 1/4 unbalanced output (wet) - that can work at the same time. The gain knob

up all the way helps the user achieve strong and fuzzy distortion. The Dark Storm has 0.018% THD+N and a frequency response that spans 10Hz-400kHz (+/-2dB from 13Hz-25.5kHz), 75dB of gain, S/N ratio of 100dB, 12dB of boost.

Logitech Zone Wireless 2

The Zone Wireless 2 enhances focus and concentration on tasks at hand. With AI noise suppression, four noise-cancelling microphones, and hybrid ANC, it enables high-skilled employees to work seamlessly without distractions.

Mackie DLZ Creator

Inspired partially by smartphone and DSLR cameras that make great results happen, the DLZ Creator transforms the on-screen controls to meet the users' creative style or skill level—without compromising processing power or sound quality. DLZ Creator allows users to record or stream to a computer via USB-C, or skip the computer and record full multitrack audio to an SD card for a truly self-contained setup.

Martin MAC One

The MAC One from Martin is a revolutionary beam, wash and eye-candy fixture that features a Fresnel lens designed to transform any stage or event into visual delight. MAC One's narrow, high-intensity beam, stunning Fresnel lens for a soft wash with a 4 to 27-degree zoom range, and an innovative backlight system with 24 RGB effect LEDs within the lens deliver the desired results. Powered by a custom-developed 120 W RGBL (Red, Green, Blue, Lime) LED engine, with an output of 2,500 lm and a narrow beam intensity of 375,000 cd, MAC One's performance is unparalleled in its category. The fixture is easy to handle and manage, and more fixtures can be used in a show without compromising weight or space limitations, resulting in lower transport costs and a good ROI for rental companies.

MX-MDR Technologies MX SIGNATURE PRO 14-Channel Live Audio Mixer

MX-MDR Technologies' MX SIGNATURE PRO 14-Channel Live Audio Mixer is a 14-channel ultra noise compact mixer with highest possible headroom. The live audio mixer features 14 mono + 1 stereo track input with built-in USB and bluetooth with high-quality microphone amplifier, unique 99 DSP built-in digital effects, high precision three color accurate level column, accurate display output level, 4-band active EQ with mid-range for each channel, and a 9-band equalizer.

Neumann.Berlin MT 48

The MT 48 from Neumann is a reference audio interface that delivers superior audio quality at every step of the signal chain, from input to output. The MT 48 is the one and only audio interface in this range that houses the entire spectrum of potential of Neumann's microphones, headphones, and monitors

in a single device. At 136 dB-A, the interface offers AD conversion four times the resolution of competing devices, and with a 78 dB gain, the users get the finest detail out of any microphone. The MT 48 also comes with four internal mixers for quality EQ, dynamics processing, and reverb.

N-Labs X9

N-Labs' X9 subwoofer amplifier delivers powerful audio for live sound, road shows, in cinemas, and more. The X9 is one of the biggest power amplifiers ever made by any Indian brand and the only amplifier which is available in that power rating and specs in India right now. With a peak power of 2 X 3500 W for 8 Ω, 2 X 7200 W for 4 Ω, and 2 X 9250 W for 2.6 Ω, the subwoofer amplifier uses the highest output power in the industry. It is designed for

subwoofers, delivering more than 2700 Damping Factor with a frequency response of 0.1DB +/- @ 20HZ – 200HZ. Some of the key features of X9 include – separate fuse boards inside to protect input and output supplies from damage, automatic temperature sensors inside to regulate the fan speed reducing noise, pure class H Technology for higher output and efficiency, and ideal for low frequency response.

Nx Audio Harmony16

Using studio-grade preamps to deliver fat, natural sounding bass and smooth, soaring highs with very low distortion, the Harmony16 delivers a level of sonic purity and sound quality that is unmatched in their class. These feature-packed Live Mixers have dual digital multi-effect processors offering

31+16 editable digital effects perfect for enhancing a mix, 100mm faders, 4 Aux Sends, 9 Band Graphic Equalizer, USB Recording, and more.

Pioneer DJ DJM-A9

The 4-channel DJM-A9 club standard mixer features clear sound quality, enhanced playability and connectivity, along with a host of new features. The channel input section within the DJM-A9 is equipped with an ESS Technology 32-bit high-quality A/D converter for crystal-clear, high-resolution sound, while the master and booth output sections employ 32-bit high-quality D/A converters from the same brand so that the users can experience the same sound from the booth monitors as the crowd hears on the dancefloor.

PreSonus Eris 3.5 2nd Gen

With the PreSonus Eris 3.5, users can now bring studio-grade performance to the home studio. The Eris 3.5 delivers studio-quality sound in a compact, easy-to-use package. The Eris 3.5 is loud, as well as clear, thanks to a 50W total Class AB power amp. Users can fine-tune the speakers' response with low- and high-frequency tuning controls or listen to music in private with the integrated headphone amplifier.

QSC LA112 Line Array Loudspeaker

The LA112 is a next-generation, intelligent, active line array loudspeaker featuring a brilliant combination of leading-edge innovation and unparalleled ease of use in an easy-to-deploy package. The LA112 is easy to configure and deploy for applications ranging from simple, portable setups, to demanding, networked AV productions, and fixed installations. Innovations include the proprietary QSC LEAF (Length-Equalized Acoustic Flare) waveguide, QSC Acoustic Linear Phase (ALP) design and the ergonomically designed, single operator QSC RapidDeploy rigging system coupled with onboard QSC AWARE (Automatic Wireless Array Recognition) system intelligence. The LA112 provides also flexible interoperability with networked audio systems (Dante).

RANE FOUR

The FOUR from RANE, an advanced 4-channel Stems DJ controller comes with unique features like STEM-SPLIT,

Performance Pad OLED displays, and a new dynamic internal FX engine. The newly designed internal FX suite features 22 paddle-triggered, fully customizable Main FX and 4 knob-controlled Channel FX for adding flavor and personality to individual Stems elements and tracks. This robust FX suite features Reverb and Echo and new additions, which includes Scale Down, Recycler, Riser, and more. The Channel FX section offers manipulation of 4 knob-controlled FX including Filter, Filter Roll, Noise, and Flanger. The RANE FOUR also allows the user to switch back and forth between the built-in hardware FX and Serato's software FX, providing limitless options for any style of DJing.

RME Audio Digiface USB

The Digiface USB is compact, portable digital audio interface with 4 optical ADAT / SPDIF I/Os, and an analog high-quality line/phones output via 6.3 mm TRS jack. The Digiface USB simplifies connection with USB 2 and it does not need an external power supply while adding another optical I/O, resulting in 32 channels input and output each when using ADAT optical. The analog output hosts channels 33/34, and can be used freely thanks to TotalMix FX, RME's routing and monitoring solution that is limitless in routing and mixing.

Royer Labs R-10 Hot Rod Limited Edition

The R-10 Hot Rod is fitted with a custom Anniversary Edition transformer that gives this microphone 5dB more output than the standard R-10 and increased low-midrange focus. The R-10 Hot Rod also features a 25th Anniversary black-accented trim package. the R-10 Hot Rod handles extremely high SPLs (160dB @ 1kHz), has an internally shock-mounted ribbon transducer & 3-layer wind screen system that combine to give the ribbon element excellent protection, making it ideal for live applications, features lowered proximity effect that make it an excellent for close miking instruments and singers, and carries a 5-year warranty with the first re-ribbon free.

Rupert Neve Designs Newton Channel

The Newton Channel is a modern channel strip that provides classic sound on demand, with all the instantly-recognizable character, musical tone-shaping abilities, and proven reliability that define a Rupert Neve Designs product. The parametric mid-band of the Newton EQ section includes another 31-detent potentiometer along with a wide range of mid frequencies to boost

or cut, switchable from 220Hz to 7kHz. The Newton Channel also contains the latest version of Rupert Neve Designs' VCA compressor, with +20dB of make-up gain and ample control. The Newton is ideal for a project studio, large-scale commercial facility or live sound rig.

sE Electronics V2 Switch

The V2 SWITCH is a multi-purpose handheld dynamic microphone with a no-slip on/off switch. Its balanced sound character is ideal for vocals, speech, and a wide range of instruments. The supercardioid capsule design provides impressive off-axis rejection, significantly reducing stage bleed and isolating your source from unwanted background noise. The V2 SWITCH protects against unwanted plosive pops and handling noise with an internal windscreen and integrated shock-mount, providing professional sound in any environment.

Sennheiser Profile USB Microphone

Profile USB microphone is a cardioid condenser microphone that presents an easy and stylish solution for streaming and podcasting. It combines professional sound with direct accessibility of all functions, allowing streamers, podcasters, and gamers to fully focus on their content. At the heart of the Profile USB microphone is an award-winning Sennheiser condenser capsule, the KE 10. Its cardioid pick-up pattern provides the typical attenuation of sound coming from the rear, making sure that the streamer's voice is in focus. The Profile can be tilted for optimum positioning, the self-locking joint will ensure that the mic stays in position. 3/8" and 5/8" connectors at the bottom allow the mic to be used with third-party table stands. Users who are looking for more sophisticated placement possibilities should opt for the Profile Streaming Set, which comes with a 3-point self-locking boom arm.
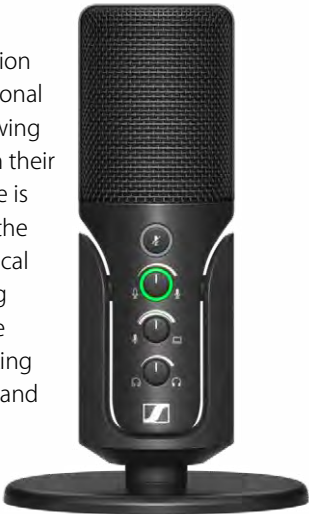
Sony MDR-MV1

The MDR-MV1 Open Back Studio Monitor Headphones offers extended spatial sound reproducibility along with accurate sound object positioning within a 360-degree space, as well as clear, sound coupled with a super-wide frequency range and accurate soundstage. The headphones' driver units provide ultra-wide-band playback (5Hz – 80 kHz) with natural high frequencies. The open back structure of the headphones minimizes internally reflected sounds and eliminates acoustic resonances while accurately reproducing natural, rich spatial information and sounds.

SPL Phonitor 3 DAC

SPL's Phonitor 3 DAC is a headphone amplifier, monitoring controller, and DAC with 120V technology, featuring analog SLP120 that converts digital PCM audio signals with a resolution of 32 bit and a sampling rate of up to 768 kHz. Phonitor 3 DAC offers the same monitoring quality as the big SPL mastering consoles – on loudspeakers as well as headphones. The analog Phonitor Matrix allows mixing and mastering on headphones with the same spatial perception of the stereo stage as on loudspeakers.

Steinberg HALion 7

Steinberg's HALion 7 is a software instrument developed to help users create superlative music and sound design. HALion 7 features the completely new FM Zone, developed in co-operation with Yamaha. This allows the users to combine up to eight operators, use them as carriers or send them to feedback loops. With access to an Algorithm Finder, the users can create

everything from classic DX7 tones to the most contemporary FM sounds. HALion 7 also supports DX7 and TX81Z SYX file import in the FM Zone. The HALion spectral oscillator features time stretch and resynthesis algorithm, which allows the users to change playback speed in real time without affecting the pitch and transform samples into completely new sounds. With features like formant shift, spectral filter, purity, inharmonicity and the ability to hold the previous spectrum functions if a sample's start or end is reached and a new FFT view, the HALion 7 is just the right fit for sound designers worldwide.

Studiomaster Professional Orb 2442

The Studiomaster Professional Orb 2442 is a large-format 24 channel live mixing console. Sporting 24 mic / 28 line inputs, 6 Aux sends, 4 subgroups, dual 7-band stereo GEQs, One Knob Compressor on 10 inputs, USB MP3 media player & recorder with Bluetooth 5.0, PC USB audio interface and advanced routing, monitoring and metering options, the mixer is ideal for live, FOH, touring, and complex installation applications in large venues.

TASCAM Sonicview 24XP

TASCAM Sonicview recording mixing consoles is equipped with built-in Dante networking, a 32-bit/96 kHz multi-channel USB audio interface, built-in multi-track SD recording*, and plenty of I/O. Sonicview 24XP includes 54-bit float-point FPGA mixing, which combines with signal processing, an expansion slot for additional connectivity, and wireless remote control to make it a next-generation choice for touring, installed sound, recording studios, and broadcasting. The TASCAM Sonicview 24XP delivers motorized channel faders in three banks of eight, along with a motorized stereo fader for the main bus. Above each bank of channel faders is a color touch panel that allows the user to view entire mixer channels, thereby controlling each parameter with ease.

Trinnov Audio NOVA

NOVA is a modular Optimizer that allows users to upgrade from 2 to 6 channels with a simple software update. Packed in a shallow 1U chassis, NOVA covers all monitoring needs from stereo to 5.1 and handles analog and digital signals easily. NOVA also enables the user to connect, align and seamlessly switch between sources and multiple sets of monitors, regardless of their format or connection. Avid EUCON compliant and fully compatible with La Remote, NOVA allows advanced monitoring control and can easily be integrated to various production tools. It can be set up either as a full monitoring controller or as an embedded audio insert processing toolbox in the loudspeaker path.

Ultimate Ears Professional UE Premier

Loaded with 21 drivers and a five-way crossover, the UE PREMIER in-ear monitors are ideal for live stage performances as well as studio recordings. With five-way crossover, 21 precisely curated and tuned drivers, Knowles Super Tweeter that extends frequency range to 40kHz, adds the desired warmth, richness and airiness, dual mid-low diaphragm speakers, acoustic isolation that rejects noise in any environment, custom, personalized fit that stays secure and comfortable, and waterproof connection system and SuperBAX cable that provide lasting durability, the UE PREMIER in-ear monitors are here to change the game.

Universal Audio Sphere DLX Modeling Microphone

The UA Sphere DLX modeling microphone system delivers the user the sound of classic mics. Featuring 38 legendary mic models of Neumann, Telefunken, AKG, Sony, and more, the Sphere DLX is designed to give the sound quality of some of the most sought-after ribbon, condenser, and dynamic microphones. The Sphere DLX lets the user audition classic mics before, during, and after recording with any interface, in any DAW. With dual-capsule design, the Sphere DLX lets the user easily record piano, drums, strings, and more in stereo and different mic models on the left and right channels for a more colorful stereo image.

VALaudio WP15CXL

VAL audio WP15CXL is a 15" two-way coaxial all-weather Line Array speaker. It uses a special polymer compound injection molded cabinet and is specifically designed for anti-UV aging, dustproof and windproof. It features specially designed dustproof and waterproof cover for input and output and a five-layer functional grille to prevent water and dust ingress. The speaker is designed to meet IP56 standard. The exposed metal parts are made of stainless steel or aluminum, and the mounting bracket is sprayed with low-carbon steel, which can meet all-weather use. It features a 1x15" ferrite mid-bass driver and coaxially mounted 1 x 3" voice coil HF driver on a 60°x25° waveguide. The WP15CXL unique design allows it to be used as a standalone speaker or in arrays of upto 4 speakers with additional flying hardware.

IPEVO
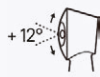
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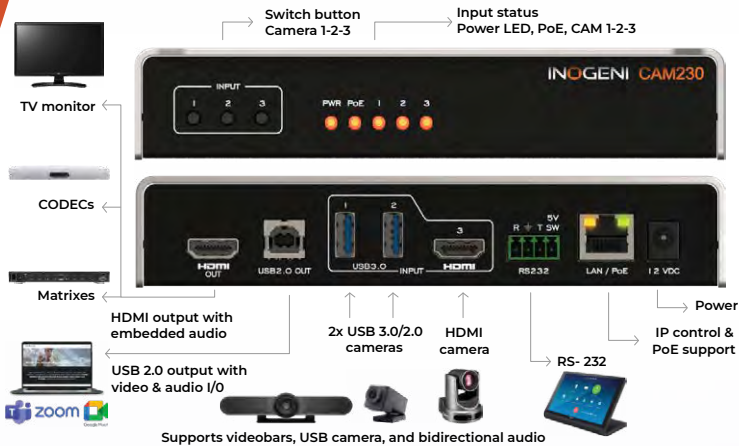
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SENNHEISER LAUNCHES HD 490 PRO REFERENCE STUDIO HEADPHONES

Sennheiser launched open-back HD 490 PRO reference studio headphones, purpose-built for producing, mixing and mastering. The circumaural, dynamic headphones feature highly precise sound reproduction and a very wide and realistic sound stage. This superior accuracy and range give producers, mixing and mastering engineers, as well as musicians, the transparency they need for critical mixing decisions and for confidently resolving any panning placement issues.

"If you compare today's music productions with that of 10 - 20 years ago, you will notice how the massively increased computing power and complex parameter automation have changed the way in which music is made," shares **Jimmy Landry**, Category Market Manager for MI, Sennheiser. "In every genre, engineers and music creators are continuously pushing boundaries, creating extremely complex mixes that can be prone to so-called 'audio blind spots'. Mixes can be crowded and muddy, with too many instruments sitting at the same position and their frequencies competing. For the engineer or musician, it becomes difficult to hear each individual instrument or voice distinctly. This goes to show the importance of a good pair of studio headphones."

Full-spectrum audio accuracy

The HD 490 PRO is equipped with an extremely wide, dimensional sound stage for precisely localising the components of a mix. Ultralight voice coils

The Sennheiser HD 490 PRO is Sennheiser's top-of-the range professional model for mixing, mastering and producing

ensure a fast and authentic sound reproduction. The frequency response is uncoloured and honest across the entire audio spectrum, with the low end being full, accurate, and clearly defined thanks to a special low-frequency cylinder. The open-mesh ear cup covers reveal Sennheiser's Open-frame Architecture, which minimises resonances and distortion. For an optimal listening experience, the transducers sit at a slight angle, thereby emulating a typical monitor loudspeaker set-up.

"All these features combine to enable music professionals to identify and resolve any panning placement issues and troublesome low-end frequencies – ensuring clear mixes and superbly refined masters," explains Gunnar Dirks, Product Manager, Sennheiser. "The HD 490 PRO studio headphones put you in full control of every detail."

A pleasure to wear

The HD 490 PRO's lightweight, ergonomic design eliminates any pressure points, as the headband does not press on the sensitive parts of the head. The circumaural ear pads feature a Sennheiser-patented soft comfort zone for the temples of glasses while maintaining good sealing.

Attention to detail

The headphone cable can be plugged into the right or left ear piece of the HD 490 PRO to cater to different studio set-ups and preferences. A patented cable coil structure ensures that the headphone cable does not transmit any noise when it hits the desk or rubs against the clothing. The left/right designation is clearly visible on the inside dust covers of the transducers, while for the visually impaired, the headband fork carries braille information. Each HD 490 PRO is delivered complete with two different sets of ear pads (mixing and producing) plus a 1.8 m headphone cable and a dearVR MIX-SE licence.
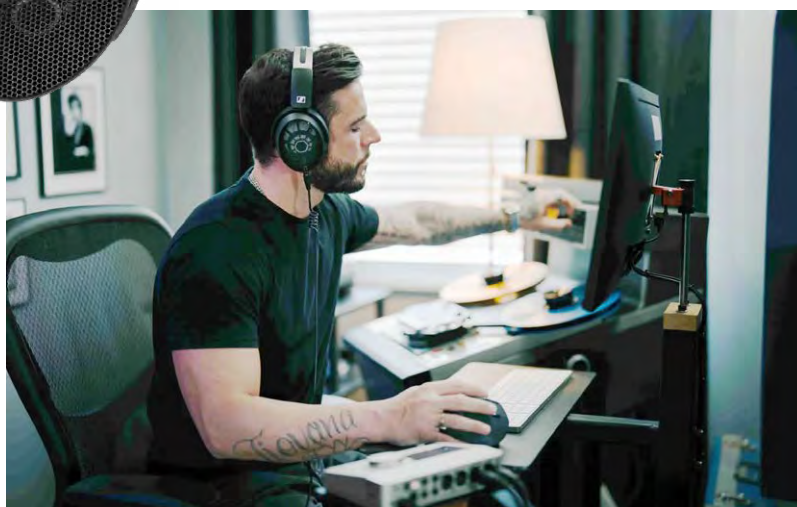
The HD 490 PRO studio headphones deliver a wide, spatial sound stage with excellent localisation, enabling producers to create refined masters

AUDIENT LAUNCHES ORIA - IMMERSIVE AUDIO INTERFACE & MONITOR CONTROLLER

Audient introduces **ORIA**, an all in one audio interface and monitor controller designed specifically for multi-speaker arrays ranging from stereo to 9.1.6 setups – and everything in between.

"As immersive audio continues to become more prevalent across music, film, TV, game and VR production, our goal was to design a purpose-driven and affordable solution for those wanting to work in the immersive space," says Audient's **Andrew Allen**.

Allen adds, "ORIA is designed to prioritise immersive audio workflows, giving you onboard room and speaker calibration DSP, true immersive monitoring control and professional audio performance, alongside intelligent integrations with **Sonarworks** and **Dolby Atmos**."

ORIA provides 16 outputs via TRS or AES, two dedicated relayed switched stereo outputs, two independent headphone outputs, BNC Word Clock in and out, as well as two **Audient Console Mic Preamps**,

16 ADAT inputs and an optional 16 input AoIP Dante card, which is ideal for large studio complexes and education facilities.

Designed with a dual purpose, ORIA is not only a powerful USB-C audio interface with 16 outputs, but it can also integrate into the existing studio setup as a standalone monitor controller via its ADAT Inputs or the Optional Dante Card.

Working with multi-channel speaker arrays requires a per-

fectly calibrated room and ORIA's Advanced Speaker Processing lets users create up to 32 custom onboard calibration Profiles (presets) for any monitoring format, by utilising per channel 8-band EQ, Speaker Delay, Trim and Bass Management tools. Ensuring users' rooms stay calibrated when monitoring different formats such as stereo, 5.1 or Dolby Atmos.

Audient has also partnered with calibration experts Sonarworks to enable users to load SoundID Reference profiles directly into ORIA's hardware giving users the ability to measure

TLA121-II

β3® Beta Three

Dual 12" Line Array Speaker

- **Frequency Response(-3db):**
  LF: 90Hz-4kHz; HF: 900Hz-15kHz

- **Max SPL@1m:**
  LF:131dB/137dB(Peak);HF: 134dB/140dB(Peak)

- **Compression Driver:**
  2x3"HF

- **Woofer:**
  2x12"LF

- **Sensitivity (1W@1m):**
  LF:102dB; HF:110dB

- **Total Power:**
  1000W

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MACKIE LAUNCHES SLATE OF INNOVATIVE NEW PRODUCTS FOR CONTENT CREATORS AND MUSICIANS

Mackie, one of the leading brands in professional audio, announced eight new products, all available in early 2024. The diverse lineup includes some entirely new concepts, including Mackie's first foray into video, updates to acclaimed products, and expansions of popular series.

Mackie DLZ Creator XS is a compact, adaptive digital mixer that enables content creators of all levels to quickly get pro results for podcasts, YouTube, and live streaming. DLZ Creator XS features the same DSP processing power and features of the larger model, the popular and well-reviewed DLZ Creator, including Mix Agent virtual audio assistant and AutoMix.

Mackie MainStream is a streaming and video capture interface that integrates video, audio and stream control into a single, powerful device for content creators. Simply connect your mic, HDMI game feed, USB cameras and other sources straight into Mackie MainStream for a sleek, all-in-one solution that puts all the essential controls right at your

The professional audio brand pushes into the future with eight new solutions for Streaming, Podcasting, Recording, and Live Performance

fingertips. Combine MainStream with the included (but optional) Mackie Matrix software to route audio, tweak your mix, add effects, create samples and trigger them with 24 virtual pads.

Mackie ShowBox is a battery-powered all-in-one performance rig that lets you set up in seconds and take total control over your live sound, no matter where you perform. ShowBox offers all the audio inputs for solo gigs and small bands, replacing amps and PA speakers and adding effects you can tweak with the

breakaway controller.

Mackie MobileMix is a small audio mixer that runs on USB power. It's the easiest way to get legendary Mackie sound into DSLR cameras, PA systems and smartphone setups. From on-the-go live sound to streaming and video production, MobileMix delivers professional quality audio in a tiny package, with a slot underneath for a rechargeable battery (sold separately).

Mackie ProFXv3+ is a series of professional analog mixers /

USB-C audio interfaces with powerful enhancements for studio-quality recordings and live streams. Capture your performance with Onyx preamps and channel EQ, add computer audio loopback, bring in calls via Bluetooth and customize the upgraded GigFX+ effects on a color LCD screen. Models include the ProFX6v3+ (6-channel), ProFX10v3+ (10-channel) and ProFX12v3+ (12-channel).

BEYERDYNAMIC RELEASES NEW LIMITED-EDITION DT-770 PRO X STUDIO HEADPHONES

Beyerdynamic has announced an update to its studio headphone range with a new model called the **DT-770 Pro X Limited Edition.**

Designed to be used as referencing headphones when mixing and making music, the new Xs offer a detachable mini-XLR cable, integrated STELLAR.45 drivers, and a new cushioned headband for long studio sessions.

Speaking about the new DT-770 Pro X Limited Edition headphones, Beyerdynamic CEO **Andreas Rapp**, said, "We wanted to commemorate

our 100-year milestone by creating headphones that pay homage to our past, and empower studio professionals of the future to work however and wherever their inspiration strikes. By combining the beloved features of the DT 770 Pro with the latest driver technology of the DT 700 Pro X, whether you're in a bustling studio or recording at home, the DT 770 Pro X Limited Edition delivers an unparalleled performance."

As Beyerdynamic inches closer to its 100th anniversary, the pro audio brand announces limited-edition DT-770 Pro X Limited Edition

AUDIENT LAUNCHES ORIA...

and calibrate their room in under an hour.

"We have ensured that ORIA delivers the audio performance you have come to expect from Audient." The high performance converters have 126dB of dynamic range and the tried and tested Audient Console Mic Preamps continue to to deliver 58dB of gain and work as mic, line or Hi-Z instrument inputs. Allen concludes, "For the first time ever, the Audient Console Mic Preamp is remote controlled. Optimised to give you the sonic benefits of its all analogue design alongside pinpoint accurate digital control."

"IRAA's Long Arc to Achieve Royalty for Music Mastering is my Motivation" : Anil Chopra

Anil Chopra, *Founder & Chairman, Indian* **Recording Arts Academy (IRAA) Awards**, *is a true-blue visionary, a champion for the technical genius that goes into making a hit song in India. Since the inception of IRAA in 2006, Mr. Chopra has upheld the mission and vision of applauding the love and labor of the sound engineers, recording, mixing, mastering engineers, and music production and post production professionals working tirelessly to imbibe life into a song. In a conversation with* **PALM Expo Magazine**, *Mr. Chopra sheds light on IRAA's journey so far, the gameplan with IRAA, and the idea of enveloping the acclaimed Awards with a sparkle of glitz and glamour in the near future.*

17 years! What has IRAA achieved? What has IRAA not achieved?

IRAA's long arc to achieve royalty for music mastering is my motivation. Very critical achievement yet remains unfulfilled. Institutionalizing IRAA is one such objective. Membership is the key to enabling IRAA as an institution. India's burgeoning content production makes growing IRAA with membership extremely important. There are other objectives which definitely need to be achieved. Such as increasing the number of nominations to 2000, then 5000, and at the earliest to 10000. I am speaking of paid nominations. This will strengthen IRAA.

I think we should start membership immediately which in turn, will contribute to increasing nominations.

In terms of what we have already achieved, I would like to emphasize, IRAA has achieved credibility. It has achieved recognition. It has achieved sponsorship. It shall soon achieve a red-carpet formal award ceremony attended by the intelligentsia of sound engineering and music recording, mixing, and mastering.

IRAA, you say, has achieved recognition, but it still lacks the glitz, glamour, and star power despite sound engineering being a core Bollywood movie production factor.

I do agree and it is rather dissatisfying in that sound engineers aren't yet given their due along with composers and lyricists and singers when there is a groundbreaking hit that is selling and streaming in the tens of millions. My view is that the sound engineer who does the mastering is as much if not the most contributive factor, artistically in creating such a groundbreaking hit music track.

Once this happens, there will be attraction to IRAA from star power and the glamour and glitz will be achieved.

So, what is the gameplan with IRAA?

We have to generate far more interest in IRAA by deciding on more music awards. Last year, we announced Song of the Year Award for Srivalli track from Pushpa. Sid Sriram was the singer and A. Uday Kumar was the sound engineer and recordist. IRAA has again announced the choice for Song of the Year for
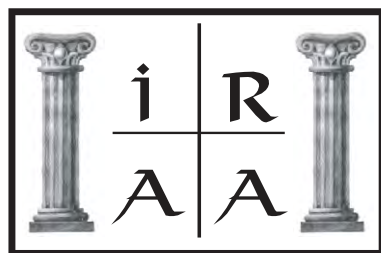
2022. We would like to add a few more categories for music in 2023. Also to receive nominations from Indian music globally. I feel that in a few years, IRAA choice for Song of the Year in various categories will become the de facto winners that will be accepted by Bollywood and the rest of the music industry.

How much involved is the music industry in IRAA?

Frankly, at this point, the music labels aren't realizing their fault in not working closely with IRAA. I am surprised. We have reached out to music labels. We

> **My view is that the sound engineer who does the mastering is as much, if not the most, contributive factor, artistically in creating such a groundbreaking hit music track.**

are aware that IRAA nominations should also come from music labels. I think most of the music labels, other than T-Series, are woolly-headed. T-Series did get in touch to make nominations, but the other labels have an attitude. But I am confident this will resolve itself soon in favor of IRAA. IRAA is willing to work closely with IPRS, PPL, and IMI. We are selecting winners through a process with 12 Jury members and an Award Director. We appoint a new Award Director every year or two. As I said earlier, IRAA has achieved a high level of credibility and music labels should respect the IRAA Awards and contribute substantially with paid nominations of all their new releases.

Why is IRAA Awards not being streamed?

Well, it is being streamed on Youtube. I think you meant OTT or television. IRAA has decided to tie up with some OTT channel. This year, we will have a good video production of the entire award ceremony. The award ceremony is a formal affair. It will be attended by many of the top sound recording engineers as well from the music industry.

IRAA's 17th edition is being sponsored by Genelec. Is IRAA well-funded?

We are extremely glad for Genelec's generous sponsorship to IRAA. We must thank **Arun Kumar** from Genelec and **Devasis Bartaki** from Alphatec. Both have contributed much to this edition of IRAA with their tremendous experience. I am sure that IRAA will benefit with their involvement. Both of them shared very strongly, the objectives of IRAA and are fully absorbed with the aims and goals of IRAA. I hope the partnership continues in the future.
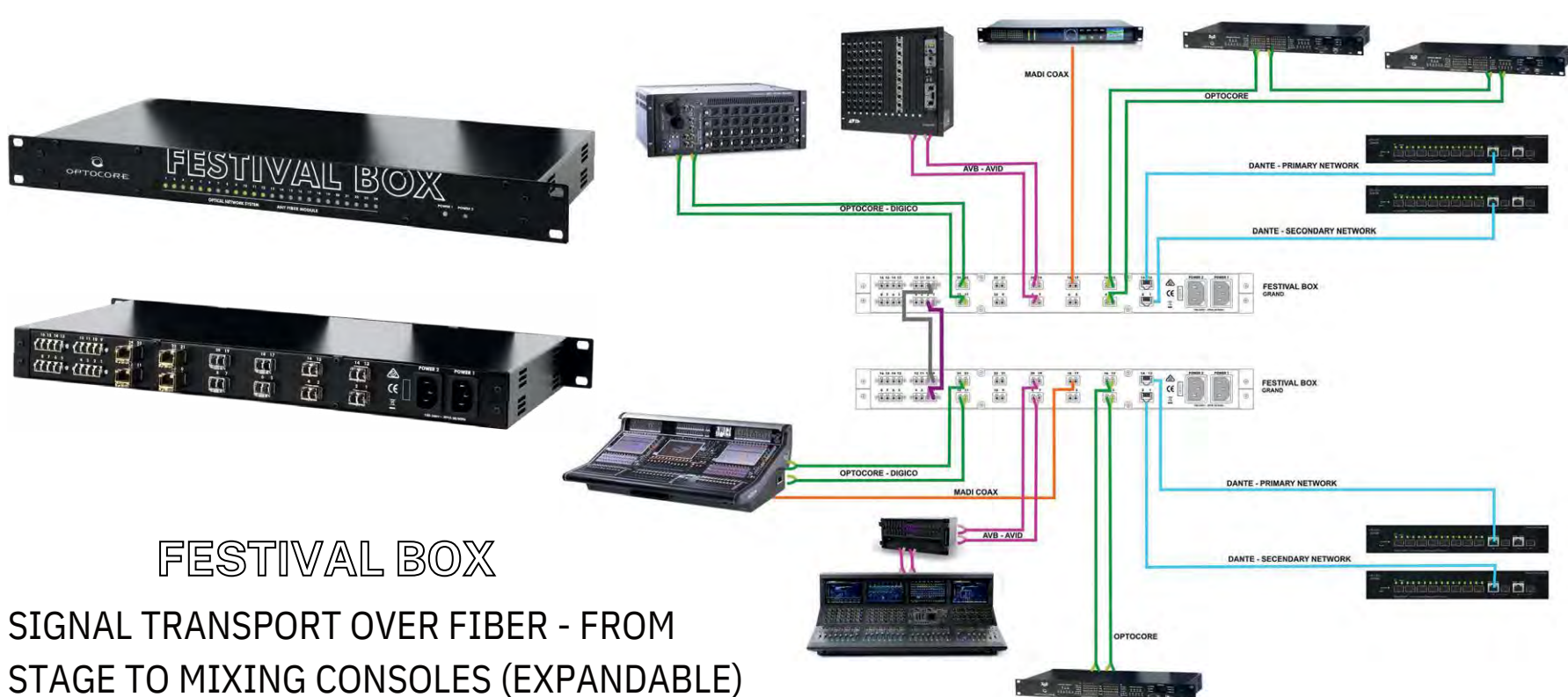
SOUND ACHIEVES NEW HIGH WITH STRINGS & NOTES

Trimac Products Open New Musical Instruments and Pro Sound Gear Store In Andheri, Mumbai

Trimac Products Private Limited, one of India's leading distributors of pro audio and musical instruments, recently inaugurated a musical instruments and pro sound gear store in Andheri, Mumbai. The store,

Inside Strings & Notes: A demonstration of premium musical instruments within the four walls of the store

store are immersed in soothing greys with the imagery of various musical notes embedded on it, with accents of red punctuating the interiors through photos of well-known musicians, artists, and sound engineers.

Ravi Ranjan, CEO, Trimac Products, strike a pose with Smita Rai, Deputy Project Director, PALM Expo and Editor, PALM Expo Magazine at the Strings & Notes' newly-opened store

named **Strings & Notes**, is designed to be a haven for exquisite products and instruments and to cater to the increasing demand from musicians and sound engineers for an exploratory space to discover a whole new world of sound and music.

Strings & Notes envelopes the ambience that makes a music store appealing to the senses. Just as the visitor turns left upon entering the store, a black art frame catches the eye – with the words 'You are exactly where you need to be' etched onto it in dazzling LED lights. But what steals the show is the good old grand classic piano from Samick, poised with a grandeur that befits a musical instrument of its calibre. The walls of the

The store is more than a typical musical instruments store. Visitors can explore an entire section of studio products from eminent brands such as **Audix, dB Technologies, Yamaha, HK Audio, Adam Audio, Prism Sound, Rode, M-Audio, KRK Systems, Mackie, Steinberg**, and the likes – right from studio grade headphones and microphones to speakers, mixers, and amplifiers. A dedicated studio room at the back of the store, designed as an experience centre for sound engineers and musicians, is a reflection of the well-rounded approach from Strings & Notes to deliver a wholesome acoustic experience to the visitors.

Talking about Trimac Products

Pankaj Agrawal, Managing Director, Pankaj Kumar, COO, Ravi Ranjan, CEO, Ramal Kant, Manager Sales - Broadcast/ Projects from Trimac Products look happy and proud at Strings & Notes' inaugural event

Inside Strings & Notes: A demonstration of premium musical instruments within the four walls of the store

foraying into the B2C segment with Strings & Notes, **Pankaj Kumar**, COO, Trimac Products, commented, "Until now, we were involved in a B2B business. But, we just started with a B2C endeavor with our first retail store in India, which is one-of-its-kind for the musical objects and instruments. Right now, for us, this store it is just like a baby. We are aiming at making it grow to its fullest potential and beyond. For this, we need your support."

A slew of musical instruments adorn the walls and shelves of the

store, from colourful guitars, drum kits, and pianos, with musicians and artists stepping in and trying out a tune on the instruments of their choice from an array from brands like **Gibson, Gibson Custom, Johannes Seiler, Orange Amplification, Maestro, Kramer, Greg Bennet Design, Steinberger, Levy's, Magma Strings, Strings GK, Epiphone, Neptune, Gatorcases, Samick, Medina Artigas Strings**, and more.

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BETA THREE AUDIO INDIA EXHIBITS LINE OF PRODUCTS AT PUNJAB DJ LIGHT & SOUND EXPO

Beta Three Audio India participated as one of the exhibitors at **Punjab DJ Light & Sound Expo** in Ludhiana, Punjab on 3rd January, 2024. Punjab DJ Light & Sound and Sbhyacharak Group Association organized this event, where Beta3 displayed exclusive Line Array, DJ Sound & Pro Audio Systems Series at the exhibition.

Punjab DJ Light & Sound Expo is a trade show which brought strong content of high-end technology and innovation, offering exhibitors and visitors a privileged platform in the world of entertainment. The one-day exhibition helped in educating end-users on the practical and efficient use of Beta Three Audio's product line.

Beta Three Audio India expe-

Beta Three Audio India displayed the TLA121 and VR112 Line Array Systems, Sigma_J218, and DT Series D Class Amplifier with Sigma_C2600 at the Punjab DJ Sound & Light Expo

rienced an entirely gratifying delegate response, both in numbers and the much-anticipated Q & A sessions from enthused professionals.

Beta Three Audio India displayed the following models at the Punjab DJ Light & Sound Expo:

Line Array Systems:
TLA121 and VR112

DJ Sound & Pro Audio Systems:
Sigma_J218

Digital Processor & Amplifier:
DT Series D Class Amplifier
Sigma_C2600

FOCUSRITE PLC ACQUIRES OUTBOARD ELECTRONICS AND TIMAX IMMERSIVE AUDIO SOLUTIONS

The acquisition aims at aligning with the Group's strategy of expanding the core customer base, foraying into new markets, and increasing lifetime value for customers

TiMax and **OutBoard** directors **Robin Whittaker** and **Dave Haydon** announced their company, Sheriff Technology Ltd, has joined premium UK audio product innovators Focusrite Group PLC. as part of the group's growing Audio Reproduction division, alongside Martin Audio, Linea Research and Optimal Audio. The acquisition includes the pioneering TiMax spatial audio and showcontrol products, plus the ubiquitous OutBoard rigging control and electrical safety test products.

Whittaker and Haydon will stay with the company, as will their existing business development, R&D, PR and manufacturing colleagues, with

The acquisition aims at aligning with the Group's strategy of expanding the core customer base, foraying into new markets, and increasing lifetime value for customers

the additional support of expanded sales, marcoms and applications resources leveraged from the considerable experience and reach offered

by the Focusrite Group. This provides existing TiMax and OutBoard motor control distributor and dealer networks with enhanced proactive sales

promotion, application and training resources and creates opportunities for additional trading partners in new markets and territories.

OutBoard directors Robin Whittaker and Dave Haydon commented, "We're delighted to be joining a team of such passionate audio people and a company with the pedigree and imagination of Focusrite. The new arrangement is ideal to help our exceptionally powerful TiMax products ride the current immersive wave into new and diverse applications and territories. and assures confidence for future developments in existing core markets. And for OutBoard-branded products, Focusrite have interesting new ideas to expand the existing tech concepts, especially in rigging motor control, while continuing to maintain and grow the belt 'n braces appeal that has made them so successful."

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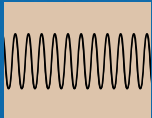
Inter locked panel

Cement bonded glue(54%)
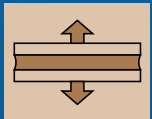
Composed at high pressure

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Smooth finish

TRIMAC PRODUCTS PVT LTD BECOMES EXCLUSIVE DISTRIBUTOR OF DBTECHNOLOGIES FOR INDIA

Trimac Products announced a strategic brand distribution agreement between Trimac Products Pvt Ltd and **dBTechnologies**, a respected pro audio brand. This collaboration marks a significant milestone in Trimac's mission to make world renowned brands accessible to the market.

Over the years, thanks to a policy of considerable investments in R&D, design and manufacturing, dBTechnologies has gained substantial recognition for some ground-breaking technological innovations, as well as their inherent standards of quality. In particular, dBTech-

nologies has been one of the industry's forerunners in active speaker and digital amplifier technologies.

Trimac's partnership with dBTechnologies is grounded in shared values of excellence, innovation, and customer satisfaction. By gaining dBTechnologies' brand distribution, Trimac Products aim to enhance customer experience by providing timely access to offerings through a trusted and reliable dealer channel.

L-R: Ravi Ranjan Agarwal – CEO, Trimac Products Pvt Ltd; Salvatore Curcio, Export Manager, dBTechnologies; Pankaj Kumar, COO, Trimac Products Pvt Ltd

MEYER SOUND CELEBRATES 45 YEARS WITH NEW LOGO

Meyer Sound, one of the pioneers in professional audio since its founding in 1979, celebrates 45 years of innovation with a new logo that underscores its commitment to the future of sound. This rebranding initiative highlights Meyer Sound's continuous dedication to pushing boundaries, advancing technologies, and shaping the industry for the next generation.

A Legacy of Innovation

Meyer Sound has been a driving force in audio ever since John and Helen Meyer set up shop in Berkeley, CA four-and-a-half decades ago. From its inception, the company's mission has been clear: to create the best sonic experiences the world has ever heard.

Since then, Meyer Sound's

technologies, including trapezoidal loudspeaker cabinets, self-powered loudspeakers, processor-controlled loudspeaker systems, curvilinear arraying, and source-independent measurement systems, have become industry standards.

"Scientific innovation, engineering excellence, an unwavering commitment to quality, and constant evolution—this is our legacy, and our future," says Meyer Sound Senior Vice President **John McMahon**. "Our dedication to craft defines us, and we're excited to

carry this spirit forward as we set our sights on developing integrated sound solutions on an even broader scale."

A New Logo: A Symbol of Evolution

Accompanying Meyer Sound's 45th-anniversary celebration is a bold new logo that encapsulates the company's evolution and readiness for the future.

The new design features heavier wave and type forms, filling more of the space it occupies and exuding a stronger presence. It is a visual representation of Meyer Sound's commitment to staying at the forefront of an evolving industry landscape and maintaining a clear and bold identity.

"The goal with the new logo was to create a mark that respects our his-

tory while better reflecting the scope of our business growth and strategic direction," explains Meyer Sound's Creative Director Simon Miller. "In a world where Meyer Sound's presence spans diverse platforms, the robust, modern design ensures an iconic presence that matches the strength of our technologies."

"This anniversary marks a time of transformative growth for Meyer Sound," adds McMahon. "As we double down on our investments in both acoustic innovations and digital ecosystems, our emphasis on partnerships, education, diversity, and sustainable solutions will drive our next chapter as we aspire to help people experience sound in ground-breaking new ways."

SOUND ACHIEVES NEW HIGH WITH STRINGS & NOTES... *(Continued from page 30)*

Echoing Strings & Notes strategy to capture the Indian market with not just musical instruments, but also pro audio/studio products, Kumar further shared that even though the store is geared at focusing on Musical Instruments, it does have an entire dedicated section for studio products, "The focus of this store will be on Musical

Instruments. However, we have a lot of studio products as well. We have M-Audio, Adam Audio, and the likes. Now, here we have the entire family of guitars from Gibson, acoustical upright pianos from Johannes Seiler, and more. So, in a gist, we started with studio products. Now, we also have musical instruments, and we

are also planning to start with Live PA – think line array systems, powered speakers, et al. In this category, we are the distributors of dB Technologies and HK Audio."

Norwendy Destavian, Senior Manager, **PT. Samick Indonesia**, expressed his elation at being able to reach out to a concentrated custom-

er base in India through Strings & Notes and concluded, "At this time, we are trying to reach out to a larger customer base, especially in India with Strings & Notes. Our grand piano here from Samick is a reflection of that effort. We are very happy to be in India and being able to support the Indian music industry."

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TUNING IN TO THE POWER OF SOUND

*With over a decade's experience in designing audio for live events, especially when it comes mega concerts and even more mega weddings in India, **Vishrut V. Joshi** is a sonic savant. In **PALM Expo Magazine's 'Professional Focus'** feature, Joshi opens up on an array of topics vital to the field of sound engineering – from the booming pro audio rental market for weddings in India and how he keeps reinventing the wheel as a live sound engineer to the importance of choosing the right gear for an event, and more.*

Vishrut V. Joshi, Head, Operations, MEGA SOUND INDIA and Audio Designer, speaks on the creativity, the challenges, and the changing landscape of the live sound industry in India

Call it serendipity. **Vishrut V. Joshi**, who now has 12+ years of experience as a live sound engineer, never set out in the professional world with the intention of venturing into live sound engineering. He shares, "I started off really into Pyrotechnics, but the opportunities for that were limited in India, and my family wasn't keen on moving abroad. Then, I noticed these big shows with cool lights, loud music, and pyrotechnics. The deep, booming sounds fascinated me, and I dreamt of diving into the world of sound. Since my pyrotechnics plan wasn't panning out, I shifted my focus to live sound. I attended small local shows in Udaipur. I connected with **Sid-**

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D.A.S.

SOUND WITH SOUL

dharth Chauhan, Director of **MEGA SOUND**, who let me join some gigs. The moment he played music on a line array, I felt the power of sound, and that sealed the deal for me. Because of him and his guidance, today I can see all those dreams come true that I once saw while sitting idle and watching shows on TV. That curiosity led me into this industry, and here I am, over a decade later, still loving every bit of it!"

Joshi recalls the names of some of the biggest artists and projects he has worked for throughout his career, "I've had the honor of contributing to a wide array of events, ranging from significant government projects to lavish royal weddings and vibrant festivals. My expertise spans across festival concerts, events, and tours, with a particular emphasis on crafting exceptional audio experiences for prestigious occasions. Within my portfolio, some standout events include managing the audio for PM Modi's speeches, playing a role in the G-20 Summit, overseeing audio arrangements for esteemed corporate gatherings, and spearheading the audio design for the Khelo India Opening Ceremony in 2023. I've been part of international tours, such as Alan Walker's India tour, and have handled audio design for high-profile Bollywood weddings, including those of Nick Jonas and Priyanka Chopra. More recently, I had the privilege of designing audio for Parineeti Chopra's wedding. A defining moment in my career was curating the audio design for Beyoncé's performance at a private wedding celebration in India. This remains a cherished memory and underscores the calibre of events I'm fortunate to be involved in."

Elaborating more on the share of sound rental market for weddings in India, Joshi states, Weddings in India are not just events; they are grand celebrations spanning multiple days, where families come together to create lasting memories. The Indian wedding market comes with a penchant for extravagant spending. Families often go all out, bringing in renowned Bollywood singers or even international artists and DJs to add that extra flair to their celebrations. In this vibrant wedding landscape, sound plays a pivotal role, and the demand for top-notch sound systems and technical expertise is substantial. Sound is an integral part of creating the perfect ambiance for these special occasions, making the wedding rental market a crucial component of the thriving live sound industry in India."

What Makes A Successful Live Sound Engineer – How Does A Successful Live Sound Engineer Design A Successful Live Sound Event?

Keeping the live sound market insights aside, does the profession of live sound engineering become stagnant after a while? Joshi disagrees, "Every day as a Live Sound Engineer is a journey that begins long before the first note is played. It starts with designing the audio experience on software, envisioning how each element will come together to create magic. I plan meticulously, thinking about the inventory needed to bring that vision to life. Choosing the right gear is like selecting the instruments for a symphony. I carefully curate the inventory, considering the venue size, acoustics, and the unique requirements of the event. It's a crucial step to ensure we have the perfect tools for the job."

Joshi adds, "Then comes the hands-on part – rigging. It's not just about hanging speakers; it's about transforming a space into a sonic canvas. I work with the team to set up the rigging, making sure every speaker is securely in place. Rigging is like setting the stage for the audio performance; it's the foundation on which the entire show rests. After the rigging is done, it's onto sound design and calibration during the soundcheck. I meticulously fine-tune the system to ensure the sound is not just heard but experienced. The mix is adjusted on the fly during the event, considering the nuances of each performance and the unique aspects of the venue.

Joshi concludes, "Throughout the day, I work closely with the team, solving technical issues, and ensuring everything runs smoothly. After the last note fades away, we pack up, dismantle the setup, and reflect on a day filled with creating memorable audio experiences. Each day is a mix of creative design, technical precision, teamwork, and the thrill of live performances. It's a dynamic journey that I love being a part of from the initial software design to the final encore."

Is passion enough to test the waters of live sound engineering? Joshi believes that while passion and curiosity is vital to thrive in the profession, live sound engineering is a job that demands much more. He states, "Being a top-notch live sound engineer means you're a tech whiz who pays attention to all the small things and can solve problems like a pro. You've got to handle pressure without breaking a sweat, especially when things don't go as planned during live shows. Talking and working well with musicians, event organizers, and your crew is a must. You've got this passion for music and sound, always staying in the loop with the latest tech trends. What sets you apart is your creativity – you can turn all those tech gadgets into an awesome sound experience that really wows the crowd. It's a cool and dynamic job that's all about making music sound fantastic live!"

In live sound engineering, Joshi mentions, there exists certain non-negotiable factors that uplift a live event and turn it into a success story. He explains, "There are crucial factors that I hold as non-negotiable. First and foremost is safety – the well-being of everyone involved is my utmost priority. This involves meticulous equipment setup, secure rigging, and strict adherence to safety protocols to create a secure environment for both the crew and the audience. Equally important is the quality of services. Every element, from vocals to instruments, must be of the highest quality to captivate and immerse the audience in the sonic journey."

Joshi goes on, "Reliability of equipment is a linchpin. Rigorous checks, regular maintenance, and having backup systems in place are vital to ensure a seamless performance. This proactive approach minimizes technical glitches and allows for swift solutions in case of any unexpected issues. Working with perfection is ingrained in my approach. Attention to detail, precision in sound tuning, and an unwavering commitment to achieving sonic excellence are non-negotiable. This extends to meticulous planning, venue reconnaissance, and adapting to the unique acoustic challenges of each performance space."

Creativity doesn't exist without challenges. But when it comes to delivering an impeccable live musical experience, Joshi remains undeterred by obstacles – "There are certain things I never compromise on to make sure the event goes smoothly. deliveries, quality of services, and safety comes first – I follow strict rules, secure all equipment properly, and plan for different weather conditions to keep everyone safe. Knowing the equipment inside out is crucial – I regularly check and maintain everything, and I always have backup plans in case something goes wrong. This mix of safety, quality, and adaptability is what sets the stage for a successful live performance."

No live event can be successful without the right equipment in place. Joshi knows his equipment like the back of his hand, and relies on select gear to ensure a smooth, seamless live sonic delivery. "When it comes to creating a great Audio design, I use a mix of fancy tech and trusting my ears. I really like using digital desks, especially the DiGiCo and Yamaha console, because it gives me the control I need for a balanced sound. To make sure everything sounds just right, I use heat maps generated by software, but my ears are my main guide. I'm also a big fan of the L-Acoustics system because it makes the sound experience amazing for both the performers and the audience. In my toolkit, I always have reliable calibration microphones like the iSEMcon, which help me measure and fine-tune the sound. Audio designing for me, is about Creating unforgettable sonic experiences which blends with cool tech with a good ear for detail."

The Booming Landscape of Live Sound In India

When asked if the live sound industry in India is seeing a boom in recent times, Joshi affirms, "Absolutely, yes! The live sound scene in India is getting bigger and better over time. We now have major festivals happening, where people from all around come to enjoy music and good vibes. Famous headliner artists are touring India, bringing awesome performances to fans. The government is also backing big projects, adding to the excitement. India has become a hotspot for destination weddings, and these special occasions need top-notch sound quality to make them truly memorable. With all these fantastic events and a growing love for live music, it's clear that the live sound industry in India is booming and creating unforgettable moments for everyone involved!"

Is the much-evident boom a result of ever-evolving trends and technologies dominating the live sound industry in the last five years? Joshi echoes the speculation and confirms, "Over the past five years, the live sound industry in India has witnessed transformative moments that have reshaped the landscape. One significant shift has been the infusion of new technologies into the industry. With a heightened awareness of the importance of precise sound

quality in concerts, there has been a notable embrace of advanced audio solutions. Artists alike are now experiencing spatial audio through innovative technologies like Klange, contributing to a more immersive and engaging live music experience."

Joshi continues, "The scale of audio production has expanded exceptionally. The industry has witnessed remarkable growth, indicating a broader acceptance of the integral role that top-notch sound plays in the overall success of live events. I foresee a galore of marvelous technological advancements and trend-setting practices that are poised to elevate the field of live sound engineering in India to newer, better heights."

Joshi expounds enthusiastically, "Exciting changes are on the horizon for live sound in India! One significant shift is that we'll be treated to more immersive sounds at concerts, thanks to cutting-edge technologies like L-acoustics LISA and Klange for in-ear spatial mixing. This promises to make the music experience feel more real and thrilling. The tech world is also introducing strong audio networks, making it easier for different sound equipment to communicate seamlessly. Additionally, with advancements in radio frequency (RF) technology, wireless will become even more reliable and efficient. There's also a special focus on ensuring we can handle big events with lots of people without compromising the awesome sound quality. Get ready for a wave of cool tech that's going to elevate the sound experience at concerts in India to a whole new level!"

Joshi agrees that the live music industry in India is benefitting by leaps and bounds due to the skyrocketing demand for live experiences, "The momentum of music festivals in India is remarkable, reflecting a thriving live event industry. While profitability is undoubtedly a crucial aspect, India's focus should extend beyond just financial gains. The nation is making significant strides in handling large-scale audio production, ensuring top-notch quality and unforgettable experiences for fans. Looking ahead, there's great potential for India to become a major touring destination for international headliner artists. By prioritizing quality and service, profits become a natural byproduct. It's an exciting time for the live event industry in India, and the key is to channel this momentum into creating unparalleled events that resonate with audiences both locally and globally."

It's not just live music concerts that are amassing a growing significance in India's live sound industry. Weddings, too, have metamorphosed into nothing short of a cinematic production, enveloped in feet-thumping sonic atmosphere and illuminated with lights galore. Joshi weights in, "'Great Indian Weddings' are still very much a thing, and they've even bounced back

stronger after the tough two-year COVID lockdown. At first, people were a bit careful with smaller gatherings and fewer guests. But as things opened up, the scale of weddings didn't shrink – if anything, it got even bigger. People realized how important it is to celebrate life, and that feeling translated into more elaborate and exciting weddings. While guest lists might be a bit shorter for safety, the overall grandness of these celebrations, with famous artists and all the bells and whistles, is still very prevalent. So, the joy of big Indian weddings is alive and well!"

The live sound industry is only going to continue to blossom, as Joshi asserts, "I see the rental market in India moving towards a tech-savvy future. With the surge in large-scale events and the growing demand for top-notch audio production, rental companies are investing heavily in cutting-edge gear. Collaborations between companies to handle extensive audio requirements are on the rise, showcasing a collective effort to meet the demands of these events. The rapid adoption of new technologies is impressive, and even major manufacturers are recognizing India as a significant market for their products. The influx of major festivals approaching India underscores the country's capacity to manage the same level of scale seen globally. It's an exciting time for the industry, with innovation and collaboration driving the live sound rental market towards a more advanced and dynamic future."

Advice For Aspirational Live Sound Engineers

With a metamorphosis looming on the horizon for the live sound landscape in India, Joshi has a piece of advice for aspiring live sound engineers – "My advice is to embrace a combination of technical expertise, adaptability, and a relentless passion for music. First and foremost, invest time in mastering the technical aspects of sound engineering, from understanding different audio equipment to honing your skills in sound design, systems, mixing, and troubleshooting. Stay updated on industry trends and emerging technologies. Adaptability is key in the dynamic world of live performances – be ready to think on your feet, handle unexpected challenges. Cultivate a keen ear for detail and a profound appreciation for the nuances of different instruments and voices. Networking within the industry is invaluable; establish connections with musicians, fellow engineers, and other professionals. Finally, never underestimate the power of hands-on experience – seek opportunities to work on a variety of live events to build your confidence and refine your craft. Passion is the driving force behind any successful career, so stay passionate about creating the best possible sonic experience for both performers and audiences alike and give audience a great time."

TOP 50 PRODUCTS & TECHNOLOGY

Yamaha STAGEPAS 200

With clear quality sound and mixing capability that exceeds expectations, the STAGEPAS 200 is a one of the most premium portable PA systems that sets benchmark in its performance. The STAGEPAS 200 offers all the connectivity, performance functions, and mixing capability users would ever need for small-scale duo or trio performances— all packed into a compact 300 mm cube-style cabinet. Equipped with a digital mixer that can be controlled remotely for up to 5 channels, 3 mic preamps, and a comprehensive range of practical functions, the STAGEPAS 200 is the ideal compact all-in-one PA system. The STAGEPAS 200 comes in two models— one with a high-capacity lithium-ion battery, the other compatible with optional batteries, giving the user the flexibility to capture the audience's attention in any environment— from street/stage performances, to events, parties, and even speeches.

ZSOUND VCX

ZSOUND VCX is a large-scale, four-amp, three-way line array system with Neodymium high-sensitivity driver and large stroke LF driver. The ZSOUND VCX is a powerful dual 14-inch 3-way 4-amp line array speaker system. This system features two 14-inch LF components, four 7-inch MF components, and three 3-inch HF components, delivering outstanding sound quality and coverage with a nominal coverage of 80 degrees (H) adjustable. The ZSOUND VCX delivers maximum headroom and a large stroke LF driver, ensuring that the low frequency is extended. The presettable angle on the ground is adjustable with a manual hoister in the air, making it an ideal choice for large-scale events, touring performances, stadium, and theatre installation. With a weight of 77 kg, this line array speaker system is built to withstand the rigors of professional use and delivers SPL peaks of 135/141 dB for HF, 131/137 dB for MF, and 125/131 dB for both LF(L) and LF(R).

BETA THREE DELIVERS BESPOKE SOUND SOLUTIONS AT BAPTIST CHURCH OF CHANDMARY LAWNGTLAI VENGPUI, MIZORAM

The **Baptist Church of Chandmary Lawngtlai Vengpui** in Mizoram is a part of the 100-year-old Baptist World Alliance, which has networked the Baptist family to impact the world of Christianity, contributing to the development of the community in various ways through missionaries in India. To bolster its facility and offer guests enhanced experiences during services and events, the Baptist Church of Chandmary Lawngtlai Vengpui installed Beta Three's cutting-edge sound solution.

The Solution

The sound system at the church includes VR112- 12" Two-Way Full-Range Array Speakers and N10- 10" Two-Way Full-Range Speakers. The N series is specially designed with professional speakers perfectly suited

The Baptist Church of Chandmary Lawngtlai Vengpui finds an ideal sound solution with Beta Three Audio's VR112- 12" Two-Way Full-Range Array Speakers, N10- 10" Two-Way Full-Range Speakers, TW118B-18" Subwoofer, and DT series Class D Amplifier

for a wide range of portable and installed applications. For great punch and bass effect, the speakers are complimented by TW118B-18" Subwoofer, deployed on the floor. The system is powered by DT series Class D Amplifier with a standardized design and a complete product line. The DT series help meet the needs of diversification in the professional sound reinforcement industry. A comprehensive interface and simplified control functions are in place to contribute to convenient and flexible applications.

The Impact

Representatives from the Baptist Church commented that they sought a powerful, dynamic and easy-to-use audio solution for the church and there were very satisfied with the sound of the VR112-Line Array Speakers.

KISSHT RELIES ON BRITISH ACOUSTICS & OSL FOR VERSATILE AUDIO SOLUTIONS

Kissht, operated by **ONEMi Technology Solutions Private Limited**, stands as a pioneering digitally-enabled platform with a distinct vision in the financial landscape of India. Dedicated to providing swift and seamless credit financing, Kissht emerges as a one-of-a-kind solution. Fuelled by a commitment to facilitating hassle-free financial transactions, Kissht caters to customers nationwide, leveraging technology to redefine the credit experience. With a

An impeccable sound system from British Acoustics and OSL, installed by VMT, adds to the charm of Kissht's office space in Mumbai

Kissht's office space in Mumbai reverberates with quality sound system, delivered by Radial 208 TW speaker system, Contract 350 Qi mixer amplifier, LiveMix 4FX mixing frame, and FX and OSL OS 110HH dual handheld microphones

vision firmly rooted in accessibility and efficiency, Kissht aims to empower individuals across India by making credit financing a convenient and customer-centric process.

The client demanded an acoustic environment that seamlessly complemented Kissht's dynamic operations and financial services. The demand for a sophisticated yet flexible audio setup was paramount. Navigating through space constraints and the need for versatile audio solutions posed significant challenges for **VMT's** installation team. But the team was upto the task.

The Sound System:

To overcome the acoustic challenges, VMT selected cutting-edge products from **British Acoustics** and **OSL**. The **Ra-**

COCKTAILS AND DREAMS ENVELOPE VISITORS IN A DREAMY ACOUSTIC AMBIENCE WITH VMT

Takes the venue's auditory experience up a notch with surreal sound systems from British Acoustics and Martin Audio

Cocktails and Dreams Bar & Grill in Indore is a modern cocktail bar that redefines the dining experience with its exceptional ambiance and enthralling vibes. As a haven for sensory delight, this establishment offers a unique blend of gourmet delights and exclusive concoctions, ensuring that each visit is more than just a meal—it's a culinary adventure. The carefully curated menu features a range of innovative dishes that complement the bar's signature cocktails, each crafted with precision and flair. The stylish décor and the vibrant atmosphere make it the perfect spot for those looking to unwind and indulge in a taste of luxury.

Whether it's a casual evening out or a special celebration, Cocktails and Dreams promises an unforgettable experience where every moment is infused with sophistication and pleasure.

The Audio Install:

At Cocktails and Dreams, the goal was to create an immersive audio experience that enhances the venue's modern ambience and vibrant vibe. The clients expected a sound system that delivers clarity, range, and depth to complement their exceptional sensory dining experience and enthralling atmosphere.

The installation team faced the challenge of integrating a high-performance sound system into the unique architectural features of the venue without compromising aesthetic or audio quality. The objective was to ensure even sound distribution, versatility for different events, and seamless integration with the existing décor.

To meet these challenges, a selection of top-tier audio equipment was installed. **Martin Audio's Blackline X8, X12**, and **X15** provide a range of passive two-way portable loudspeakers, offering exceptional clarity and coverage. The **British Acoustics Alpha Sub 418 S** and **428 S** subwoofers were chosen for their deep, impactful bass. The **2XM** and **2XL** amplifiers from British Acoustics ensure high-performance and reliability for all install applications.

Words of Applause:

The audio install at Cocktails and Dreams was nothing short of spectacular, as reflected in the words of those involved in the project.

"Working on the Cocktails and Dreams project was a journey of technical and creative synergy. The challenges of integrating high-end audio within a distinctive space pushed us to innovate", commented **Mayank Jain**, Systems Integrator, **Audiocratz Sound & Light Solutions**.

"Seeing the seamless blend of the Martin Audio and British Acoustics products with the venue's atmosphere is a testament to our dedication and the quality of our work. We're proud to have crafted an audio experience that resonates with every beat", shared **Vinayak Luthra, Systems Integrator, Audiocratz Sound & Light Solutions**.

Dharam Koli, Pre-Design & Sales Engineer, **VMT Enterprise**, added, "The installation at Cocktails and Dreams is a testament to what can be achieved with a keen understanding of acoustics and the right technology. Even though we weren't part of the integration, the end result speaks volumes about the industry's ability to create spaces where every note and beat can be felt and appreciated."

Kekul Seth, Head of Sales, **VMT Distribution**, concluded, ""At VMT, we're committed to delivering excellence, and the project at Cocktails and Dreams is a testament to this commitment. The positive feedback from patrons is a clear indicator of the impact our products and designs have on creating memorable experiences."

Cocktails and Dreams Bar & Brill in Indore, Madhya Pradesh merges a fine culinary experience with an equally fine listening experience with Martin Audio's Blackline loudspeaker range along with subwoofers and amplifiers from British Acoustics

KISSHT RELIES ON BRITISH ACOUSTICS & OSL...

dial 208 TW speaker system delivered exceptional audio quality, addressing the space limitations effectively. The **Contract 350 Qi mixer amplifier** provided a powerful 6-zone control, enhancing the overall audio management. The **LiveMix 4FX mixing frame** with FX and OSL OS 110HH dual handheld **microphones** added further versatility to the system.

Rohit Sharma, Director, Kissht, praised the audio installation, stating, "I am delighted with the outstanding audio installation by the professional team. Overcoming space constraints, the British Acoustics Radial 208 TW and Contract 350 Qi have transformed our venue, offering impeccable sound quality."

In conclusion, VMT's audio installation at Kissht not only met the venue's needs but surpassed client expectations. The seamless integration of advanced audio solutions has transformed Kissht into an acoustically optimized space, aligning perfectly with its innovative financial services.

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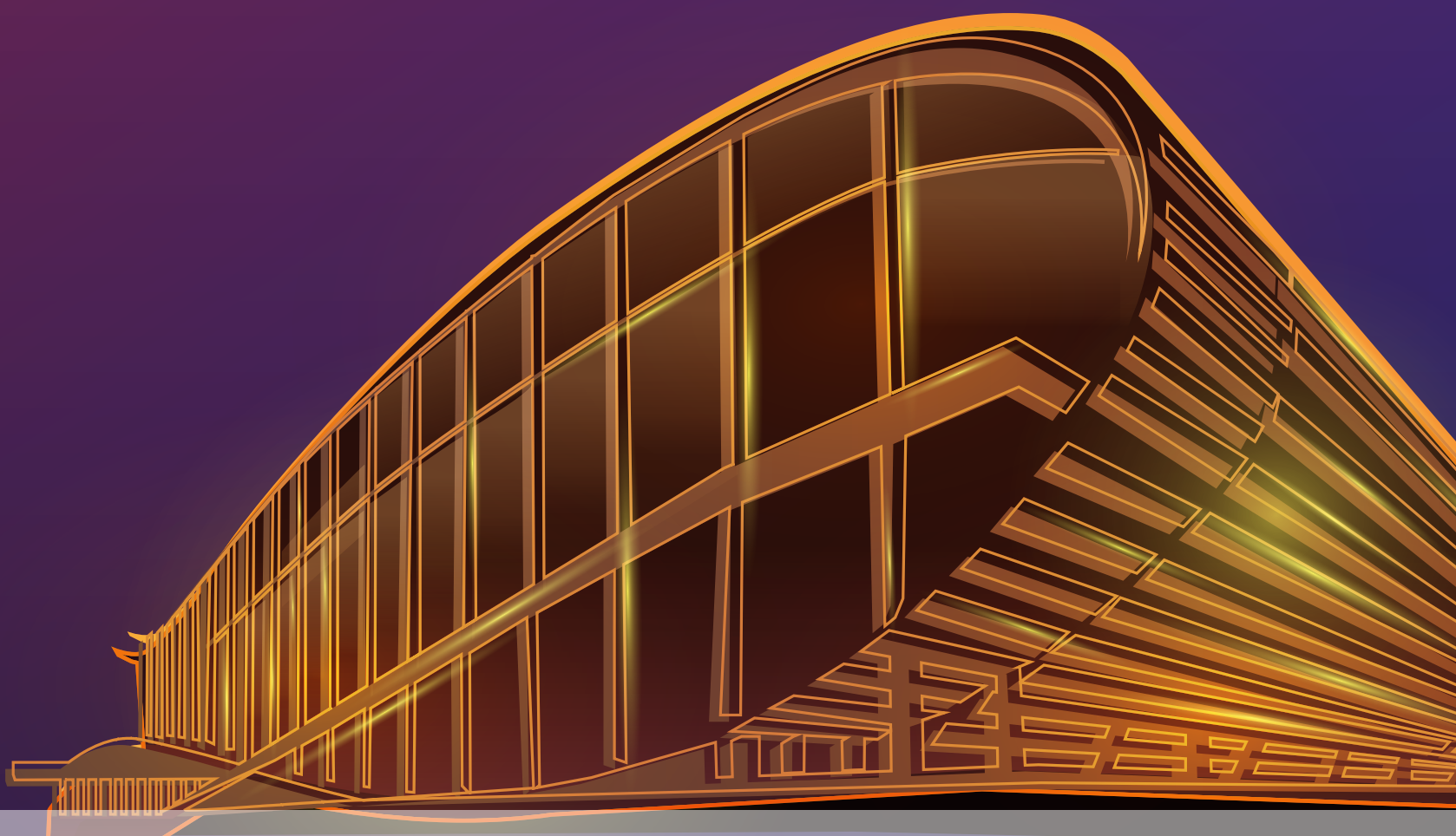
From L-R: Solomon Nesaraj, National Sales and Marketing Manager, The Inventory, Harris Jayaraj, Music Composer and Producer, and Tanseer Jabbar - Managing Director, The Inventory

Chennai's
STUDIO H
Goes Big With Rupert Neve

Becomes first-ever Indian recoding studio to house the iconic Rupert Neve Designs 5088 Analog Console

*At music composer **Harris Jayaraj's** Studio H, Rupert Neve Designs 5088 Analog Console finds a new home. PALM Expo Magazine, in a conversation with music composer and producer Harris Jayaraj and **Tanseer Jabbar**, Managing Director, The Inventory, reports on the 'how' and the 'why' of the installation of this centrepiece, executed in a seamless fashion by the team of The Inventory*

India's renowned music composer and producer, Harris Jayaraj is a connoisseur of everything crème de la crème from the world of music. So, it comes as no surprise that when he embarked on his journey to introduce a large format console for his studio, Studio H, he would leave no stone unturned in choosing only the most superlative product in the category. This is where The Inventory, one of the most well-known distributors of pro audio products in India, enters the narrative.

Tanseer Jabbar, Managing Director, The Inventory, remarks "Harris Jayaraj's directive was crystal clear – for his

studio, he sought the ultimate large format analog console in the market without compromising on quality. The Rupert Neve 5088 emerged as the perfect solution to meet his exacting requirements."

Hitting The Right Chord At Studio H With Rupert Neve Designs

The first-ever Rupert Neve Designs 5088 Analog Console in India found its home at Studio H in Chennai on November 17th, 2023. But, for Harris, what prompted the decision to switch from a digital console to the 5088 An-

Rupert Neve Designs 5088 Analog Console features an extra 24db headroom, giving it an edge over other large format console in its category, and making it Harris Jayaraj's preferred choice for installation at Chennai's Studio H

mix my own songs, I see the 5088 as another extension of my music Instruments as I don't need to turn my head around the studio for enhancement of the mix. As I always decide the layers of music based on the sonic sound, the console has a huge impact and influence in taking the decisions."

Creating A Customized 5088 Analog Console For Studio H:

Harris Jayaraj is a reputed name in the Indian music industry. To reflect his stature and his studios' technical design, Harris opted to incorporate a custom 5088 Analog Console in Studio H. The team from The Inventory stepped up to the challenge and nailed the task, laced with challenges, to perfection, as Jabbar comments, "Our proficient technical team, consisting of experienced sound engineers and musicians, skillfully assembled the 500 Analog Console from its delivered modules. Each component required precise integration to ensure seamless functionality. Moreover, the console's frame was custom-built to suit the specific needs of Jayaraj, further enhancing its compatibility with Studio H's requirements. This meticulous attention to detail facilitated a smooth and efficient installation process."

Praise & Applaud:

Installing the Rupert Neve Designs 5088 Analog Console at Studio H wasn't an easy feat. But, in the end, the console found its abode within the studio, and it all turned out well for both Harris and the team at The Inventory.

Jabbar recalls, "Collaborating closely with Harris, we meticulously planned the custom console over eight months to align with his workflow and specifications. Every detail was carefully considered to ensure it perfectly suited his needs."

Harris applauds the acoustic quality that the 5088 Analog Console by Rupert Neve Designs offers. He concludes, "I am a man of precision and cleanliness. I don't compromise on anything I see or hear, especially when it comes to music and mixes. I think the 5088 is the epitome of quality when you want to raise your bar to great standards."

alog Console? According to him, "I used to have the Euphonix S5 Fusion digital console for the past 10 years which took care of the mixes recorded from 3,000 sqft of our recording space, but I felt at one point I need to go for a large format analogue console with more channels along with dedicated high-quality EQs and compressors. I began this hunt 6 years ago and finally chose the New RND 5088. I am very happy about it."

The Rupert Neve Designs 5088 Analog Console functioned more than just a console at Studio H. For Harris, the Analog Console became a muse, an inspiration that helped keep his creative zen going. Harris shares, "The sonic quality and the extra 24db headroom of the 5088 stands high among other contemporary Large Format Analogue Consoles. Since I always compose, produce and

Kindling The Grandeur of Indian Classical Dance Form Through Lighting

Ace Lighting Designer, Gyandev Singh, shares his perspective on the craft of illumination

Photo Credit: Lijesh Karunakaran

**Gyandev Singh,
Lighting Designer**

I started getting attracted towards theatre as an actor. Being onstage and playing characters was a freeing experience for me. It gave me confidence and vigour. I decided to study at NSD for this very reason because I wanted to act. But at NSD I was exposed to theatre design streams like set design, costume design, and lighting design. As a young person, I was never exposed to these forms of design and they were new

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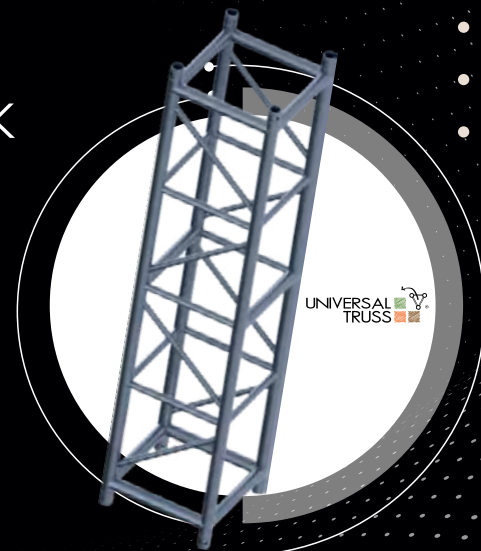B-12, GROUND FLOOR, KIRTI NAGAR, NEW DELHI - 110015
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INDOOR / OUTDOOR
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UNIVERSAL TRUSS

and fascinating for me. After my first year at NSD, I organically started getting interested in Lights. I would help design lighting for other student productions. In the second year, I opted for a specialization course in theatre design and direction. There was no turning back after that. Those two years of my student life without any responsibilities or distractions were very fruitful for me in my journey of stage lighting design.

I had always loved classical dance because I was exposed to Indian classical arts very early in my life by my parents. My parents had many friends who were dancers themselves. So, I understood that form. But it was not until a few years after me graduating from NSD and working as a successful lighting designer for theatre that I met Aditi Mangaladas who, according to me, is one of the most prominent figures in Indian dance scene in India. She was searching for a lighting designer and I happened to ask her if could handle lights in her performances. I enjoyed those couple of years thoroughly. After that, I worked with many stalwarts of Indian classical dance like Leela Samson, Malavika Sarrukkai, Madhavi Mudghal, Kumudini Lakhiya and so on.

The Art of Illuminating Indian Dance Forms In Theatre:

When I started designing lights for dance performances, I realised that lighting can play a much more prominent role in a dance performance, which is not the case in theatre lighting. The reason is the basic structure of theatre itself which is more rooted in realism- like a house drawing room at daytime or a garden at night. The lighting would have to adhere to those realistic circumstances like daytime or night, indoor-outdoor etc. But in dance, I observed that it was more abstract. It did not have to be rooted in realism. The story was important, but it could be told in a very abstract way.

Technically, lighting plays a more important role in dance than in theatre because theatre relies heavily on sets and set props to show various scenes like a house or a railway station, whereas traditionally Indian classical dance forms were performed on a bare stage, without the use of any stage sets. So that gives lights full freedom and space to explore the performance in detail. Secondly, with lighting as the sole design element in dance, it becomes easier and economical to travel. One does not have to travel with loads of sets and properties. Lights can be easily hired at the city/country of performance.

Choreographing Flawless Synergy With Dancers & Setting New Standards in Lighting Design For Indian Classical Dance

There is a trend in India to involve a lighting designer very late in the process of creating a performance. The lighting designer will be called for maybe one rehearsal a day before the show and is expected to create magic. It does not work like that with human nature. It takes a while for an idea to build and come to fruition. So, the result is that most of the light designs in dance performances look very similar. Nothing new is designed. The same design and aesthetics are repeated. I, from very early in my career, insisted on being involved in the production process from the conceptualization stage. This gives me insight into the dancers' thought process thematical structure while being on the same page as them. This automatically creates an artistic synergy between me and the dancers and helps me create unique and different light-

Photo Credit: Lijesh Karunakaran

ing design which stands out from the rest of the performances.

For this very reason, the first thing I focus on is that the lighting design should align with the vision of the choreographer thematically. I, as a lighting designer, can add as many layers as possible of interpretation and context to the performance through my lighting, but the basic theme should align with the vision of the choreographer. Second, I never overdo while using different aspects of lighting like colour, brightness and direction of the lights. I always keep these three things in check. I always make sure that I derive my inspiration for using a particular colour or a particular beam of light from the movements of the dancer. And not from something I saw on Pinterest.

Shedding 'Light' on Futuristic Lighting Design in India:

Paul Lynde, the famous American comedian and actor had once said, "A room is like a stage. If you see it without lighting, is can be the coldest place in the world." Lighting design, according to me, can make or break a dance performance. It's the medium through which you see the space and the dancer. It sculpts our visual as well our emotional perception. Specially at this day and age where lighting technology has become so advanced that it has become a co-player and a co-dancer in a performance. With the advent of sensor technologies and AI, it can interact with the performer, dance with the performer, and respond in its own unique way.

However, no matter how advanced the lighting technologies get, they can never overpower the performer. The value of lighting exists because there is something to illuminate – in this case, the dancer. So that I always keep this in mind. Because of so many new options in high tech lighting, it is very easy to overpower the performer. To steal attention away from the dancer and lighting to take centre stage. But according to me, that just defeats the purpose. As a lighting designer, I have to make sure that the dancer is not overpowered.

Photo Credit: Lijesh Karunakaran

Lighting has to accentuate and augment the dancers' movements. It needs to facilitate the dancers' body to express itself better. So once that is clear, many aspects in lighting design for a particular performance fall into place.

Light Designers Are Here To Stay:

The prominence of lighting design for theatrical performances has only increased in the last decade. I remember when I passed out of NSD and used to tell people that I am a lighting designer, they would not take me seriously- even the people in theatre and dance world like the actors, directors, choreographers would not understand the gravitas of lighting design as a profession. They did not think lighting could play that important a role in shaping the outcome of the performance. So, I used to introduce myself as a stage designer, but I was only designing lighting because I loved it so much. But now, lighting design has become a full-fledged profession. Every day, I meet many young people who want to be lighting designers for the stage. In my lighting workshops, there are more people who want to participate than the actual slots in the workshop. There are now well known lighting designers in India who make a decent livelihood working in this field.

For aspiring lighting designers, the rule of thumb is to:

• Never settle for a design that you will not enjoy watching yourself.
• Never apply the 'Chalta Hai' attitude
• Always take feedback from the performers and the audiences. This information will make your design better.
Ultimately, your work speaks for itself.
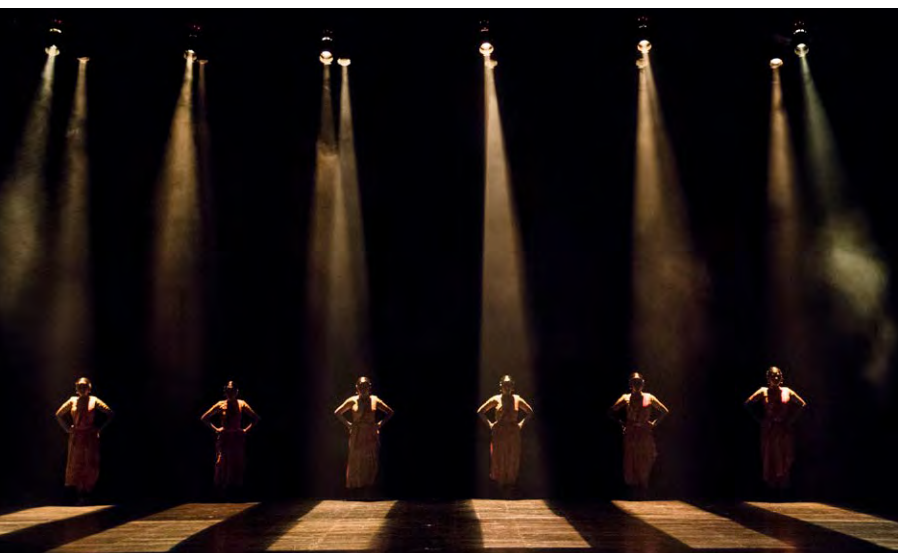
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LIGHTING | TRUSS | SOUND | VIDEO | INTEGRATION

The Main Hall of the Church is fitted with Turbosound NuQ102, the balcony of the church is equipped with Turbosound IP82, while Behringer EUROLIVE B212D function as the monitoring speakers along with other audio products from Audio Technica, Sennheiser, AKG, and Yamaha

Salem Mar Thoma Church in Kollam, India gets a sonic upgrade with finely tuned audio systems deployed by Alphatec

ALPHATEC delivers an Immersive Spiritual Experience at Salem Mar Thoma Church, India

*At **Salem Mar Thoma Church** in Thalachira, Kottarakkara, Kollam, 13 families began their spiritual journey under a small thatch. But as the community grew, so did the expanse of the church. To accommodate 302 families' congregation under a single roof and deliver crystal clear service every single time, the church's construction committee entrusted **Alphatec** to design an audio system that does justice to its form and function.*

12 years ago, in the humble village of Thalachira, located in Kottarakkara, Kollam, a small group of 13 families came together to establish the **Salem Mar Thoma Church**. Their journey commenced within the confines of a simple palm-thatched shed. Through the passage of time, the church has experienced remarkable growth and now caters to a congregation of 302 families, culminating in the creation of a splendid new place of worship.

Reverend **Vinoj Varghese**, the dedicated **Vicar**, **Paul P. George**, the Convenor of the new church construction committee, and all the devoted committee members, in their unwavering pursuit of excellence, meticulously chose high-quality audio equipment for the new church. Zacs and Phils played an integral role in bringing the new church building to fruition. With scrupulous attention to detail, **Alphatec** finely tuned the audio systems to ensure the highest sound quality for the Salem Mar

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By Hyve

Thoma Church in Thalachira.

Alphatec's goal was to provide comprehensive sound coverage, guaranteeing a captivating fusion of musical performances and inspiring sermons, thereby enhancing the spiritual experience for all within the Salem Mar Thoma Church in Thalachira. This achievement has been made possible thanks to the new **Turbosound NuQ Series** and **IP Series speakers**, powered by **Behringer amplifiers**, and **Audio-Technica India microphones**, **Yamaha Mixing Console** ensuring even coverage and a seamless frequency response.

The 50-member choir's seating arrangement was set in front of the altar, with microphones positioned in front of the speakers. In order to achieve effective sound coverage in the spacious church, the Alphatec team conducted a sound simulation using EASE, the industry-standard software for sound and acoustics. This simulation enabled the team to refine the speaker specifications before proceeding with the installation. Fortunately, the church's

The Inventory:

- 6 nos Turbosound NuQ102 (Church Main Hall)
- 2 nos Turbosound IP82 (Balcony Area)
- 3 nos Behringer EUROLIVE B212D (Monitoring Speakers)
- 3 nos Behringer KM 1700
- 1 nos Audio Technica U859QL + AT8668s
- 1 nos Audio Technica U859QL + AT8662
- 15 nos Audio Technica MB1K
- 1 nos BEHRINGER PRO MX882 V2
- 1 nos Marani 260P+ DSP
- 1 nos AKG WMS 40
- 1 nos Yamaha MGP 32
- 1 nos Sennheiser XSW 2-ME3-A

acoustics posed relatively few challenges. Given that the church was located in a village, the team had to work with a tighter budget compared to town parishes. This create a bill of quantities (BOQ) that aligned with the available budget, which proved to be a challenging task.

The Sound System:

Alphatec recommended installing six Turbosound NuQ102 speakers in the church's main hall and two Turbosound iNSPIRE iP82 speakers for the balcony area. These choices were made because both speaker models are full-range, capable of delivering a frequency range of 50 Hz to 20 kHz (-10 dB), and have a nominal dispersion of 100° horizontal and 60° vertical at -6 dB points, ensuring comprehensive coverage of the church's large area.

To power the speakers, Alphatec selected amplifiers from Behringer, known for their reliability and performance. Additionally, the team opted for an analog mixing console from Yamaha to manage the audio signals effectively. This combination of equipment was chosen to provide high-quality sound reinforcement for the church's diverse needs. Zacs and Phil, known for their expertise in church audio solutions, were confident in recommending Turbosound speakers powered by Behringer amplifiers. This confidence stemmed from their successful installation of Turbosound speakers in a church in Cochin eight years ago, which continues to deliver exceptional sound quality.

Reverend Vinoj Varghese, the dedicated Vicar, and Paul P. George, the Convenor of the new church construction committee, expressed their profound satisfaction upon hearing the beautiful, clear, and harmonious sound produced by the installed audio system in their church. The system received high praise from the esteemed priest of the Mar Thoma Church following the dedication ceremony of the new church.

> **Alphatec and Zacs and Phil recommended installing six Turbosound NuQ102 speakers in the church's main hall and two Turbosound iNSPIRE iP82 speakers for the balcony area, amplifiers from Behringer, and an analog mixing console from Yamaha.**

BRIGHT SPARK

SAHIB BHI, GHULAM BHI

by Viraf Pocha

The event industry is a service industry. Run on similar principals and parallel lines of the hospitality industry.

Our clients approach us with specific projects (usually) and it is our job to deliver them an event tailored to their expectation and requirement.

So we are their 'Ghulam'. In the loosest of terms. Some poetic licence here, please. No offense intended.

To deliver an event, we have to call on the services of a large array of service and equipment providers. So for the duration of the event, the event manager becomes their 'Sahib'. Again, I'm hoping you extend me a similar poetic licence.

Let's examine this duality and figure out how to navigate this complex position.

Bob Dylan sang – 'Gotta serve somebody. Even the President gotta serve somebody.' Wiley old Nobel Prize winner, our Bob knows his way around words.

But that I feel is a bit different. The President of a country has a larger responsibility to fulfil over time. Much like all people in responsible positions.

The Event Manager is different in that he has to play both roles, if not simultaneously, at least in very quick succession, hour by hour. This constant and repetitive changing of hats can get exhausting, confusing, and schizophrenic.

We are constantly 'ON Display.' Watched closely by all around us, looking for cracks and perhaps for clients or 'ghulams' pushing their own agenda. We need a strong team around us. Supportive partners (I hate the term 'vendors') and if we are to push our luck, understanding and protective clients.

All of this can only be built over time. Through battle situations, and significantly in today's times, timely payments.

The Covid era forced us to question our faith. A large number of us had to look for alternate work. Some had to relocate. This happened to all of us at various stages of our careers. In my estimation, it was easiest on the older ones who had built some

equity and could weather the storm.

The Youngest, perhaps not fully entrenched in this line, had other opportunities to pursue. Some who had made professional choices or moved here from other fields could explore a quick turn around and head back.

I imagine it was the toughest for the guys who got hit by Covid in the middle of their careers. OR those of our brothers who had taken on debts, anticipating growth.

This was a real trial by fire. This lot had to do some real soul searching in troubled times. The unexpected was always ahead.

How long would this last?

What is this new normal everybody keeps talking about?

How much of my painstakingly gathered reserves can I spend every year, month, and week before I have to make drastic changes? To lifestyles, career paths, ambitions.

The wise way perhaps would have been, go with the flow. Don't worry about things you have no control over. But not all of us have reached ZEN states. It's hard to look into our loved ones faces, those who depend upon us and not be affected.

They were facing their own challenges, confronting their own fears. Health scares (which our media, both mass and social, did their best to sensationalise). The challenges for putting food and medicine on our tables as we lurched from one catastrophe to the next emergency. We had to be strong for them, spread cheer and hope – when our own reserves were dwindling.

Somehow we got through it. And the bounce back has been awesome (in most areas). It amazes me that despite the setbacks, just how much money and resources were waiting to be poured into the economy. The stock market is booming. Inflation is everywhere. (Side Note – Inflation happens when too much money is chasing too few resources.)

Which begs the question – where was all this money?

Some offerings (I'm not aware of any real scientific studies, even our economic gurus are guessing)

1. Families are moving away from traditional investments in utensils and jewellery.

2. Lots of earning, little opportunity to spend (for people who held onto jobs and were working from home).
3. A release from 'bondage', calling for euphoria.
4. People are re-examining their priorities in life.
5. People received grants and subsidies.

All of this, fuelled by loosening consumer credit. Everything is now available on EMI. Phones, (today's status symbols) holidays, and even funerals.

Yes – it fuels growth, but it comes at a huge price. As the western world is discovering. Under the burden of unpayable debt, the middle class is sinking back into the (relative) poverty they recently climbed out of.

Why am I touching all these points?

This is the world that destiny has chosen for us to be both 'Sahib' and 'Ghulam' in.

Fortunately, we remain relatively untouched by the terrible tragedies unfolding around us. War between brothers where all lines of right and wrong are totally blurred and propaganda is blasted at us from every side. It has to affect our senses at some level.

In my view, the single largest issue our country faces is pollution. We are already amongst the most polluted nations of the world and we are just getting started.

I don't want to be dragged into a political debate here, but pollution seems to be getting worse and widespread every year.

The event industry is a soft target and in the crosshairs. Perhaps the next big disruption in our already erratic lives.

Our road ahead is one of the main ideas that continue to occupy my mind. I am looked upon both quizzically and with amusement when I bring up the subject. Here I am at the end of a rewarding career thinking these thoughts more relevant to a twenty year old starting out.

In their defence, today's 20 year old (I've been there. I know) is more distracted by the low hanging fruits that he is suddenly free to explore. Soul searching is for another time.

It's you lot that will define our future. Your choices on how to structure your business will lead to your requirements

to either rent or buy equipment, which will then trigger attention and investment from the technical boys.

You budding 'Sahibs', here's the landscape ahead for you. You have to choose where and how to build your path. There are so many possibilities. Careful of the pitfalls. Our industry, more than most, is always looking for 'The Next Big Thing' at an incredibly fast pace. Marketing people will use jargon to bottle 'thakela' old wine into newer and shinier bottles.

Our industry's problem is that rarely do we really see even a bare bone structure even days before an event. Everything exists on paper and presentations. So we have to be really careful.

To borrow a situation. Movies and Video went from 4D to 7D or whatever number some smooth talking salesman could conjure up. Sure, there were breakthroughs, but they usually just draw a yawn today. 3D barely survives.

Like that, so many words are thrown about. Immersive. Holistic. Experiential. How many of these actually translate into a new experience? Placing some speakers around the venue does uplift an event to another level. 'Sahib', careful what you fall for. Even more careful on how you will sell the idea to a client. Remember, on the event day, you must both delight him and exceed his expectations.

For that you will need to pick your 'Ghulams'. Remember, they are 'Sahibs' in their own domain. It's a tightrope.

The cycle continues. Onto the next event.

CLAYPAKY SHOWCASES RECENT PRODUCT LAUNCHES AT ISE 2024

At Integrated Systems Europe (ISE) 2024, Claypaky showcased its recently launched products suited for all kinds of events - from touring to theater productions. It is also the first time since ARRI's acquisition of Claypaky, that two companies exhibited together at ISE and presented even broader portfolio together.

Growing IP66 Shield Family

With demand for IP-rated fixtures continuing to grow, Claypaky launched a new standard of weather-resistant, high-performance, ultra-durable and long-lasting fixtures.

Arolla Aqua is Claypaky's new weather-resistant light, a IP66 fixture with technical and construction features once unimaginable

Arolla Aqua is a IP66 fixture with a custom white 900 W (7000 K) LED light source and 40,000-lumen output

for this kind of light. It offers high-power and high brightness with top-level performance in a remarkably compact and lightweight package that enables fast pan and tilt movements. The Arolla Aqua fits a custom white 900 W (7000 K) LED light source and is capable of a 40,000-lumen output with a high-quality,

uniform light beam, density and the total absence of spurious lights. It can compete with both high-power-range lights (given its output) and medium-power-range lights (given its small size and weight). Go-Bright technology means no light loss or color shift when gobos are inserted into the beam. From high-power to medium-power ranges, Arolla Aqua shines as a versatile solution.

HY B-EYE K15 Aqua is based on the well-known and unique Claypaky ALEDA B-EYE technology with rotation and pixel-mapping. It boasts true IP66 protection and has been rigorously tested to endure vibration and shock during transportation, extreme temperature fluctuations, impacts from hailstones, electrical stress, harsh surroundings, UV exposure and

HY B-EYE K15 Aqua features the unique ALEDA B-EYE technology from Claypaky and an IP66 protection

much more.

Shining a Light on New Theatrical Fixtures

Claypaky fixture for theatrical applications – Rhapsodya, also had a prominent place at ISE 2024.

Rhapsodya is a high power, low-noise multi-spectral LED-based fixture designed for a variety of applications, including theater, TV production,

touring and live events. It uses a custom 1200W multicolour RGBAL LED engine, is capable of a 24,000-lumen output and offers many exclusive features, such as the AccuframeTM framing system using two focal planes for better resolution and focusing; TonedownTM, which ensures whisper-quiet operation at just 27dB; Absolute Position for advanced pan and tilt control; the Lineguard frost system using two pairs of blades for much higher beam uniformity and truly incremental adjustment of frost levels; and ColorMatch calibration for matching colour temperatures to other fixtures when using Claypaky CloudIO software. This technology provides consistency among a variety of fixtures used in a production and offers the potential for storing custom digital colour filters onboard.

Rhapsodya incorporates AccuTune, a sophisticated, internally developed firmware algorithm for a precise control over the beam in a multicolour LED engine, providing vibrant, rich colours and a balanced, consistent white, optimized for both stage and TV. COLORSTRING, a new system enabling an individual control of 4

Rhapsodya is a multi-spectral LED-based fixture that uses a custom 1200W multicolour RGBAL LED engine and a 24,000-lumen output with AccuframTM framing system

and easy automated follow-spot system, also made its ISE debut. The Buddylight can be used either in an Art-Net or DMX network – by setting up control priority management with the console – or in stand-alone

Buddylight is an easy automated followspot system that can be used in an Art-Net or DMX network or even in a stand-alone mode

independent LED stripes within the engine for a high level of graphics and colour effects.

Making Light Automation Quick and Easy

Buddylight, Claypaky's new, quick

mode. The Buddylight marks a further step towards increasing entertainment light automation and is perfect for small theaters, auditoriums, and conference rooms.

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20..
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	MON	TUES	WED	THUR	FRI	SAT	SUN	MON	TUES	WED	THUR	FRI	SAT	SUN	MON	TUES	WED	THUR	FR
JAN 2024	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
FEB 2024				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAR 2024					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
APR 2024	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
MAY 2024			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
JUN 2024					1	2	3	4	5	6	7	8	9	10	11	12	13	14
JUL 2024	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
AUG 2024				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
SEP 2024						1	2	3	4	5	6	7	8	9	10	11	12	13	
OCT 2024		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
NOV 2024					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
DEC 2024						1	2	3	4	5	6	7	8	9	10	11	12	13
JAN 2025			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	MON	TUES	WED	THUR	FRI	SAT	SUN	MON	TUES	WED	THUR	FRI	SAT	SUN	MON	TUES	WED	THUR	FR

Get Show (China) www.getshow.com.cn/

NAB Show (USA) www.nabshow.com

Infocomm 24 (USA) www.infocommshow.org

Infocomm India (Mumbai) www.infocomm-india.org

Interbee (Japan) www.inter-bee.com

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9	20	21	22	23	24	25	26	27	28	29	30	31	1	2					JAN 2024
																			The NAMM Show (USA) www.namm.org · ISE (Spain) www.iseurope.org
6	17	18	19	20	21	22	23	24	25	26	27	28	29						FEB 2024
5	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			MAR 2024
																			Prolight + Sound Frakfurt (Germany) pls.messefrankfurt.com
9	20	21	22	23	24	25	26	27	28	29	30								APR 2024
7	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1				MAY 2024
																			Koba (Korea) www.kobashow.com · Prolight + Sound Guangzhou (China) prolight-sound-guangzhou.hk.messefrankfurt.com · PALM Expo 2024 (Mumbai) www.palmexpo.in · AV-ICN 2024 (Mumbai) www.av-icnx.com
4	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30			JUN 2024
9	20	21	22	23	24	25	26	27	28	29	30	31							JUL 2024
6	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				AUG 2024
3	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		SEP 2024
																			IBC (Netherlands) show.ibc.org/about_us · Pro Integration Future Asia (Singapore) www.prointegrationfuture.asia
8	19	20	21	22	23	24	25	26	27	28	29	30	31						OCT 2024
5	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30				NOV 2024
3	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	DEC 2024
7	18	19	20	21	22	23	24	25	26	27	28	29	30	31					JAN 2025
	SAT	SUN	MON	TUES	WED	THUR	FRI	SAT	SUN	MON	TUES	WED	THUR	FRI	SAT	SUN	MON	TUES	

ELATION LAUNCHES SIX+ PAR SERIES

Elation introduces the **SIX + PAR Series**, which includes **SIX+ PAR S** and **SIX+ PAR L**.

Available with either 7x or 14x 20W RGBLA+UV LEDs, the SIX+ PAR offers the ultra-wide colour spectrum, outstanding colour rendering and high CRI (93) that exacting designers demand. The carefully engineered optical system guarantees that homogenized colour distributes evenly and with no colour fringing, from high-fidelity whites to intense primaries and virtually every shade in between. Furthermore, they house the same LED engine as Elation's new SIX+ BAR series for a perfect colour match.

At 3200 lumens for the SIX+ PAR S and over 7000 lumens for the SIX+ PAR L, these indoor/outdoor PAR colour changers punch well above their weight. To expand the colour capabilities of the SIX+ PAR further, precise colour temperature control via a dedicated variable CCT control channel has been integrated with adjustments

capable from 2400K - 8500K. A CMY Emulation mode plus an integrated library of calibrated colour presets that match the most popular gel filters have also been included.

The SIX+ PAR's durable housing includes a dedicated diffusion lens holder with an optional gel frame holder available that can accommodate industry-standard 7.5" (S)/10" (L) accessories. Beam angle is 12° with a 22° lens included that allows them to match seamlessly with existing SIXPAR fixtures. Other optional lenses are also available. SIX+ PAR luminaires house an electronic dimmer and strobe and are capable of smooth dimming from 0-100% with stability throughout the range. A selection of 16-bit dimming modes and curves are also included.

Seamless integration with original SIXPAR fixtures

To ensure the SIX+ PAR can be integrated seamlessly alongside original SIXPAR fixtures, great care has been taken to ensure that the new LED array colours match the original. A unique DMX mode has been created for SIXPAR emulation,

enabling seamless control of the new fixtures using the identical DMX mapping as the original. The colour mixing has also been calibrated to virtually emulate the White LED included in the original SIXPAR array, and an output limit master setting has been added so the new lights don't overpower any older fixtures in the rig.

Versatility

Useful for any production that requires the magic and allure of color and easily integrated into installation applications, the SIX+ PAR serves as a highly versatile wash light, uplight, wall wash, key/front

light, truss warmer and more. A robust IP65 rating makes these compact and rugged LED fixtures go-to workhorse colour-changers for both indoor and outdoor events. Its marine-grade coating makes them safe to use in harsh coastal environments, while the fanless cooling system ensures silent operation for noise-sensitive settings. In addition, remotely variable LED refresh frequency allows them to be easily integrated into any broadcast application.

The SIX + PAR Series includes the 3200-lumen SIX + PAR S and 7000+-lumen SIX + PAR L

CAMEO UNVEILS AZOR SP2 AND AZOR W2 MOVING HEADS

With the addition of the **SP2 Spot Profile Moving Head** and the **W2 Wash Moving Head**, **Cameo** expands the **AZOR** family with two flexible lighting tools for creative use in small to medium-sized applications in the live, theatre and broadcast sectors.

AZOR SP2

The AZOR SP2 is a compact spot profile moving head based on a 300 W LED light source with a luminous flux of 13,000 lumens and a large zoom range of 5°-50°. Compared to the AZOR S2, the AZOR SP2 supplements the advantages of a classic spotlight with a motorised 4-layer framing system (+/- 60°rotatable), which allows the light beam to be limited and flexibly directed at people and objects. The integrated CMY colour mixing system is supplemented by an additional colour wheel with eight dichroic filters to create rapid colour changes and split colours. On

the effects side, the AZOR SP2 has a gobo wheel with seven rotating gobos, a linear CTO and two overlapping prisms (linear + circular). Due to the adjustable PWM frequency (650 Hz – 25 kHz), the AZOR SP2 is also suitable for flexible use in TV and broadcast applications. It can be controlled via DMX512, RDM or wirelessly via W-DMX with the optional Cameo iDMX stick.

AZOR W2

The compact AZOR W2 combines seven individually controllable 40 W RGBL LEDs, 3,600 lumens total output and a zoom range of 4°-50° for classic wash looks – and more. The special feature of the AZOR W2 is the eclipse burst effect: Behind a dark filter are four individually controllable seg-

ment SMD LEDs, which create stroboscopic and pixel effects and expand the wash light's range of applications enormously. Like the AZOR SP2, the AZOR W2 is also suitable for use with cameras thanks to its adjustable

The AZOR SP2 comes with a 300 W LED light source and 13,000 lumens along with a zoom range of 5°-50°

The AZOR W2 combines seven 40 W RGBL LEDs, 3,600 lumens, and a zoom range of 4°-50°

PWM frequency (650 Hz – 25 kHz) and enables the flicker-free display of LEDs in the image. In addition to DMX512 and RDM, the AZOR W2 can also be controlled wirelessly using the optional iDMX stick.

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By Hyve

Deploying 'MEGA' SOUND
For G-20 Summit In India

*Mega Sound India designs a discreet and dapper sound system for the 3rd G-20 Finance Ministers and Central Bank Governors (FMCBG) Meeting in Gandhinagar, India. **Vishrut V. Joshi**, Head, Operations, Mega Sound India and Audio Designer, in a conversation with **PALM Expo Magazine Team**, elaborates on the same.*

India reinforced its presence on the global map with its G-20 Presidency in 2023. Under the Indian Presidency's theme of "One Earth, One Family, One Future", G-20 Ministers and Governors pledged to prioritize the well-being of the people and the planet and reaffirmed their commitment to improving international economic cooperation, strengthening global development, and steering the global economy towards strong, sustainable, balanced, and inclusive growth. To reflect this, The **3rd G-20 Finance Ministers and Central Bank Governors (FMCBG)** meeting under the Indian Presidency was held during 17-18 July 2023 in Gandhinagar, Gujarat. The meeting was jointly chaired by **Smt. Nirmala Sitharaman**, Union Minister of Finance and Corporate Affairs, and **Shri Shaktikanta Das**, Governor, Reserve Bank of India.

Mega Sound India, a pro sound rental company in India, was tasked with designing and deploying a sound system that is clear and discreet in equal measure. In a conversation with PALM Expo Magazine's Team, **Vishrut V. Joshi**, Project Head, Mega Sound India, shares how the company succeed-

The K2 from L-Acoustics is used to reinforce sound for media briefings during the G-20 Summit Meet

ed in putting together a sound system for a large-scale event that not only demands impeccable sound dispersion, but also aims at captivating the audience's attention within seconds.

The Project Brief:

Speaking about being approached by the client for FMCBG Meeting's sound deployment at the G-20 Summit in Gandhinagar, Joshi shares, "When we were approached for The Third G20 Finance Ministers and Central Bank Governors (FMCBG & FCBD) meeting under the Indian Presidency in Gandhinagar, it was a testament to the company's reputation and expertise in the field of sound rental and audio production. The organizers of the G-20 Summit recognized Mega Sound India as a reliable and accomplished partner with a track record of delivering high-quality audio solutions for various events."

Joshi further states, "Our consistent commitment to excellence, cutting-edge technology, and a team of experienced professionals played a pivotal role in securing the opportunity to be part of such a prestigious event. The organizers likely sought a partner who could ensure flawless audio production, clear communication, and a seamless experience for the participants and attendees of the G-20 Summit."

For Joshi, the detailed client brief for the project meant that Mega Sound India was required to pay nuanced attention while deploying the sound system at the venue. Joshi recalls, "The organizing community for the G-20 underscored the event's significance and high-profile nature. They emphasized the scale of the gathering, underlining the necessity for a robust audio production setup capable of accommodating a large number of attendees while facilitating clear communication. Recognizing the spatial dynamics of the meeting venue, the organizer placed a premium on the need for impeccable sound clarity throughout, ensuring that every participant could hear with precision."

That is not all. Joshi adds, "Moreover, the organizer entrusted us with the freedom to design the audio infrastructure, emphasizing the importance of sensitivity to the nature of the meeting. Aesthetic considerations were paramount, with a specific directive to ensure that speakers were discreet and unobtrusive, harmonizing seamlessly with the dignified atmosphere of the event and the explicit emphasis on redundant backup systems reflected the paramount importance placed on reliability. We were tasked with crafting a system featuring inherent backup mechanisms, guaranteeing a seamless and uninterrupted audio production experience, even in the event of technical glitches."

Dual Redundant DiGiCo SD10 Consoles ensure impeccable, balanced sonic mix at the G-20 Summit Meeting

The Inventory:

Joshi states that Mega Sound India designed a total of 10 setups for the G-20 Summit's Meeting. The inventory list is as follows:

Speakers:
- 28 x L-acoustics KARA Speakers
- 12 x L-acoustics K2 Speakers
- 12 x L-Acoustics KS28 Subwoofers
- 8 x L-acoustics X15 Monitor Speakers
- 8 x L-acoustics ARCS II Speakers
- 20 x JBL VRX 915
- All Powered By L-ACOUSTICS LA 12X Amplification
- 50 x RCF TT 25-CXA Active High-Definition Coaxial Monitors
- 20 x RCF EVOX Speakers (for fillers)

Consoles:
- 4 x Digico SD Consoles (both main and redundant) with SD racks

1 x Soundcraft Vi3000 Console

1 x Yamaha CL5 Console

Joshi expounds further, "We made sure everything was reliable by having redundant audio network protocols. We used AVB, AES, and analog connections, making sure the setup stayed rock-solid. L-acoustics P1 and Luminex Gigacore helped us strengthen the redundancy.

Once the client's brief was in place, the team from Mega Sound India, let by Joshi, performed an intensive recce of the venue in order to explore the layout and understand the requirements for the eventual deployment. Joshi notes, "Our team prioritized delivering a perfect audio experience for the G-20 Summit meeting. To achieve this, the team performed careful site check, which highlighted the company's commitment to understanding the event inside out. We personally took care of analyzing the venue, checking the acoustics, inspecting technical setups, addressing aesthetic challenges, and planning logistics."

The venue, according to Joshi, was "quite big." He elaborates, "The main hall of the venue is quite big — 108 meters wide and 60 meters long. The ceiling was really high, reaching up to 12 meters. This massive space was they divided into three parts. Two parts of the venue were for the main meetings, where the important discussions happened. The third part was specifically designed for the media, where they can listen to the discussions report on them."

Talking about the team's key observations at the venue, Joshi relays, "We looked at where the meeting rooms are, how the stage is set up, and where people will be sitting. This helped us figure out the best spots to put our audio equipment so everyone can hear clearly. We also listened to how sound behaves in different parts of the venue. Understanding this is super important for making sure the sound quality is top-notch everywhere. We took note of the technical stuff already present at the venue. This enabled us to ensure our equipment will work smoothly with what is already in place and let us spot any potential issues ahead of time. Considering how everything looks is

another big thing. We wanted our audio gear to blend in and not be too noticeable. So, we figured out where to place the equipment in a way that they fit in with the overall style of the event."

The Challenges:

Deploying an articulate sound system for a massive venue, for a large-scale event, is not a cakewalk. Joshi agrees and lists down the major challenges that Mega Sound India's team faced while designing the acoustic layout for the venue, "Over 500 delegates, including Finance Ministers and Central Bank Governors from G-20 Member Countries, Invitee Countries, and Heads of various International Organizations (IOs) participated in the meeting. Setting up speakers in a big venue and for a big event like the G-20 Summit was a bit tricky. We had to figure out where to put them so that everyone could hear well. Since the hall was really tall, hanging the speakers securely from the ceiling was a bit of a challenge. But our team, who knows a lot about this stuff, came up with a plan to do it safely."

The challenges don't end there. Joshi continues, "Sometimes, there are spots in big halls where the sound doesn't reach as well, making it hard for people in those areas to hear properly. To fix this, we added extra speakers or adjusted the direction of the ones we had already placed. We used tools to map out and simulate the sound in the venue before the event to make sure everyone gets clear audio."

The Team From Mega Sound India:

Siddharth Chauhan, Audio Director
Vishrut V. Joshi, Head Audio Designer
Ranjeet Singh, Senior Audio Engineer for FMCBG Meeting Room
Sanjay K., Audio Engineer for FCBD Meeting Room
Rajesh Kumawat, Audio Engineer
Ravi Rathore, Assistant Audio Engineer
Devendra Jethi, Assistant Audio Engineer
Harshal Philare, Assistant Audio Engineer
Krishna Biswal, Audio Tech and Rigger
Lokesh Kumawat, Audio Tech and Rigger
Virendra Solanki, Audio Tech
Swapnil Elpass, Audio Tech, Mega Sound India
Harish Kumar, Assistant Engineer, Mega Sound India

> **"**
> We looked at where the meeting rooms are, how the stage is set up, and where people will be sitting....We took note of the technical stuff already present at the venue. This enabled us to ensure our equipment will work smoothly with what is already in place and let us spot any potential issues ahead of time.

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By Hyve

Rediscovering Sonic Superiority:

Six Efficient Line Array Speakers of 2023

In 2023, the landscape of line array speakers witnessed a paradigm shift, with several models from reputed brands setting new industry benchmarks. Used primarily for large-scale audio reinforcement in various settings such as concerts, festivals, stadiums, arenas, theaters, houses of worship, and outdoor events, the design of the line array speakers allows them to distribute sound evenly over long distances, making them ideal for venues with expansive audience areas.

JBL Pro VTX A6

The VTX A6 from JBL Pro is a fully passive, two-way line array element, ideal for small to mid-size rental houses, corporate events, theaters, clubs, houses of worship, and any other application that requires clear, immaculate sound reinforcement. The VTX A6 features a custom-engineered dual 6.5" Differential Drive woofers and a new 3-inch compression along with a modern industrial design and IP55 rating.

Main Features include:

- Custom 3-inch polymer annular-diaphragm compression driver
- Custom 6.5-inch woofers
- Radiation Boundary Integrator (RBI) horn design for 120° horizontal dispersion
- Efficient passive crossover network
- Fully compatible with JBL LAC-3, Array Link and Performance Manager software
- Available accessories include mini frame, suspension bar, base plate, ceiling mount, cover, ground stack accessory, pole adapter and transport cover and accessories

Technical Specifications:

- Frequency Range: (-10 dB): 67 Hz-20 kHz' (±3 dB): 80 Hz-19 kHz
- Coverage Pattern (-6 dB): Horizontal: 110 degrees nominal (500 Hz-16 kHz); Vertical: Varies with array size and configuration
- Maximum Peak Output: 134 dB
- System Power Rating: 350 Watts Continuous (IEC/100 hour)
- System Type: Line Array, two-way passive
- System Nominal Impedance: 10 ohms
- Connectors: Type: (2) Neutrik speakON STXX Series NL4

DAS Audio SARA-100

SARA-100 is a compact line array system featuring 3000Wrms of power, delivering a linear performance of 138 dB SPL MAX and a wide dynamic range, making it ideal for events and medium-sized installations where sound quality and uniformity are a priority. SARA features two custom designed 8" loudspeakers for mid and low frequencies and a compression driver for high frequencies with a 100° horizontal dispersion waveguide. SARA's Class D amplifier integrates a switch-mode power supply with power factor correction (PFC).

Main Features Include:

- Symmetric V-shaped configuration
- 4-channel, 3000 W continuous Class D amplifier
- FIR processing and digital steering via DASaim
- Fast Set Splay FSS for angle setting while stacked

Technical Specifications:

- Frequency Range (-10 dB): 70 Hz – 17 kHz
- Horizontal Coverage (-6 dB): 100º
- Vertical Coverage: Splay Dependent
- Maximum Linear SPL: 138 dB
- Maximum SPL: 142 dB
- Nominal Amplifier Power (continuous): 3000 W
- Input Type: Balanced Analog
- Input Impedance: 20 kohms
- Input Sensitivity: 6.2 V (+18 dBu)
- Control: ALMA
- IP Rating: IP43

Alcons Audio LR15

The LR15 is a two-way, "ultra-compact" format line-array sound system, combining one of the highest sound qualities possible with high SPL capabilities and throw in a very compact form factor. The LR15 utilizes next-gen driver technology, together with new developments such as FlowVent and VHIR and new simulation methods. The system is designed to enable a 1:1 non-compressed reproduction of the original sound source with a completely neutral response. It is ideal for any application - from speech, to classical music, jazz, all the way to pop and rock performances.

Main Features include:

- Ultra-robust multiple-patented pro-ribbon transducer technology
- 1:1 non-compressed linear sound reproduction
- Unique symmetric & coherent horizontal & vertical pattern control
- Fully integrated solution with processing & amplification, rigging & transportation

Technical Specifications:

- Frequency response: 74 Hz - 20.000 Hz (+/- 3 dB); 53 Hz - (+/-10 dB)
- Sensitivity nominal: 99 dB (200 Hz - 10 kHz)
- Nominal impedance: 8 ohms
- Nominal SPL peak: 125 dB (Sentinel3 200 Hz - 10 kHz); 131 dB (Sentinel10 200 Hz - 10 kHz)
- Dispersion H x V (array): 90 or 120° x depending on array length
- Dispersion H x V (single): 90 or 120° x 15° (@10kHz)
- Connectors: 2x Speakon NL4 input/link

CODA Audio CiRAY

CODA Audio's CiRAY is a high output, three-way Passive Line Array System featuring 8.75" DDP plus dual 10" neodymium ultra-low distortion cone drivers. CiRAY is a compact, dual 10" line array system that provides high output and stunning intelligibility for an endless range of applications, in both installation and touring.

Main Features include:

- Dual 10", 3-way high output system
- High power handling: 1400 W (AES)
- 8.75" DDP generates a unified wavefront and operates at a very high efficiency with extremely low distortion
- DAC (equivalent energy density as AiRAY at low frequencies per array length)
- CiCOUPLER, Instafit Magnetic to change the horizontal coverage without tools (60°, 90°, 120° or asymmetrical)
- Integrated 3-point rigging system for flown or ground stacked arrays

Technical Specifications:

- Frequency response: 50 Hz – 22 kHz (-6 dB)
- Power handling AES / peak (passive): 1400 W / 5600 W
- Maximum peak SPL (with LINUS14):* 145 dB (A)
- Dispersion horizontal: 60°, 90°, 120° or asymmetrical
- Dispersion vertical: Array dependent: 0.5°, 1°, 2°, 2.5°, 3° to 10° in 1°-steps
- Low frequency: 2x 10" Nd water resistant cones, 3" (77 mm) voice coil, 700 W (AES)
- Mid/High frequency: 8.75" DDP (Dual Diaphragm Planar-wave-driver); Mid: 3.5" (90 mm) voice coil, 150 W (AES); High: 1.75" (44.4 mm) voice coil, 80 W (AES)
- Crossover point: 560 Hz passive, 6.3 kHz passive
- Nominal impedance LF / MF+HF: 12 Ohm (2+/2-)
- IP rating (IEC 60529): IP54

L-Acoustics L-Series

L Series from L-Acoustics comprises two elements that are designed to work together or on their own: L2 and L2D. Each element contains eight three-inch high-frequency drivers with eight ten-inch low-frequency drivers, complemented by four side-loaded 12-inch drivers with front and back exits. L Series also features L-Acoustics Panflex technology, which provides sound designers with quick access to a choice of four horizontal directivity patterns: 70° or 110° symmetrical, or 90° asymmetrical on either side.

Main features include:

L2:
- Line source technology perfected with PULS
- Best in class SPL/m, SPL/kg, SPL/m2
- Fast and errorless deployment

L2D:
- Large-format system performance in a compact size
- Line source technology perfected with PULS
- Best in class SPL/m, SPL/kg, SPL/m2

Technical Specifications:

L2:
- Max SPL: 155 dB
- Bandwidth: 45 Hz- 20 KHz
- Transducers: LC: 4 x 12"; LF: 8 × 10"; HF: 8 × 3"
- Directivity: V: 10°; H: Four modules; Panflex: 70° / 90° / 110° Integrated cardioid

L2D:
- Max SPL: 151 dB
- Bandwidth: 45 Hz- 20 KHz
- Transducers: LC: 4 x 12"; LF: 8 × 10"; HF: 8 × 3"
- Directivity: V: 60°; H: Top two modules; Panflex:70° / 90° / 110°

Beta Three VR112

VR112 is a full range speaker of medium sized array system. It has 1*12" Ferrite LF driver & 2*44mm Neodymium HF drivers and built-in-crossover. T-shaped cabinet and easy installation and uninstallation with lockpin 10°adjustable cabinet angle range. Multiple VR112 can work with a Subwoofer to make up excellent point source system. Easy to install and uninstall. VR112 Features of Sound Quality: clear, full and powerful.

Main features include:

- Full range speaker of medium sized array system
- 12 T-shaped cabinet and easy installation and uninstallation with lockpin, 10°adjustable cabinet angle range
- Clear, full, and powerful sound quality

Technical Specifications:

- Frequency Response(-3db): 50Hz-15kHz
- Frequency Response(-10db): 40Hz-20kHz
- Max SPL @ 1m: 120dB/126dB(PEAK)
- Compression driver: 2 x 44mm Neo
- Woofer: 1 x 12
- Input Connectors: 2 x NL4
- Sensitivity (1W @ 1m): 96dB
- Power: 300w(RMS), 600W(PG), 1200(Peak)
- Rated Impedance: 8ohms
- Cabinet Dimension (WXDXH): 645*405*348mm
- Packing Dimension (WXDXH): 535*475*780mm
- Net Weight: 22.3kg(49.1lbs)
- Gross Weight: 25kg(55.1lbs)
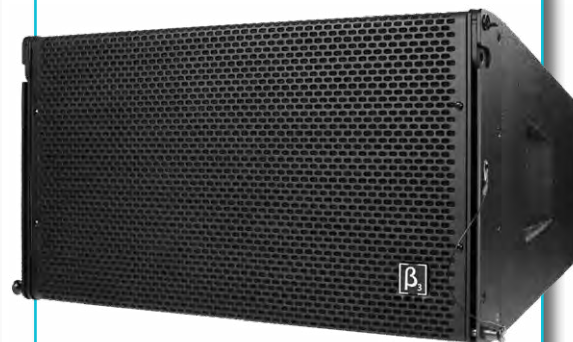
UNVEILING SONIC SPLENDOUR

In it's quest to elevate the spiritual ambience, College Veng Presbyterian Church in Aizawl, Mizoram chose CELTO Acoustique's ISORAY10+ as the centrepiece of the newly-installed audio system

College Veng Presbyterian Church's Transformative Journey with CELTO Acoustique's ISORAY10+

*The committee at the **College Veng Presbyterian Church** in Aizawl, Mizoram, India sought a compact yet impactful sound system to enable the visitors and worshippers offer prayers and hear sermons with ease and clarity. Their search ended with **CELTO Acoustique's ISORAY10+ Coaxial Line Array System**. **Zothan Sanga** of Wave Record and Sounds (CELTO Acoustique's Channel partner) executed the audio installation. PALM Expo Magazine reports.*

Nestled in the serene hills of Aizawl, Mizoram, the **College Veng Presbyterian Church** recently embarked on a sonic journey that has redefined its worship experience. The church's quest for a compact yet powerful audio solution led them to the **ISORAY10+, CELTO Acoustique's** flagship **Coaxial Line Array System**. The entire installation, from demonstrations to execution, was orchestrated by CELTO Channel partner, **Zothan Sanga** of Wave Record and Sounds, based in Aizawl. This collaboration has not only fulfilled the church committee's desire for a compact line array but has elevated the worship atmosphere to new heights.

The ISORAY10+ from CELTO Acoustique, a Coaxial Line Array System, crafted as a compact solution without compromising on power, delivers crystal-clear sound with an immersive quality. Since it is ideal for spaces where clarity and intelligibility are paramount, the ISORAY10+ perfectly aligns with the church's vision for a dynamic and impactful worship experience.

Zothan Sanga, renowned for his expertise in pro audio installations, embarked on a journey to tailor the ISORAY10+ to the unique acoustic characteristics of College Veng Presbyterian Church. The journey began with a demonstration,

The ISORAY10+ tops were complemented with ISORAY18S subwoofer and Coaxial iFIX7 & iFIX10 speakers, adding to the acoustic clarity within the church's environment

The Inventory:

SPEAKERS:
- ISORAY10+ -8 nos
- ISORAY18S - 2 nos
- CT12G2 - 4 nos
- iFIX10+ - 4 nos
- iFIX7 G2 - 4 nos
- CCL830 - 2 nos
- VAL QX10HP - 4 nos

AMPLIFIERS + DSP:
- T4.26 - 1 nos
- C2.20 - 1 nos
- C2.10 - 2 nos
- C2.6 - 4 nos
- DSP CLM48-1

ISORAY10+ Coaxial Line Array System makes sound reverberate through the Church, allowing hundreds of devotees to take their worship to greater heights

allowing the church committee to experience firsthand the sonic capabilities of the product.

The Sound System:

The church committee's quest for a compact line array that could deliver both loudness and clarity was met with success. The ISORAY10+, with its innovative coaxial design and advanced ISOTOP waveguide technology, presented an ideal solution. Its compact footprint, weighing only 15kgs, makes it an ideal fit for the church's architectural constraints while ensuring an immersive audi-

tory experience for the congregation.

As the installation progressed from demonstration to execution, Sanga's commitment to perfection shone through. The ISORAY10+ tops along with the ISORAY18S subwoofer were strategically positioned to achieve optimal sound distribution, ensuring that every corner of the church was enveloped in a seamless audio embrace. Adding to the fills were the Coaxial iFIX7 & iFIX10 speakers which blend with the ISORAY. The line arrays' and fill speakers' ability to project sound evenly throughout the space eliminated dead zones and created a worship environment where every word and melody reached the worshipers.

Beyond the technical aspects, the ISORAY10+ seamlessly integrated into the church's visual aesthetic. The unobtrusive placement of the compact line array preserved the sanctity of the space, allowing the focus to remain on the worship experience rather than the technology behind it.

The Impact:

The impact of this pro audio installation extends beyond the walls of College Veng Presbyterian Church. The newfound sonic clarity has invigorated worship services, allowing the congregation to engage more deeply with sermons and musical expressions. The church has become a hub for community events, cultural gatherings, and educational programs, fostering a sense of togetherness and shared experiences.

In conclusion, the collaboration between College Veng Presbyterian Church, CELTO Acoustique's ISORAY10+, and Zothan Sanga of Wave Record and Sounds has ushered in a new era of worship in Aizawl, Mizoram. The compact line array's ability to deliver both power and clarity has redefined the possibilities for worship spaces, making it a valuable addition to the church's architectural and spiritual landscape.
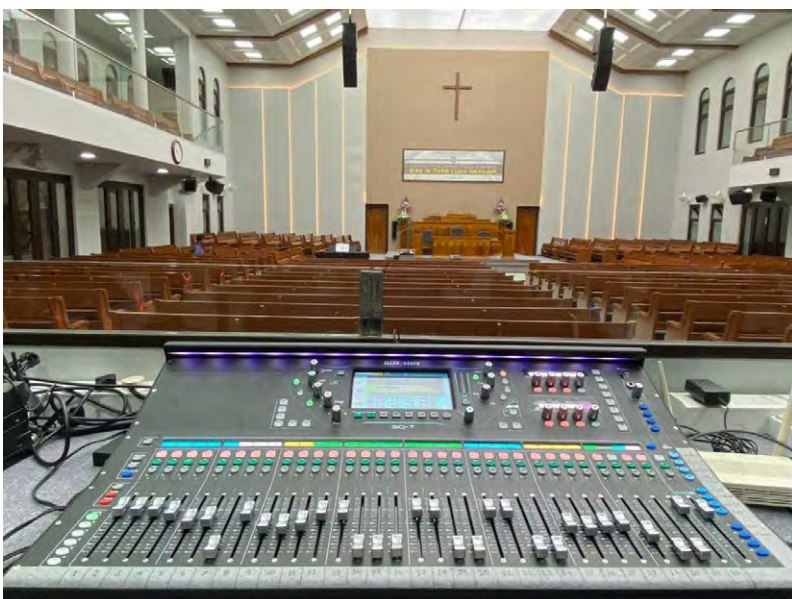
Setting up a Stage in 90 Minutes

A Panel Discussion on The Probabililty of Being Stage-Ready In 90 Minutes

At the PALM Expo Conference 2023, held at the Bombay Exhibition Centre from May 25- May 27, 2023, four professionals from the pro audio industry – Sachit Subramanian, Co-Founder and CEO at Circle Pro Audio, Sancheth Suvarna, Senior Engineer-NJSM, Touring Engineer, Co-Founder & Product Head at Circle Pro Audio, Luca Opizzi, Technical Sales Executive, Link Italy, Vishrut V. Joshi, Head Operations, MEGA SOUND India, weigh in on the possibilities and practicalities of assembling and dissembling an audio setup in 90 minutes in a conference session titled, 'Fireside Chat: 90 Mins in & 90 Mins out – right from finetuning the time-consuming art of coiling cables and the importance of timely gear maintenance to pre-prepping the equipment right at the warehouse to setting up a stage in 90 minutes (or less!). This article is an excerpt of the conference session

Sachit: India as a market for audio, video, and lighting is growing at a tremendous pace. The quality of production within our country has improved a lot. But, the question is, do you really need so much time to set up an event? Can we do it faster? Or are we slow because of some elements that can be easily reworked upon? That is the whole idea of the discussion today, and this is going to be a very casual chat where we talk about our experiences.

If you look at our regular events, one of the biggest time-taking processes is coiling cables. Let me ask, have you found some innovative solutions to coil cables faster?

Vishrut: Learning to coil cables properly is a crucial skill that requires attention to detail and technique. Delicate cables, in particular, demand careful handling during coiling to prevent damage. The process becomes even more challenging in colder temperatures, where cables may stiffen and become harder to manipulate. Despite these obstacles, mastering the art of coiling cables is essential for ensuring their longevity and optimal performance.

Luca: Good quality cables will help. In coiling, the only difference is to have good

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quality cables with good rubber, good flexibility, and heaviness. In terms of managing the cable, reducing the quantity of the cables help.

Sancheth: Use more number of snake cables to reduce your cable runs. That will help you save a lot of time. You can't run away from coiling cables, you have to do it manually. But reducing the number of cables will definitely help.

Sachit: When you say 'reducing the number of cables', how important is 'snake'? I have seen people running 'snake boxes' between FOH and monitor run or FOH to stage runs, but how important is a 'snake' cable when you are literally running the show on stage? Can you give some examples?

Vishrut: When I was in my earlier years within a rental company, I myself did band patching of 50 channels of XLR cables. The biggest issue that I faced was to find and troubleshoot the cables, because on that 50-cable network, I cannot find the wrong cable. What 'snake' can do is help us find the wrong channel, swap that channel or put it in some other 'snake'.

Sancheth: Right. Which is why, even we are transitioning from using a normal 'snake' to multiple 'snakes'.

Sachit: Okay. So, say for example, I am running XYZ Bollywood artist's show and I need to run 72 channels of audio from one place to the other, making sure that it isn't failing on me. So, what is the setup that I should prefer to make my life easy?

Sancheth: If you use seven cables of a multiple 12-cable channels, you are just running seven 'snakes' on stage, and the rest is just all the small cables that you need to do to patch the rest of the band. Your stage is automatically clean, you will take less time to do your setup and wind up.

Vishrut: So, you have to find out what exactly you are using it for. When it comes to the drum kit, and I have a 12-channel drum kit, so you need 12-channel 'snakes', which can directly come to the drum kits. Deploy in such a manner that you can easily rectify the problem.

Achieving '90 Minutes In & 90 Minutes Out:

Luca: I was thinking how to achieve 90 minutes in and 90 minutes out.

Sancheth: I think we should start from the beginning – from loading out of the warehouse.

Luca: Yes, the idea to achieve such an incredible timeline compared to how many things on a stage, I think we are now seeing a big decrease in the number of ? running back and forth on the stage to the stage box and from the stage box to the Front of House, so considering the future – with the fibre and other technologies – the cable will be less and less and less, but from now to the future, what must be considered is the mindset change in the technician. So, the things people should go and see is how to optimize all the processes, from the warehouse to the stage, to have a scalable system that can be replicated at every event.

Sancheth: What I would suggest to vendors here in India is to at least have their mic racks set up prewired inside, so that you just have to give one power to your mic rack or your IEM and you are not wasting individual time connecting each and every power chord to each and every receiver or transmitter or an IEM rack or an amplifier.

Vishrut: This is how we design in Mega Sound. To achieve that design in a less amount of time, we design in such a way that we just have to connect the power and the signal and everything works on its own. How can this be achieved? You have to trust your equipment, you have to perform proper maintenance for the equipment, because when you go to the shows with a very tight schedule, and your equipment isn't working, you don't have any other backup plan. So each and every instrument has to be properly checked once the show is over. Then you can multiply all the racks into multiple racks. So, no matter how many racks you are deploying, you just have to connect the power and that's it.

The Significance of Gear Maintenance:

Sancheth: I think, in this case, education is an important topic. If there is anyone here who wants to make a rack and doesn't have an idea on how to get it done, they can always get in touch with us. We will always help you on how to design a flight case with everything inside it.

Sachit: Yes, that's right. I think in general, education about how to prewire stuff, how to maintain your gear, is important. I think gear maintenance starts right at the warehouse. With the kind of events that are happening back-to-back for vendors, for engineers, for technicians, it demands a lot of running. You have to finish one event and move on to the next.

Sancheth: That is still okay. But having proper racks and proper flight cases for your speakers is vital – you cannot take one speaker after the other inside the venue. That is not going to work. Doing back-to-back shows is not a problem, but how are you going to achieve doing that with ease?

Vishrut: There is one more important thing to keep in mind while designing the racks. They need to be robust and road-friendly, because the roads here are very bad. The equipment can get shuffled in the trucks. So, if the racks are designed bad-

ly, with non-shocking absorbents, they will deliver equally bad results at the shows if something goes wrong.

Sachit: Correct. Maintaining your gear and the allied accessories that come along with the gear, be it cables, flight cases, etc, is important. They need to be so robust that they take the beating. Then '90 minutes' is possible. Because you are just going to set up, plug in, and be sure that when you go live, it is all going to come alive.

Luca: It does give us more time to sound check as well as check up on all the configurations inside, but just thinking about how difficult it is if something bad happens on stage at the venue. If something is not working, you have to troubleshoot everything, you have to find the right problem, you have to fix it in a dirty place, and work in a very harsh environment, which is a real problem. Also, configuration of the RF, the rack – with the right frequency, already separated, already done to be deployed as a good backbone which carries the signal, tested in-house. One thing that I always did was to carry a separate box at all times to put all the damaged things on site so that I can isolate them, and the next time, it runs separately. But it is good advice to keep all the damaged things apart, always.

Vishrut: In my case, we have created a group called, 'Maintenance Group'. Whenever something goes wrong, we have to click a picture and send it to the group, and any particular action on the problem has to be taken in the next two days.

Going Beyond '90 Minutes In & 90 Minutes Out':

Sachit: Basically, you just create a SOP and just pre-prep all these things in the warehouse. That's how life becomes much easier. Things are much more robust. Then it will be 90 minutes in and 90 minutes out.

Sachit: So, if I have to summarize from the beginning, looking at things from the warehouse standpoint, maintenance is something that is very important. Making sure that you have the right accessories for the gear, your gear is in the right condition, you crew is educated when you come at the show so your runtime and setup time becomes faster, using the right cables, good quality cables so that you reduce the chances of mistakes happening on site and thereby, having things go faster. This is where we are at right now. When it comes to setup on stage, using more number of longer 'snakes' than single cables to set up your show will make your stage time quicker. Tell me practically, can we do this in 90 minutes?

Vishrut: We can do this less than 20 minutes. Because now we can make good cables and good racks. But people are not updating themselves with new technologies, which can reduce stage time. Right now, we can patch an entire 60-channel band in less than 10 minutes and do a changeover in less than 5 minutes.

Sancheth: We have to do it regularly. When you are doing a corporate show, once the artist's sound check is done, the artist wants the entire stage, the LED, and other things, to be cleared. How will you achieve the task of moving the entire band out of the stage and get everything back onto the stage again once it is time to perform, with only 15 minutes on your hand?

Sachit: Sancheth, do you remember the show that we did with Abhijit Sawant?

Sancheth: Yes, this is exactly what happened there. The only ask from the client was – 'Will you be able to remove everything and put it all back on in just 15 minutes'? We said yes and got the job. And in the end, we were able to deliver what we promised.

Vishrut: What we do is we patch everything. But now, we have shifted from the XLRs. The XLR is only from the mic to the patch bear. Now, we are running all the CAT5 cables just by plugging a CAT pipe or catapults. All we have to do is label the CAT5, plug it, and we're good to go.

Luca: Recently, I received a request from a small production company making corporate, and we designed something very easy, because another thing I was thinking about is the importance of a good backbone between stage and Front of House. It is usually the messy part of the configuration and that's where you have to run every cable singularly. There was a configuration in our range, which two CAT6, two digitalign and one power. So, only the DMX goes back and forward, only the Dante goes back and forward, and we set up in 10 minutes. This is a complete configuration. Just open the boxes, connect everything with the connector, and since everything is prewired into a big console case, it's all done.

Sachit: Yes. I have seen one of the vendors running one single cable right from the stage to the FOH, which was running two lines of power for him on the other end. It was sending two CAT5 signals from the console back to the stage. I was amazed. If you actually look at the cost of the cables that the guy was running, it has now been reduced because he had to run two power cables, the connectors for both the cables, two audio cables, power for both the audio cables, two CAT5s, connectors for both the CAT5s, and a speedbreaker for the cable managers. Removing it and setting it up again is a 30-minute job and nobody wants to do it! But this guy managed to do it with a very thin cover on top. All he had was a box on one side with the ins and a box on the other side with the outs. So, such solutions are available with so many vendors across the board. All you have to do is go out

and educate yourself. If you just read the magazine that comes out every alternate month, that talks so much about these new technologies. All you have to do is read it and implement it.

Vishrut: There was a time when we used to do a complete rig setup, which took us around three to four hours. Now, I can proudly say that we can do it all in probably less than half an hour, with signal routings and everything.

It All Begins At The Warehouse:

Sancheth: Once everything has reached the venue, setting up a speaker doesn't take time. It is pretty easy. In fact, the rigging of a speaker is the easiest part. It hardly takes any time. The time consuming element is the cabling – how you lay the cables, keeping it all neat because you don't want the client coming in and criticising you for it.

Vishrut: Everything can be pre-configured in your warehouse.

Sachit: Does anyone here pre-prep in the warehouse, put everything in writing, and then plan everything elaborately?

Sancheth: Yes. We actually make a list of the amount of cable that is going for a particular show. It is all calculated. The shows happening in Bombay are happening in ballrooms, so the crew already knows the layout of the ballroom. So, the kind of setup or cabling that has to be done is already embedded into them. Nobody goes and tells the crew how to do it. By the time I reach the venue, this is already done. It all boils down to training them by taking them for a few shows and telling them how it is done. If you are talking about bigger shows, we have to sit and decide how it needs to be taken care of.

Sachit: You do the pre-designing and pre-paperwork, but you do it early out in the warehouse. You draw it down and say that this is where you run this cable, this is where you run that cable, etc. The same thing applies for lighting and LED as well.

Vishrut: I think we should have some SOPs in place. Because when you depend on your guys, then they may mess it all up.

Sachit: So, create a procedure and run based on the procedure. So, does it work on lighting and video as well?

Vishrut: I can say yes for video, since that is a crucial part of projection, for which you have to make racks.

Behind The Scenes At A '90 Minutes In & 90 Minutes Out' Setup:

Sachit: We spoke so much for so long about coming in within 90 minutes, and now it looks like this is clearly possible in less than 90 minutes as well. How do we get out of a place in 60 minutes? I will come back to my question of how to roll cables, because at the end of the day, you will still put down a lot of cables, but who is going to roll them?

Sancheth: Obviously, the technicians have to do it. There are some really nice videos on how to wind cables in a proper manner, so that, how, at the next show, when you are unwinding the same cable, it won't get tangled. There are ways to actually wind your cable. If you go on Youtube, you can find the right help.

Sachit: What about the reels? Do you advocate for reels?

Sancheth: For longer cables, yes, you have to use them.

Sachit: I don't know if people know about Eureka Forbes, a company that makes vacuum cleaners. If you will see one of their old vacuum cleaners, the power cable needs to be pulled out from the cleaner, and there was a button there. All one had to do was press the button and the cable goes inside. I always wanted to open it up and make a similar box for all the mic cables.

Sancheth: I can't recall the name of the company, but one of the company's products was there at the PALM Expo with one of the distributors. It was a 'snake' of eight or twelve, and with the press of a button, the cable automatically winds itself.

Vishrut: But the disadvantage here is that if you run the cables on the cable manager with lots of cable and you press that button, your connector will be left in its original place and the cable will come back to you.

Sachit: I think cable winding is a very crucial part of the entire process.

Sancheth: There is actually a way to do it. If people actually follow it, they will spend less time unwinding it and the life of the cable will be much longer.

Vishrut: I have seen most rental companies outsource their labour. The labourers do all the setup, bind the cables, etc. I believe the labourers are just to load and unload the stuff. The rest of it has to be taken care of by the technical crew, because labourers don't care about the cost of the cables.

Sachit: I think this is going to be a predominant issue in India because we don't have venues that are designed to… if you take Udaipur as an example, the palaces were built 700-1000 years ago. The size of the boxes we deploy there keeps going up and the complexity of the shows have doubled. If you look at an older digital console, the footprint was literally small and today, if you look at a DiGiCo SD10, the

footprint is so huge and taking it inside the venue is a task in itself.

Vishrut: The biggest challenge that we face while doing shows in Udaipur is logistical in nature. You get a very limited time period to put the entire system in place. Sometimes, I get the venue at 9:00 in the morning and I have to get the band ready by 2:00 PM in the afternoon.

Sancheth: Yes, in those 90 minutes, event managers also play a crucial role. They need to give the vendor a proper call time. Most of the time, the event manager gives the same call time to everyone, right from staging to sound. So, everyone reaches the venue at the same time. It is chaos from that moment, because the lighting and trussing teams have to wait till the stage team finishes their part. In that case, a 90-minute setup is tough. I think it's better that the rental companies ask the event managers about the schedule of the stage, sound, lighting, and trussing teams.

Sachit: So, it is a communication gap. A lot of communication needs to happen from the sales end of both the companies. Also, what needs to happen in India is, as service providers, we need to put our foot down in certain things. We need be very clear, if something is going to take 'X' amount of time, communicate clearly.

Vishrut: I remember something similar that happened to me around two or three years ago. We were putting up a show for Prime Minister Narendra Modi, covering 3000 ft. area, which would accommodate around 50,000-60,000 people. We had planned a five-day setup, and till the fourth day, it was raining heavily. We couldn't even open our equipment cases. The show was scheduled on the 10th of a particular month, and we started setting up our equipment on the 9th of that month. In a single day, we deployed 16 delay towers with every single cable. We worked for 72 hours, deployed the system, checked the system, did the rehearsals, executed the show, and packed up.

Sachit: So, your 90 minutes can keep on multiplying based on the scale of the show.

Sancheth: Yes, exactly. You cannot take every show into consideration for the 90-minute timeline.

Sachit: True. The '90 minutes in and 90 minutes out' was just a catchy phrase line. The idea was that, in the scale of events, it should take minimal time and deliver the most optimum output. The optimization of how well you can maintain your gear, how well your crew is educated, and how well can you give the best results to the client.

Vishrut: You can have the best equipment, but without the right knowledge, you will still fail. I have seen lots of people brush their consoles roughly after the show is over. What they actually doing is putting the dust in the faders and blocking the faders. A better way to do this is to air blow the dust away and clean the console properly. Next, when you pack up the consoles, the console should be on the upside and the fader should be on the top notch. These small things make a huge difference when it comes to running a show.

Sachit: So, I can now comfortably say that within 90 minutes, we can all set up a good show.

Vishrut: In 15 minutes!

Sachit: In 15 minutes! Now, we have come down. Next year, this might go down the 5 minutes.

Vishrut: I remember one more experience. When I was a part of SOUND.com and did the HARMAN Live Arena, we got five minutes to do a changeover.

Sachit: Festivals are a different ballgame altogether. I learnt a lot when we were doing Supersonic a few years ago. At the time, I really went out of my way and researched about multi-pin cables, and we made a lot of them too.

Sancheth: At that show, we actually planned how to do things. All our stage boxes were colour-coded and it was pre-decided as to which box will go to the left side and which one will go to the right side. Everything was planned to perfection.

Sachit: We also divided the whole stage into multiple parts for various teams. The drums were handled by one drum technician and one stage technician. Same for the guitars, same for the vocals…

Sancheth: So, there was one guy for RF, one guy for the console.

Vishrut: I deploy a maximum of two crew members for stage patching, because too many cooks spoil the broth.

Sachit: Yes, less crew members, but more knowledgeable staff. I also think that there's some superb work being done by a lot of professionals in our industry with regards to education. Yesterday, I heard Dr. Rajesh Khade, who is doing a brilliant job. Niranjan is also doing a brilliant job with the Audio Academy. There are also so many new schools opening for this purpose. But I think that the onus is also on the owners of rental companies – to learn and to educate. A lot of people think that they can't learn because education is not accessible. That's where the owners of rental companies who are hiring professionals should start investing on education.

*To view the complete conference session go to **Youtube PALM Expo India***

D&B APPOINTS MARCO BAUMGÄRTNER AS NEW ASIA-PACIFIC TERRITORY MANAGER

d&b audiotechnik announced the appointment of **Marco Baumgärtner** to the role of Territory Manager for the Asia-Pacific (APAC) region. Baumgärtner has been with d&b since 2017, and previously held the position of Director Corporate Development, based at the company's headquarters. Before joining d&b, Baumgärtner worked in a range of corporate and consulting roles and brings his extensive experience in the areas of business development, transaction services and strategy execution to the region.

In the role of Territory Manager APAC, a primary manage-ment role for d&b's future operations in the APAC region, Baumgärtner will take responsibility for the company's subsidiary in Singapore as Managing Director and oversee operations across Southeast Asia, South Korea, Australia, New Zealand, and Japan.

The appointment of Baumgärtner signifies d&b's commitment to APAC, supporting the growth of significant new business opportunities across both developed and emerging markets. This enhanced focus on the territory aligns seamlessly with the escalating demand for immersive experiences and the swift adoption of d&b Soundscape across the entire region.

"We are delighted that Marco has

Marco Baumgärtner, Territory Manager for APAC, d&b audiotechnik

moved into this important role. With his leadership skills and commercial experience, we know he will bring new perspectives and drive to APAC. His track record with d&b speaks for itself, and we anticipate further growth under his leadership," said **Phill Coe**, Vice President of Global Sales.

Marco Baumgärtner, Territory Manager APAC, stated, "I am very excited to lead our APAC Team and the further development of the territory. We have a strong presence in the region, thanks to highly motivated experts who work closely together with our dedicated partners. Together, we will continue to provide uncompromised sound experiences through our market-leading technology.

K-ARRAY ANNOUNCES NEW APPOINTMENTS; STRENGTHENS GLOBAL BRAND DEVELOPMENT

K-array makes a series of new appointments aimed at strengthening the brand's development on a global scale. Internally, **Francesco Maffei, Simone Rossoni, Daniel Strasserra** and **Lorenzo De Poi** are adopting new and strategic roles within the company, whilst well-known industry Italian and Swiss markets.

With 16 years of experience working globally with K-array, Daniel Strasserra will take on the role of Global Business Development Manager, with a broad focus across all vertical market sectors. Within previous roles in the sales department the K-array family is Lorenzo De Poi, who will be heading up Brand Management across both the K-array and KGEAR brands. De Poi has been instrumental in growing the prominence of KGEAR in his previous role as Global Sales and Marketing Manager and this new role will fuels our passionate and unique approach and I'm excited to share this spirit with our clients at ISE."

Finally, Vincenzo Borrelli, whose career in professional audio included several years as Regional Sales Manager at d&b audiotechnik, joins K-array to drive business develop-
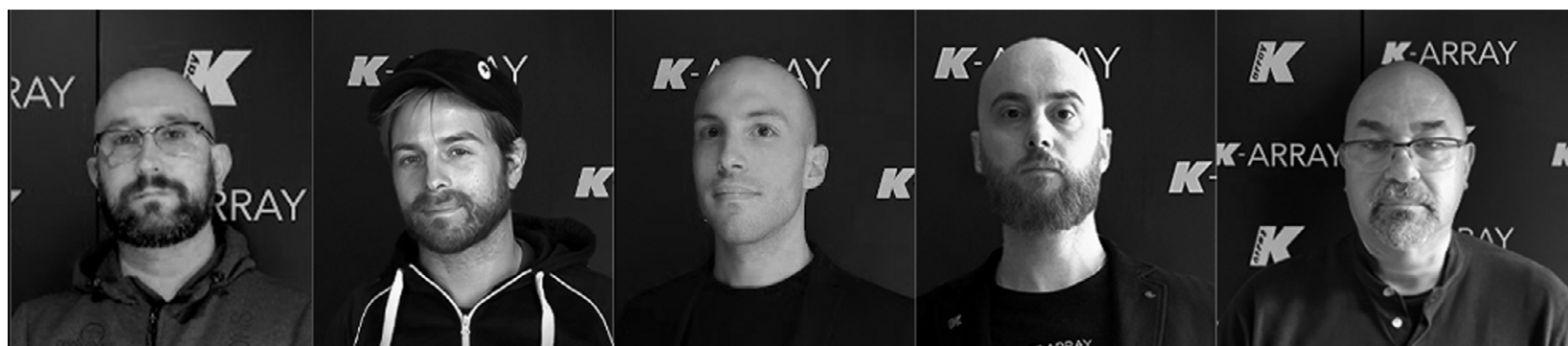
| Francesco Maffei | Daniel Strasserra | Lorenzo De Poi | Simone Rossoni | Vincenzo Borelli |

name, **Vincenzo Borelli**, joins K-array for the first time in the role of Business Development Manager focused on the live events market.

Francesco Maffei, formerly Area Sales Manager EMEA, has been appointed to the new role of Sales Director. In this role, Maffei will oversee commercial efforts across all regions.

Also joining the sales team, Simone Rossoni will be responsible for driving growth and providing comprehensive sales support in the and as a support engineer, Daniel has forged relationships with K-array partners worldwide, and this heritage will be pivotal in further developing the K-array brand in both new and existing markets. "I'm excited for 2024, where I'll be focused on increasing our impact on major projects, building relationships with international artists and DJs and growing our partnerships with rental companies," explains Strasserra. "It is sure to be another strong year for K-array."

A further appointment from within focus on cultivating the corporate identities of the two distinct brands. "Since 2020, I've been responsible for launching and maintaining our new brand, KGEAR, contributing to its remarkable success and the K-array group's overall growth," reflects De Poi. "As Brand Manager for K-array, I'm eager to leverage my knowledge and passion to consolidate both brands for sustained growth through a "one ecosystem" approach. Our vibrant family spirit, shared with our exceptional team and cherished customers, ment within the live events market. "My role at K-array will take many paths, supporting existing partners, identifying and creating new associations and looking for opportunities in additional sales segments," explains Borrelli. "The vision is to discover partners that want to move forward with K-array's technology-led offerings. K-array has afforded me this opportunity to work with an innovative audio manufacturer and I can't wait to introduce the brand to as many companies as possible."

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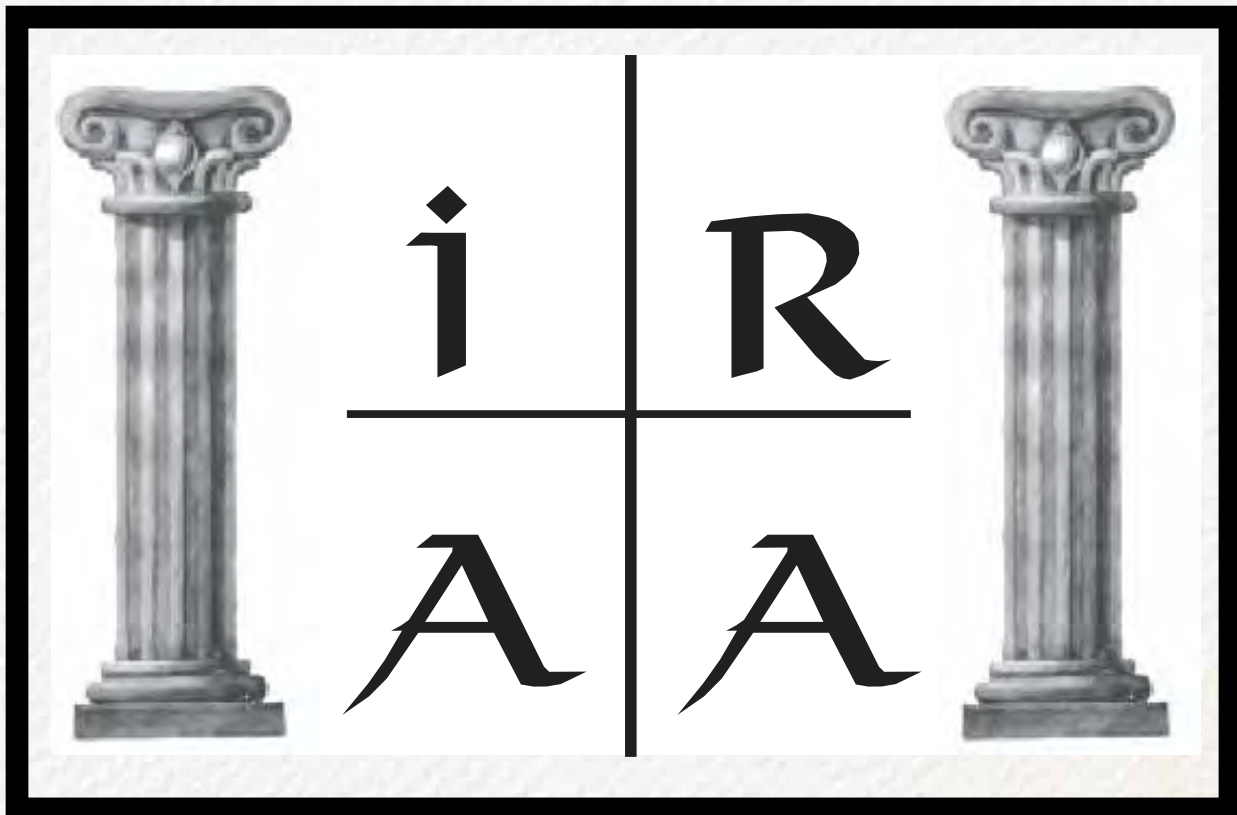
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By

Hyve

VISIONHIRE ENTERTAINMENTS SETS THE VISION FOR DENON DJ IN INDIA

Unveils Experience Centres & Organizes Workshops For DJs Across The Country

Visionhire Entertainments (VHE) was appointed as the official distributor of Denon DJ, Rane DJ and SoundSwitch in India, marking Denon DJ and Rane DJ's official re-entry into the Indian DJ market.

"We are very excited to be partnering with VHE, a company which has been at the forefront of promoting DJ products in India for several years now. We appreciate their vision and feel this is the right match for Denon DJ to re-establish its rightful presence in the Indian market", said Mark Spies, Director of Sales (Asia Pacific) for inMusic Brands.

Siddharth Lulla, Managing Director VHE, comments, "Our aim of partnering with Denon DJ and Rane DJ is to bring choice back into the Indian DJ market by providing the community with products that are far ahead of the competition in terms of technology, being future proof with regular feature updates and ensuring the go to market strategy is innovative and approachable for DJs to truly appreciate the Denon DJ offering."

Denon DJ's product range focusses primarily on powerful, self-contained, stand-alone products. From the professional, world-touring SC6000 media players to their popular all-in-one systems (such as SC Live 4 and recently relaunched Prime4+) as well as the super-portable, battery-powered Prime Go – Denon DJ products are designed by DJ's, for DJ's.

VHE, with operations in 8 cities around India has a strong and well-established partner network and are prominently placed in the DJ industry in India, marketing other marquee brands like UDG GEAR, DECK-SAVER, PHASE DJ & myVolts which all cater to DJ's and Producers.

Experience Centres

In order to change the way

A glimpse of the Denon DJ Coimbatore Workshop, held on 21st November, 2023

A still from the Denon DJ's Bangalore Workshop, held on 9th October, 2023
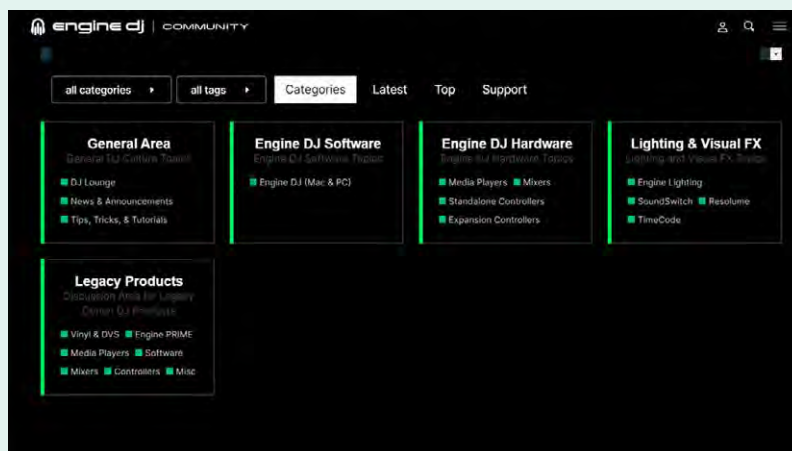
the DJ industry is perceived in India, VHE has set up 16 experience centers across the country. Major cities like Chennai, Hyderabad, Bangalore, Mumbai, Goa, Delhi and Kolkata house Denon DJ experience centers, where DJs get to have a hands-on experience with Denon DJ gear. Revolutionizing the way DJs test and buy equipment, these experience centers are becoming the new norm of selling gear in the DJ industry. With more experience centers now set to pop up in more cities, aspiring DJs now get access to a touch-feel experience with top-notch DJ equipment, which is the case worldwide.

Denon Dj Workshops

To promote the Denon DJ products, VHE, in a collaborative effort with their partners, have conducted 10 workshops in a span of three months within the country. A comprehensive list follows:

- Chennai - 21st September 2023
- Bangalore - 9th October 2023 * 6th December 2023
- Hyderabad - 10th October 2023, 7th December 2023
- Kochi - 22nd November 2023
- Coimbatore - 21st November 2023
- Delhi - 5th December 2023
- Mumbai - 14th December 2023

The workshops had great turnouts and DJs were eager to checkout the new Denon DJ consoles. The DJs got to have a live hands-on experience of the Denon DJ Standalone systems (Prime 4+, Sc Live 4 and Prime Go).

The Faculty of the workshops were highly experienced and well-known DJs, such as Clement Dsouza, Amit Shah, DJ Mash, and Siddarth Raheja. The Delhi workshop featured the introduction of the Rane One controller to India, with DJ Skip

VISIONHIRE ENTERTAINMENTS SETS...

giving a flamboyant showcase with it. The Mumbai edition was graced by the presence of one of the most renowned DJs of India, Spin Doctor. He praised and applauded Denon DJ and Rane DJ consoles

The Launch of the Engine Community

The Engine community is a forum where DJs who use Engine products can share their suggestions and drive the community towards change.

Here, DJs can post on the forum about issues they face with their gear, features they would like to have in the next update, or even solutions for other DJs that drives the developers to constantly update and innovate the Engine OS software to match the needs of the community. This gives the DJs a feeling of being heard and builds the relationship and loyalty of the user towards the brand.

With these initiatives, Denon DJ, now launched in India, aims to bring a positive change in the Indian DJ industry.

ALPHATHETA INTRODUCES OMNIS-DUO ALL-IN-ONE DJ SYSTEM & WAVE-EIGHT

OMNIS-DUO Portable All-in-One DJ System

AlphaTheta announced the release of the **OMNIS-DUO**, a portable setup for DJ parties.

Built to be fully portable, the all-in-one DJ system is lightweight and compact enough to fit in a good-sized backpack. It's easy to set up and enjoy an authentic DJ experience in any location – even outside – thanks to the Bluetooth/MD audio output function, battery power, 2-deck + mixer interface, and touchscreen.

The OMNIS-DUO features a Bluetooth audio input function so anyone can bring their phone and play their favourite track. All the unit's effects can be applied to the Bluetooth audio and there's a choice of other input options. Its design adopts a distinctive indigo colour, inspired by the versatility of denim jeans, so it looks at home in professional venues and casual environments.

Other features:

- 8 types of Beat FX
- 6 types of Sound Color FX
- 8 Hot Cues per deck
- Dedicated Beat Jump buttons
- Dedicated Beat Loop controls
- 2 Mic inputs
- Booth output (combined with master RCA)

WAVE-EIGHT:

Alphatheta released WAVE-EIGHT, a portable wireless DJ speaker that enables users to set up effortlessly and perform in places never before imagined.

With its SonicLink ultra-low-latency wireless technology, users can set up quickly and easily, while also going DJ cable-free – which has never been practical before due to the sound delay when using Bluetooth/MD

OMNIS-DUO

features.

Users get professional sound quality from the WAVE-EIGHT, even when using it outdoors, thanks to the speaker's high level of sound pressure and rich bass reproduction. Users can combine multiple speakers wirelessly to suit the size of the party and, with easy-to-understand sound modes

WAVE-EIGHT

available at the flick of a switch, they can instantly find the right musical vibe. The WAVE-EIGHT also comes with an 8-hour battery life and is waterproof with an IPX4 rating. With built-in casters and an extendable handle, it's easy to transport the speaker from one place to another.

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