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North India

Anurag Khanna,
NSM - VMT Enterprise

M | +91 865 786 4921
E | anurag.khanna@vmt.in

East India

Anindya Bhattacharya,
DGM - VMT Enterprise

M | +91 865 786 4920
E | anindya@vmt.in

West India

Kekul Sheth,
NSM - VMT Distribution

M | +91 865 786 4922
E | Kekul@vmt.in

South India

Rangarajan N,
DGM - VMT Enterprise

M | +91 865 786 4931
E | rangarajan@vmt.in

West India

Mayuri Chavan,
Head of Sales - VMT Retail

M | +91 865 786 4933
E | info@vmt.in

Central

Prem Salve,
Head of Sales - VMT Retail

M | +91 865 786 4940
E | prem@vmt.in

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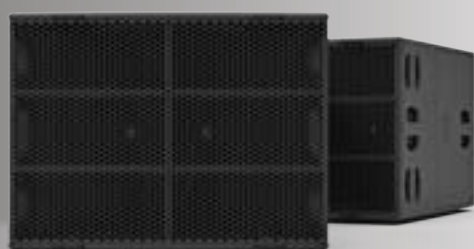
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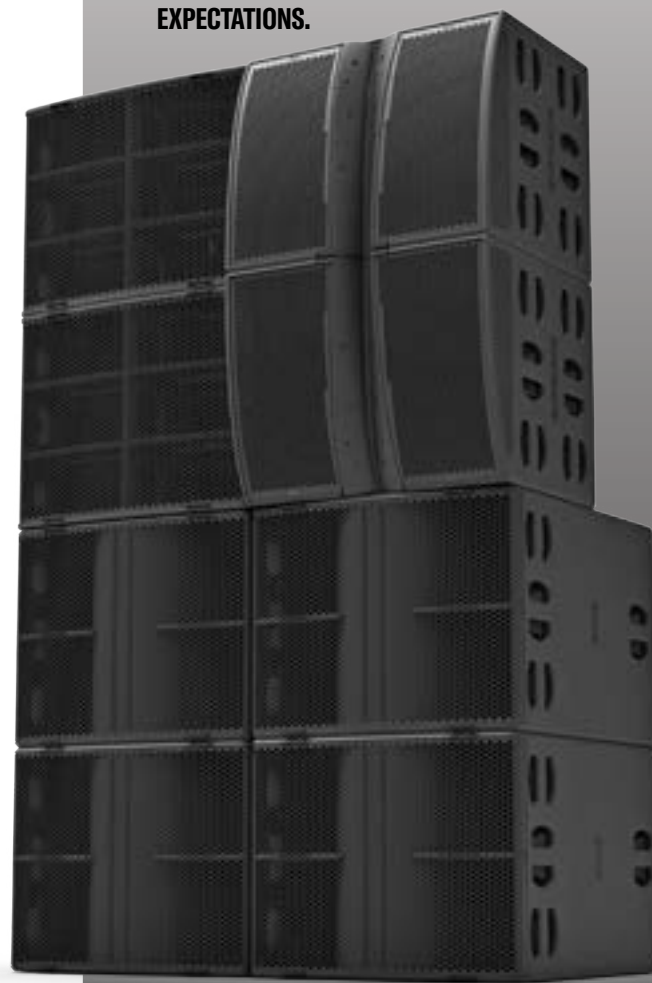


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PALM AV-ICN

EDITOR-IN-CHIEF

Anil Shiv Raj Chopra
achopra@palmexpo.in

EDITOR

ADVERTISEMENT SALES

Smita Rai
smita.rai@hyve.group
Mob: +91 92893 68200

CONTENT MANAGER

Shanaya Sequeira
shanaya.sequeira@hyve.group
Mob: +91 98920 75712

Ritika Pandey

ritika.pandey@hyve.group
Mob: +91 96164 96912

GRAPHIC DESIGNERS

Peter Pereira
peter.pereira@hyve.group
Mob: +91 93113 78568

Moiz Lokhandwala

moiz.abbas@hyve.group
Mob: +91 98204 31229

WEB DEVELOPER

Fauziya Aansari
fauziya.ansari@hyve.group
Mob: +91 88797 44991

DISTRIBUTION

Komal Jadhav
komal.jadhav@hyve.group
Mob: +91 93113 78566

CONTRIBUTORS

Viraf Pocha, Lighting Designer
Jon Burton, Sound Engineer

**CONTENT PRODUCTION & RESPONSE
OFFICE**

Hyve India Private Limited
(CIN no. U92490DL2004PTC124343)
7, Workafella,
AK Estate, Off Veer Savarkar Flyover,
Next to Radisson Blu Hotel, SV Road,
Goregaon (West), Mumbai – 400062.
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8 Ω POWER OUTPUT

4 X 500 W

4 Ω POWER OUTPUT

4 X 700 W



8 Ω POWER OUTPUT

4 X 700 W

4 Ω POWER OUTPUT

4 X 1200 W



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DISPLAY**



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AVID UNVEILS VENUE 8.0 WITH NEW E6LX-256 ENGINE

Avid has announced the release of **VENUE 8.0**, its latest update to the VENUE live sound software platform, alongside the introduction of a new flagship engine, the **VENUE | E6LX-256**. This significant upgrade brings a suite of expanded features aimed at improving performance, flexibility, and workflow for live sound engineers managing large and complex productions.

At the core of the VENUE 8.0 update is the debut of the new VENUE

| E6LX-256 engine. This high-performance engine pushes the boundaries of live sound processing with an expanded channel count, offering up to 256 inputs and 192 output busses. Designed to handle the demands of the most intricate live events, the E6LX-256 provides users with increased headroom for routing, mixing, and creative application.

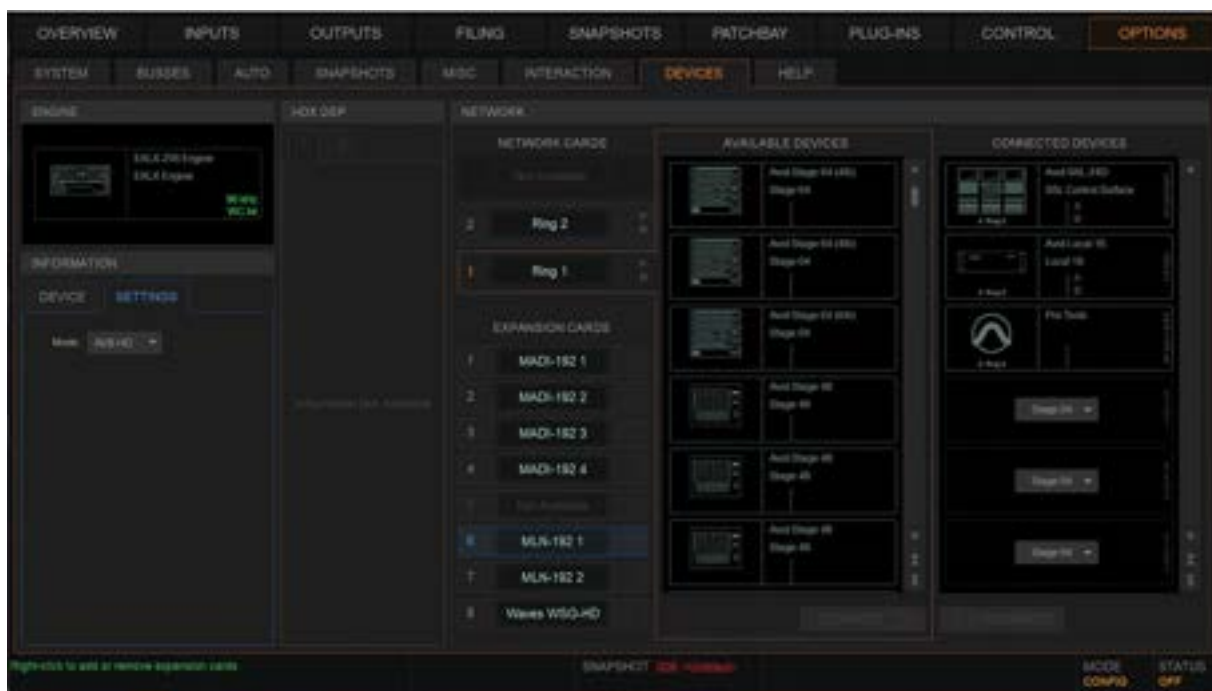
Additionally, a firmware update to the MLN-192 expansion card enables a new AVBHD mode, supporting up

to 216x216 channels at 96kHz of AVB recording through a single Ethernet connection to a supported computer.

The Event system within VENUE continues to evolve with version 8.0, offering expanded automation through a broader array of Triggers and Actions, many derived from the Options tab. A particularly noteworthy addition is the "VCAs Trim Aux Sends in SOF" feature, which allows engineers to toggle the use of VCAs to trim mixes in Sends on Faders.

To improve workflow efficiency, the update introduces Smart Duplicate, a tool that simplifies the creation of events. This function enables users to duplicate any Trigger, Action, or full Event, while intelligently iterating variables. For example, duplicating a trigger that adjusts the colour of Group 1 will automatically create a trigger for Group 2, streamlining setup during programming. Avid has added the ability to assign any output as the Mix to Monitors for both Monitor A and B buses. VENUE 8.0 introduces AutoMix, a long-anticipated addition to the platform. Available on all groups, AutoMix uses VENUE's internal bus-to-bus routing architecture to create weighted automixes. Metering for monitor buses and VCAs, providing better at-a-glance feedback during operation. Ability to set all members of an Aux to Pre or Post, improving mix consistency. Colour-matching of output members, aiding visual organisation of outputs. Expanded Group View, offering clearer insight into group composition and structure. A restructured navigation system on CKMs, optimising access to mixes and group members during shows.

As live productions continue to grow in complexity, VENUE 8.0 positions itself as a robust and forward-looking solution for professional sound reinforcement.



With the release of VENUE 8.0 and the E6LX-256 engine, Avid delivers a comprehensive update catering to new demands of live sound production

NX AUDIO LAUNCHES NEW DGN SERIES CLASS D AMPLIFIERS

The demands of the Indian professional audio industry for more power and energy efficiency have not gone unheard. The new **DGN Series Class D SMPS Power Amplifiers** are Nx Audio's next answer

to the market. Beginning the series is the **DGN9.2K**, offering a superb 4600+4600W RMS @ 4 Ohms with phenomenal Damping Factor > 5000.

Along with this, it has Audiophile Slew Rate of 50 v/us, Low Total Harmonic Distortion (THD) of <0.5% from

1W to full power and a high signal-to-noise ratio of >110 dBA, allowing it to handle incredible levels of power. This is enhanced by the use of Gallium Nitride (GaN) technology, as Gallium Nitride mosfets offer a lot of advantages in comparison to silicon. GaN has

higher bandgap of 3.2 electron-volts (eV) as compared to silicon's bandgap of 1.1 eV, which gives GaN various electrical properties that equip it for higher power applications. GaN's switching energy is more than 50% lower than silicon, which directly translates to lower losses in the PFC stage. GaN devices can be made denser circuits, which means more devices can be made from the same Chip.

Maintaining a competitive price, it's only the first of Nx Audio's new DGN Series reinstating their commitment to pro-audio greatness.



The DGN9.2K is lightweight and provides extremely high power with superb energy efficiency



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MARTIN AUDIO OFFERS PRECISION AND POWER FOR ALEGRIA 2025

Alegria, The Festival of Joy, returned to the **Pillai Group of Institutions** in Mumbai for its 2025 edition, once again drawing an audience of over 50,000. Known for its expansive scale and electric atmosphere, Alegria is a staple on India's college festival circuit, combining top-tier music performances with vibrant student engagement. This year's headline acts included **Raghav Chaitanya**, **KR\$NA**, **DJ Chetas**, and **Lost Stories**, each delivering high-impact sets that spanned

genres and moods.

Ensuring audio fidelity for an event of such magnitude was entrusted to **Superwaves**, who deployed a **Martin Audio** sound system tailored to the venue's demands. The setup was anchored by **Martin Audio's Wavefront Precision Longbow (WPL)** line array, selected for its power, clarity, and ability to handle dynamic live performances across a large audience area.

The WPL line arrays were flown at the Front of House (FOH) position, delivering consistent, articulate sound coverage across the breadth of the

festival grounds. The low-end was reinforced using **Martin Audio's SXHF218 hybrid horn/reflex flown subwoofers**, which provided the necessary punch and presence for bass-heavy sets. To further enhance low-frequency impact, SXH218 subwoofers were positioned in both centre and end fire configurations, maximising output and definition.

To address the requirements for side fill and on-stage monitoring, the team deployed W8LM mini line arrays for Side Fill coverage. These compact enclosures delivered balanced output

was a sonic experience that kept the crowd fully immersed. Whether it was the lyrical intensity of **KR\$NA**, the high-octane Bollywood mixes from **DJ Chetas**, or the pulsating electronic drops of **Lost Stories**, the sound system responded with nuance and power.

Gurvinder Singh Saini, Director of **Superwaves**, shared his reflections on the project: "Delivering high-quality sound for Alegria 2025 required precision and power. The setup provided exceptional coverage, ensuring an immersive experience for every attendee. With the right expertise, we executed a flawless show that elevated our brand's reputation in live sound."

With technical expertise from **Superwaves** and the deployment of **Martin Audio's** high-performance WPL system, Alegria 2025 set a new benchmark for audio delivery at large-scale college festivals. The event not only met the expectations of a high-energy crowd but also demonstrated how carefully integrated audio systems can elevate live performance to a professional standard.



Superwaves deployed W8LM mini line arrays and **Martin Audio** products for precision at **Algeria Festival**

DAS AUDIO INTRODUCES MARA FOR PROFESSIONAL AUDIO APPLICATIONS

DAS Audio has unveiled **MARA**, a new cardioid self-powered line array system, expanding the **ARA series** alongside the **LARA** and **SARA** systems. Designed for medium to large-scale events, **MARA** integrates cardioid technology with a symmetrical design, delivering 4200 W RMS and a MAX SPL of 148 dB.

MARA features custom-engineered components, including two 10" low-frequency drivers, two 8" mid-range drivers, and two 6" drivers in a cardioid configuration. A six-channel Class D amplifier with a switched-mode power supply and Power Factor Correction (PFC) ensures stable operation. The cardioid design provides rear attenuation of up to -12

dB between 80 Hz and 200 Hz, improving on-stage sound control and reducing unwanted emissions.

MARA-SUB, a self-powered cardioid subwoofer, incorporates a 21" front-facing speaker and an 18" rear-facing speaker with 4" voice coils. With **MARA** joining the **ARA series**, **DAS Audio** provides a full range of solutions. **LARA**,



the most powerful in the series, delivers 6000 W RMS and a MAX SPL of 150 dB for large-scale events. **SARA**, a more compact option, achieves a MAX SPL of 142 dB, ideal for medium-sized venues. **Javier Navarro**, CEO of **DAS Audio**, stated: "We are incredibly proud of the work accomplished with

MARA is supported by ALMA

the **ARA series**. We firmly believe that the technology, innovation, and performance of the **ARA series** will open many doors that once seemed out of reach."

All **ARA series** systems are supported by **ALMA**, **DAS Audio's** control and monitoring platform. **ALMA** features **DASaim**, which utilises **FIR filters** for optimised directivity and sound coverage, and **Health Check**, allowing users to assess system conditions through **NFC technology**. These features ensure reliable performance and simplify management for professional audio applications.

MARA reinforces **DAS Audio's** commitment to providing innovative, high-performance audio solutions.



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FSL PRO ELEVATES ITS GAME WITH DIGICO QUANTUM 338 CONSOLE

Over the past decade, **FSL Pro** has emerged as one of the formidable players in the professional audio scene in Odisha. What began as a small audio company catering to corporate shows has evolved into a full-fledged enterprise handling large-scale cultural, college, corporate, and government events.

Abinash Dash, who now leads the company, says, "This work intrigued me and I planned to learn in depth about this field and went to pursue sound engineering. After completing my studies, I came back and took over the company in 2018. We started doing cultural events, corporate and government shows. We started upgrading our system and this helped us in doing college shows and now FSL has reached new greater heights by adding 3 way sound line array like b and sound console like **DiGiCo Quantum 338** and **Allen & Heath dLive S7000**."

FSL Pro is now recognised as one of the leading sound companies in

Odisha. "FSL Pro is one of the best in Odisha and loved by many artist sound engineers for the smooth and properly managed shows by our qualified tech team," Dash adds. This reputation is bolstered by the team's focus on precision, efficiency, and the integration of high-performance gear.

One of the pivotal upgrades in FSL Pro's arsenal has been the adoption of the **DiGiCo Quantum 338** mixing console. Known for its advanced features and robust design, the Q338 is acclaimed as one of the most powerful and user-friendly mixing consoles in the industry.

"**DiGiCo Quantum 338**, is the most advanced and has excellent attributes sound technicalities. This has made it to stand above all other mixing consoles available in the market," Dash states. The Quantum 338's adaptable workflow supports both Front-of-House (FOH) and monitor engineers, making it ideal for the varied demands of FSL Pro's events.

FSL Pro primarily caters to concerts

and college shows, hosting a wide array of performers, including international artists. "We are into concerts and college shows, where we get to do shows for different artist from across the world. Most of the Singers love the efficacy of **DiGiCo Quantum 338** and the powerful features makes the show a grand success," says Dash.

The Q338 has garnered appreciation from both the technical crew and artists. "Quantum 338 are praised for their powerful features, efficient technology and user-friendly operation, and best packaged beast in the industry with efficient technology. **DiGiCo Quantum 338**'s workflow is well suited for FOH as well as monitor engineers," he affirms.

A key factor in the selection of the **DiGiCo** console was the support received from **Hi-Tech Audio & Image**, the distributor. "Hi-Tech Audio and Image explained the features of all the available models and gave us clarity in choosing this console which will fit our line of work," Dash

explains. He further notes, "It was a great experience working with Hi-Tech Audio and Image."

Rajan Gupta, CEO-Founder of Hi-Tech Audio & Image shares - "Investing in the **DiGiCo Quantum 338** is not just about upgrading gear—it's about elevating your entire rental business. We've seen how this console redefines workflow efficiency, sonic precision, and system flexibility. In today's competitive market, rental companies must offer cutting-edge technology that meets the expectations of top-tier engineers and touring acts. The Q338 doesn't just check those boxes—it sets new standards. It's a future-proof investment that ensures you stay relevant, competitive, and ready for the most demanding productions."

Adding to this, Managing Partner of Hi-Tech Audio & Image, **Nirdosh Aggarwal** says, "India's leading rental companies have embraced the **DiGiCo Quantum** series, setting a benchmark for audio excellence in live sound. Their trust and success stories have created a ripple effect, inspiring the next generation of rental companies to follow suit. We're proud to support this movement and are confident that with the Quantum series, our clients are equipped to deliver world-class audio solutions across every stage, every show."

With a strong foundation, a clear vision, and a commitment to staying technologically updated, FSL Pro continues to set high standards in the live sound domain. The integration of advanced systems like the **DiGiCo Quantum 338** further underscores the company's pursuit of excellence in delivering high-quality audio experiences.



FSL Pro's team with the newly acquired **DiGiCo Quantum 338**

SOUND.COM ELEVATES LIVE SOUND WITH INVESTMENTS IN KLANG TECHNOLOGIES

SOUND.COM is pushing the boundaries of technical excellence in turnkey audio rental solutions. The company, owned by **Warren D'Souza**, has built a strong reputation in the Indian live sound industry. This year, **SOUND.COM** has expanded its technological capabilities by integrating **KLANG** immersive in-ear monitoring systems into its inventory.

As part of this investment, **SOUND.COM** has acquired **DMI-KLANG** cards to complement its fleet of **DiGiCo consoles**. Additionally, the company has incorporated the **KLANG:konduktor** system, which enhances its ability to offer advanced spatial audio solutions across various console platforms. This move aligns with an increasing demand for immersive monitoring

solutions, both from Indian and international artists performing in the region. **SOUND.COM**'s adoption of **KLANG** technology is part of a broader commitment to enhancing the live sound experience. D'Souza has expressed satisfaction with how **KLANG** has been integrated into the company's operations. "In keeping with our tradition of naming our consoles and

rack-mounted equipment after Star Wars characters, the **Konduktor** has been christened '**Podracer**'."

With this integration of cutting-edge immersive monitoring technology, **SOUND.COM** continues to reinforce its position as a leader in the live audio industry, offering unparalleled sonic experiences for performers and audiences alike.

YAMAHA ADDS NEW MODELS TO DHR/CHR SERIES

Yamaha has added new models to its popular **DHR/CHR** range of loudspeakers. Offering a choice of two-way, bi-amped (DHR) or passive (CHR) models, the new **DHR/CHR12** and **DHR/CHR15M** bring

added flexibility to a series which can take a wide variety of live and installed applications to new levels of professional quality, accuracy and performance at a very cost-effective price.

The DHR15M and DHR12 models expand the DHR Series of middle-class powered speakers and are

equipped with a high-efficiency Class-D amplifier to achieve a maximum output of 1,000W. The DHR15M is a 15-inch model suitable for floor monitor applications, while the

DHR12 is a 12-inch model suitable for main applications and fixed facilities. The CHR15M and CHR12 models share the same enclosure and major components as the DHR15M and

DHR12 models and expand the CHR Series of passive SR loudspeakers. All four models are made of wooden plywood and have a polyurea coating that offers superior scratch resistance.

With this addition to the lineup, both the DHR and CHR series now include five models each, in addition to 10-, 12-, and 15-inch main speaker models and 12- and 15-inch floor monitor models, enhancing their ability to respond to diverse applications and installation situations.



BETA3 WAVELINE POWERED LINE ARRAY CHOSEN FOR JAIPUR LITERATURE FESTIVAL 2025

The globally celebrated **Jaipur Literature Festival (JLF)** once again lived up to its reputation as a confluence of literature, art, and music. This year, alongside thought-provoking discussions and literary excellence, the festival witnessed an outstanding audio experience powered by **Beta3's Waveline Series Powered Line Array**.

Held at **Hotel Clarks Amer**, Jaipur, from January 30 to February 3, 2025, the festival featured an array of esteemed personalities, including celebrated Poet and Lyricist **Javed Akhtar** and renowned educator and Author **Sudha Murthy**, Ex-Prime Minister of the United Kingdom **Rishi Sunak**, and **Infosys** Owner, **Narayana Murthy**. Their insightful sessions engaged audiences in an atmosphere of intellectual brilliance, enhanced by

pristine sound reinforcement from Beta3's cutting-edge audio solutions.

A key highlight of the festival was the electrifying performance by legendary Indian singer **Kailash Kher**,

whose soulful melodies captivated the audience. Ensuring every note and beat was delivered with clarity and impact, **Beta3 VX15A Powered Speakers** provided seamless amplification,

creating an immersive musical experience for attendees.

Beta3's Waveline Powered Line Array was the preferred choice for the main stage, delivering powerful, high-definition audio with exceptional coverage. Its precision engineering ensured that every session—be it literary discussions or live performances—was experienced with unparalleled sound quality.

With another successful event under its belt, Beta3 continues to set new benchmarks in pro audio solutions, reinforcing its presence in high-profile cultural and musical events. The Jaipur Literature Festival 2025 proved to be yet another testament to Beta3's commitment to superior sound, reliability, and performance in large-scale live events.



Beta3's VX15A Speakers and Waveline Line Array Series power the Jaipur Literature Festival 2025



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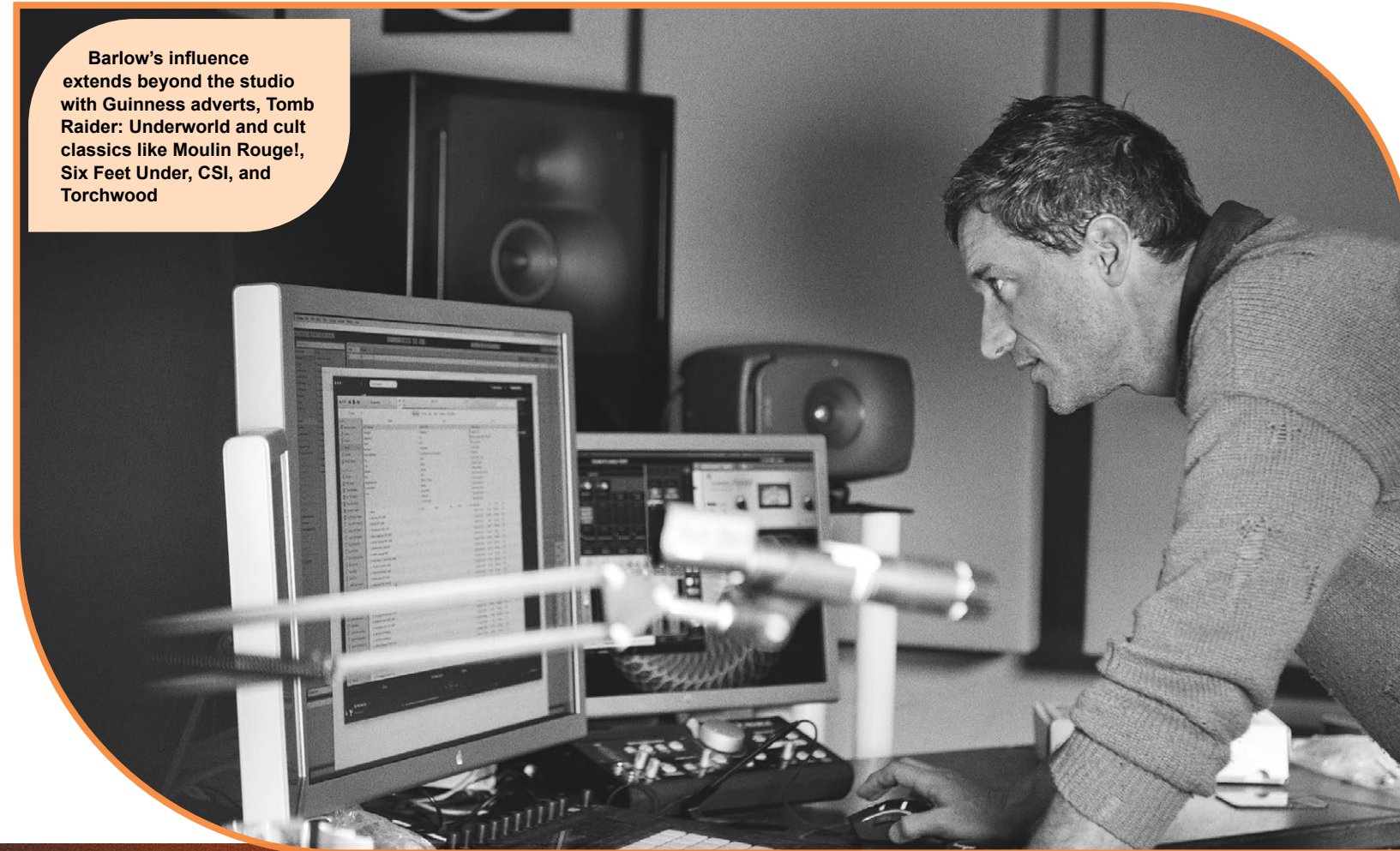
Can you tell us about your early days as a musician and what inspired you to become a record producer?

I've been fascinated by sound for as long as I can remember. My mum loves to tell this story about me as a toddler, pulling out all the saucepans and wooden spoons, setting up my own little percussion section in the kitchen. Apparently, I even urinated in one of the pans while drumming on it—which,

while not my proudest musical moment, does show a certain commitment to the performance!

I always knew I wanted to do something with music, but I wasn't the typical "I play guitar" kind of kid. I was more drawn to technology—keyboards, drum machines, anything that made sounds and did interesting things. That's kind of been the ongoing joke with Lamb: that I've always loved "things that do

Barlow's influence extends beyond the studio with Guinness adverts, Tomb Raider: Underworld and cult classics like Moulin Rouge!, Six Feet Under, CSI, and Torchwood

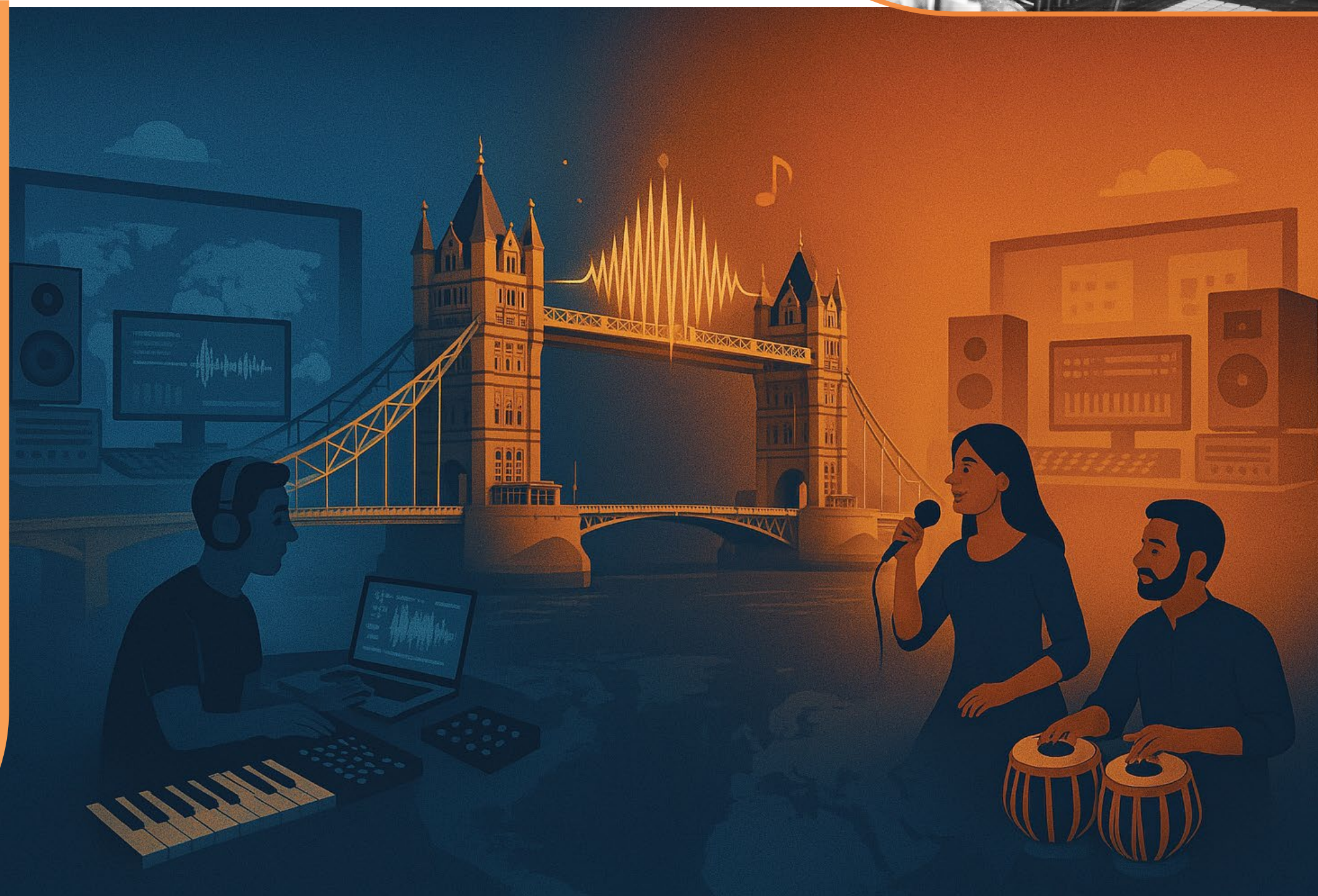


*Few artists straddle the line between innovation and emotional depth quite like **Andy Barlow**.*

*Best known as one half of the genre-defying duo **Lamb**, Barlow has built a reputation for crafting intricate textures laced with hypnotic rhythms, music that moves both heart and head.*

*In a rare tête-à-tête with **Anil Chopra**, Editor-in-Chief of **PALM Expo Magazine**, Barlow elucidates a path to realise Chopra's dream of building a vibrant bridge between the Mumbai and London music scenes.*

Along the way, he opens up about his creative process, and shares insights from his journey as both artist and producer.



things."

In my teens, I spent some time living in the States, went to high school there, and started going to a lot of live gigs. That's when I really caught the bug for live music. But even then, I didn't have a clear picture of what a record producer actually did. Looking back, though, I realise I'd been producing records for years without even knowing it.

It all became official when my friend Fin—who you might know as **Fink**—rang me up. His producer had pulled out at the last minute, and he asked if I'd give it a go. We did a couple of tracks, and both he and the label loved it. That turned into a full album together—**Distance and Time**—which I'm still really proud of.

From that point on, I stepped fully into the role. Over the years, I started taking on more and more of the process myself. These days, unless we're doing something like a string arrangement, I'm usually mixing and engineering my own productions too.

How do you think your musical background influences your approach to record production?

Honestly, I think the biggest influence is the fact that I'm completely self-taught. I gave the traditional route a go—had a few guitar lessons, tried piano lessons too—but none of it really stuck. So I just decided to figure it out myself. And this was all before the internet, which made it a bit like trying to assemble IKEA furniture without the instructions... or the Allen key.

Back then, all my mates wanted to be drummers, guitarists, or singers. Being into keyboards wasn't exactly cool—how times have changed! But I stuck with it because I genuinely loved sound, and I loved messing around with machines and gear until something magical happened.

Not having a formal musical education has actually been a blessing. I'm not limited by theory or rules—I just go with what feels right. I think it's helped me stay open-minded and curious. I can usually find the beauty in things that might not be "technically correct," but they feel honest and real. That's where the magic is for me.

Can you walk us through your typical production process from initial ideas to final mixing and mastering?

It really changes from track to track—there's no one-size-fits-all formula. But if I had a golden rule, it's this: whatever bugs me the most, I work on first.

If the chorus isn't sitting right, it doesn't matter how great everything else sounds—it'll keep buzzing around in my head until I fix it. That said, I don't usually go hunting for choruses straight away. Sometimes it's better to let them reveal themselves naturally.

Often, I'll focus on shaping the other parts of the track and give it some space to breathe. Usually, in the middle of that process—maybe through a happy accident, or just catching a wave of momentum—the chorus shows up, and you just know it's right.

And when it comes to mixing and mastering, I try not to separate those stages too much from the creative flow. I've found over the years that the more I can stay in that same headspace—from the first idea through to the final mix—the more cohesive and emotionally resonant the track becomes.

Tell us about your sound engineering work that makes you happy—and some that's had an impact or created change.

The sound engineering work that makes me happiest is when I'm in a room I trust, with monitors I love, and I'm not juggling too many hats at once. When I can just focus fully on the artist and the music, and they're feeling seen, supported, and excited—that's the sweet spot. There's nothing better than that moment when the talent hears a playback and gets goosebumps... and you can see it in their eyes that you've nailed it. That's when I'm happiest.

As for sound engineering that's impacted change... I'm not sure how to answer that, to be honest. I don't know if my work has changed the world, but I do hope it's moved people. Whether it's helped someone through a tough time, made them dance, cry, or just feel something—that, in its own quiet way, is a kind of change.

Tell us about your work as a musician that won you recognition.

Recognition is a funny thing. I produced a **U2** album that went to number one in over 30 countries... but no one's ever stopped me in the street to say, "Well done for that!"

I suppose if I had to choose something that really resonated with people, it would be **Lamb's** first album. At the time, it was pretty groundbreaking—we were blending electronic music, jazz, and drum and bass, all within proper song structures. That kind of fusion just wasn't happening in many places back then.

What's meant the most to me over the years is hearing from other musicians—people I deeply admire—saying that our work inspired them, or acted like a kind of lighthouse for their own creative journeys. That's incredibly motivating, and honestly, it's one of the most rewarding parts of making music.

Tell us about your ideas in unconventional sound engineering.

I've always been a big fan of putting mics in weird places—corners of the room, under the piano, wherever feels interesting in the moment. There's something magic about capturing sound from a space where it's not supposed to be recorded.

One little trick I love is using a pair of ribbon mics that usually live above my piano. When we're doing backing vocals, I'll get the singer to stand about two metres back and angle the mics up toward their face. Then we track harmonies onto those piano mics. What you get is this beautiful blend—the resonance of the piano subtly bleeding in, and the vocals sitting in the room in a really natural, uncompressed way. It gives you this textured, atmospheric sound that's full of character.

I'm also not precious about things being too clean. Sometimes, just overdriving the input on a sampler a little can make a sample come alive. It might not be technically perfect—but perfect isn't really the goal. Interesting is better.

What's your go-to equipment and software for recording and producing music?

I do pretty much everything—whether it's mixing to picture, producing other artists, or working on my own music—in **Ableton**. It just feels so intuitive. I don't even really think about it anymore—I just watch my hands move and suddenly everything's in focus. It's like muscle memory meets flow state.

I can use **Cubase** and **Pro Tools**, but honestly, opening them now feels a bit like visiting an old girlfriend—nostalgic, but not where I live anymore.

The latest **Macs** with the **Apple Silicon** chips are incredible. Especially in warmer climates, where older machines used to kick out fan noise that would sneak into your mics—super annoying and hard to get rid of. These new machines are silent, fast, and just brilliant for creative work.

I'm a huge fan of **Universal Audio**—both their hardware and plugins. Their stuff just sounds amazing. My speakers of choice are **Genelec**. I've got five or six pairs scattered across different spaces, and the **1237a** in the main room of my Brighton studio sound as good as any high-end room I've worked in.

Mic-wise, I've got a **Neumann M 149**, which just seems to work beautifully on anything you put in front of it. And I've got a soft spot for ribbon mics—Coles are a big part of my sound palette.

I use the **Push** as my Ableton controller—it's so tactile and intuitive. **Native Instruments** gear is also a staple in my setup, especially the **Komplete Kontrol S88 MkII** with the weighted keys—it's a stunning bit of kit.

Universal Audio's **Apollo** interfaces? I've got a few—some **Twins**, and a few of the bigger ones. Rock solid.

As for plugins, I love **Soundtoys**, **Omnisphere**, **Spectrasonics** stuff, and **Spitfire Audio's** samples. Oh—and I much prefer using **Melodyne** for pitch correction. It just sounds more natural to me. Auto-Tune has its place, but it tends to wear me out after a while.

Here's a tightened-up and engaging version of your answer, in the same relaxed and warm tone as the rest of the interview:

Tell us about your studio in Goa.

I've got a really simple but wonderfully creative setup out here in Goa. It's centred around an M1 MacBook, my Ableton Push controller, and the S88 MkII from Native Instruments. Basically, all my favourite pieces from my main studio—just fewer of them. I also travel with a small collection of microphones, and I've got a pair of **Genelec Ones** here (**8331a**), which are absolutely incredible. They don't have quite the same heft or SPL as the big studio monitors back in the UK, but everything I work on here translates beautifully when I get home to mix. That's the real test, and these little guys pass with flying colours. In a way, having less gear actually opens things up creatively. There's something about being limited that can make writing and arranging feel more focused—and often, more inspired.

We have a vision of building a creative bridge for music between London and Mumbai. Tell us how this bridge can be built.

I think it's a beautiful vision—and totally possible. Both London and Mumbai are steeped in musical history, each with their own rich, diverse scenes. There's so much potential when artists from these two cities connect and share their unique influences.

One way to build that bridge could be through workshops and creative residencies—bringing musicians from the UK to India and vice versa. It would be amazing to create spaces where people can collaborate, learn from each other, and find that spark that happens when different cultures and styles collide.

I've got a beautiful studio back in the UK, and I'm currently running a new series of retreats called **Inflow Retreats**. They're all about exploring the connection between music and wellness—but in a playful, open, and creatively nourishing way.

I'd absolutely love to bring participants from India over to the UK for retreats, and equally to host retreats here in Goa, inviting UK musicians to experience the incredible creative energy of India. I think that kind of cultural exchange is where real inspiration lives.

Thank you for sharing your journey with us. Any final thoughts for our readers?

Just that music is still, for me, one of the most powerful ways we can connect—across cultures, across generations, and across any personal differences. Whether you're making it, listening to it, or using it to heal or grow, it has this amazing ability to bring people into the present moment and remind us we're not alone.

If you're reading this and you're a musician, a producer, or even just someone curious about creativity—keep exploring, keep playing, and most importantly, stay open. That's where the magic is.

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SOLID STATE LOGIC INTRODUCES SSL 18 RACKMOUNT AUDIO INTERFACE

Solid State Logic (SSL) unveiled the **SSL 18 rackmount USB audio interface**, marking the company's latest advancement in professional studio technology. With a heritage built on excellence in analogue and digital design, SSL has introduced SSL 18 as a high-performance, feature-rich studio centrepiece tailored for both desktop and professional studio environments.

The SSL 18 is a 19-inch rack unit engineered to enhance production workflows and elevate audio quality. Its next-generation 32-bit/192 kHz converters provide high-resolution fidelity, with an unparalleled dynamic range of 120 dB across all microphones, line, and instrument inputs. The interface also delivers 125 dB dynamic range on monitor and line outputs, ensuring uncompromised sound reproduction.

The device features eight SSL-designed microphone preamplifiers with switchable Mic/Line configurations, providing ultra-low noise and an extended dynamic range. These preamps employ a two-stage circuit design that minimises distortion while

maintaining the natural tonality of recorded sources.

"SSL 18 embodies our commitment to crafting a 19-inch rack audio interface that delivers SSL quality. Our engineering team applied their analogue and digital design expertise to exceed expectations. With the powerful SSL 360 software, SSL 18 delivers a world-class studio experience to any setup. We're eager for everyone to experience its sound and workflow," said **Andy Jackson**, Senior Product Manager, Studio.

The rear panel of SSL 18 houses 10 balanced line-level outputs, with outputs 1&2 and 3&4 configurable to either +9 dBu or +24 dBu for seam-

less integration with a wide range of studio monitors and outboard equipment. Outputs 3 to 10 operate at +24 dBu, making them ideal for professional signal chains. Notably, all outputs are DC-coupled, enabling the interface to send Control Voltage (CV) signals to modular synthesiser rigs.

The talkback input can be reconfigured as a LINE mode input, enabling users to process signals through the SSL Listen Mic Compressor (LMC), a sought-after feature for drum processing and parallel compression techniques.

For speaker management, the front panel offers Alt Speaker and Cut controls, allowing engineers to switch

between multiple monitor sets. These functions, along with various other routing and monitoring features, are fully customisable through SSL 360 software.

SSL 18 is designed to integrate seamlessly into a variety of studio configurations, with ADAT and S/PDIF connectivity expanding its microphone and line-level I/O count by an additional 18 channels. A dedicated Word Clock output ensures precise synchronisation when working with external digital devices.

SSL 18 is bundled with the SSL Production Pack, an extensive suite of virtual instruments, plug-ins, samples, and digital audio workstations. The package includes **Harrison Mixbus 10**, a DAW designed for analogue-style workflow.

For nearly five decades, Solid State Logic has remained at the forefront of professional audio innovation, delivering solutions for engineers, producers, and artists. The SSL 18 marks a significant advancement in rackmount interface technology, combining SSL's hallmark sound quality with a flexible, studio-grade feature set.



SSL 18's best-in-class conversion specifications and monitor control capabilities establish it as the new industry standard in rackmount audio interfaces

SAMSON UNVEILS FM1 INSTRUMENT MICROPHONE

Samson, a well-established name in professional audio equipment, announced the launch of the **FM1 Instrument Microphone** at **NAMM 2025**. The FM1 is a dynamic instrument microphone specifically designed for capturing high-volume sound sources such as guitar cabinets and drum kits.

The FM1 Instrument Microphone is a dynamic instrument microphone designed for recording guitar cabinets and drums. It's an ideal solution for when you need to get up close to a sound source without losing clarity. The microphone's flattened profile

and supercardioid pickup pattern ensure clear recording, while the dynamic element can withstand high volumes without distorting, allowing you to record loud sources cleanly.

The FM1 features a supercardioid pickup pattern, making it perfect for focused recordings. The microphone rejects off-axis noise, allowing for a much cleaner recording by eliminating background noise and avoiding feedback. This is especially useful when miking toms or snares in a kit setting, since it allows for up-close recording with minimal bleed.

The FM1 features a dynamic

element that makes it perfect for miking loud sound sources with little to no distortion. This preserves detail in the recording while still capturing a warm recording from drums and guitar cabinets, especially in common close-up recording techniques, live sound, or more specialized isolation cabinet setups.

The wider, side-address profile of the microphone is



designed for close-face recording techniques. The flattened face of the mic allows the mic element to get close-up to the sound source when miking drums or guitar cabinets, allowing the proximity effect to bring out the warmth in your performances. Additionally, the slim profile presents less of a footprint than top-address dynamic instrument microphones.

The FM1 is designed for capturing high-volume sound sources



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AUDIO-TECHNICA INTRODUCES NEW R SERIES OPEN-BACK REFERENCE HEADPHONES

Audio-Technica has introduced two new additions to its open-back reference headphone lineup: the **ATH-R70xa** and **ATH-R50x**. Designed for music production, mixing, and mastering, these headphones aim to deliver natural and accurate sound reproduction for both professional audio engineers and discerning audiophiles.

The release of the ATH-R70xa and ATH-R50x builds upon the legacy of ATH-R70x open-back monitor headphones, incorporating refinements that improve user experience and technical performance.

With a frequency response range spanning 5 Hz to 40,000 Hz, the ATH-R70xa ensures the clarity and sonic separation required to manage complex mixes, whether in the studio or on stage. Audio-Technica's open-back technology is centred on the principle that the essence of sound originates from the flow of air. By meticulously regulating airflow and relying solely on the diaphragm's natural vibrations to reproduce the original tone, the ATH-R70xa achieves a pure and natural listening experience.

The ATH-R70xa features a high-im-

pedance design, rated at 470Ω, making it ideally suited for professional recording, mixing, and mastering. The high impedance ensures that the headphones deliver a more accurate and pure sound performance when paired with professional-grade audio equipment, preserving the intricate



details and authenticity of the audio. Manufactured at Audio-Technica's Machida factory in Japan, the ATH-R70xa undergoes rigorous assembly and quality testing to maintain consistent performance standards.

The ATH-R50x maintains the acoustic design principles of the flagship ATH-R70xa while offering a versatile

solution for diverse audio production environments. Designed to meet the needs of both professional studio and home recording applications, the ATH-R50x offers a wide soundstage and an open, natural listening experience.

With a frequency response range

of 5 Hz to 40,000 Hz, the ATH-R50x is capable of reproducing fine musical details with clarity and accuracy. The drivers have been redesigned to deliver solid low frequencies alongside crisp and accurate mid-highs, ensuring that vocals and lead instruments are presented clearly while maintaining a balanced overall soundstage.

The ATH-R50x is engineered to provide powerful low frequencies and a natural sound field without the need for additional acoustic tuning. By transmitting sound directly through the driver, the headphones minimise distortion and maintain a realistic and stable sound profile. This allows audio engineers and producers to make confident mixing and mastering decisions across various applications.

With an input impedance of 50Ω, the ATH-R50x is compatible with a broad range of audio devices. It is designed to perform reliably when connected to professional recording equipment, smartphones, or digital audio players (DAPs), ensuring consistent performance whether in the studio or during casual listening sessions.

Audio-Technica's continued advancements in open-back headphone technology reflect its commitment to delivering high-fidelity audio experiences for professionals and enthusiasts alike. Both the ATH-R70xa and ATH-R50x incorporate innovations aimed at improving sound accuracy, comfort, and versatility, making them suitable for a variety of demanding audio applications.

AUDIENT INTRODUCES FLAGSHIP 8-CHANNEL AUDIO INTERFACE ID48

Audient has unveiled its latest flagship product, the **iD48**, an 8-channel, 24-in/32-out USB-C audio interface. Building on the success of the iD Desktop Interface Range, the iD48 introduces expanded I/O capabilities and cutting-edge technology designed to meet the needs of professional producers and engineers.

Meeting Industry Demand with Expanded I/O

Audient's Product & Marketing Director, **Andrew Allen** acknowledged the overwhelming demand for an 8-channel version of their popular iD interface range, stating:

"Since we launched the iD Desktop Interface Range, our customers have been shouting for us to deliver an 8-channel iD audio interface, so we are extremely excited to announce that it is finally here. iD48 is the ultimate Audient interface, building on the core feature set that has made the iD range so popular, delivering

astonishing audio performance alongside an incredibly intuitive user experience, but this time with more than enough I/O to handle any session."

At the heart of the iD48 are eight Audient Console Mic Preamps, renowned for their ultra-low noise and low distortion performance. These preamps deliver up to 68dB of gain, incorporating the same discrete

audio sources for outboard integration. This innovation introduces a new level of flexibility by enabling users to select the source feeding the ADC path – either the Audient Console Mic Preamp or a DAW output – without the need to physically re-patch cables.

The iD48 is designed to grow alongside its users, offering a range of expandable I/O options to adapt

multi-mic recording sessions.

In addition to its capabilities as an audio interface, the iD48 doubles as a fully featured monitor controller, providing comprehensive monitoring options. Users can connect both main and alternate speaker outputs or route audio to an external headphone amplifier for artist distribution.

The interface is equipped with two independent stereo headphone amplifiers that deliver 124dB of dynamic range and support high-impedance headphones up to 600 Ohms. This ensures accurate monitoring and a high level of control during tracking and mixing sessions.

With its comprehensive feature set, the iD48 delivers the performance and flexibility demanded by modern studios. It combines professional-grade mic preamps, advanced conversion technology, versatile I/O expansion, and intuitive monitor control in a single, streamlined package.



With 24 inputs and 32 outputs via USB-C the iD48 provides flexibility for multi-mic recording, external processing, and advanced monitoring applications

high-grade op-amp design found in Audient's ASP8024-HE recording console.

A standout feature of the iD48 is its Switchable Analogue Insert technology, allowing seamless routing of

to evolving studio requirements. It supports ADAT, S/PDIF, and SMUX protocols, allowing the addition of up to 16 channels of external mic preamps. This expandability makes the iD48 an ideal choice for demanding

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SOUND, LIGHTS, PERFECTION: THE STAR GROUP'S ROLE IN DUA LIPA'S STUNNING MUMBAI SHOW



Star Group perfectly executed Dua Lipa's Mumbai show with several show-stopping brands

*When global pop sensation **Dua Lipa** brought her highly anticipated Radical Optimism Tour to Mumbai's Bandra Kurla Complex, the scale of the event was immense. Ensuring a flawless execution of such a large-scale production required meticulous planning, state-of-the-art technology, and an expert team adept at handling every technical nuance. The concert was not merely a performance but an intricately designed, multi-sensory spectacle, demanding precision in lighting, visuals, and sound integration.*

At the helm of this massive production was **Star Dimensions India Pvt. Ltd.**, a key entity within the **Star Group of Companies**. With the support of its sister companies, **Spectrum AV** and **Audio Dimensionz**, the Star Group meticulously orchestrated the technological aspects of the concert, setting new benchmarks for live event production in India.

Lighting and Trussing

As the primary provider of lighting and trussing, Star Dimensions India Pvt. Ltd. played a crucial role in defining the concert's visual aesthetic. Every element of the lighting design was carefully crafted to enhance the musical performance, with a focus on seamless synchronisation between lighting cues and stage movement. The goal was not merely illumination but an immersive visual narrative.

To achieve this ambitious vision, Star Dimensions deployed an extensive range of lighting technology, including:

- **Milos Roof Truss** – Custom-modified for enhanced load-bearing capacity, forming the structural backbone of the lighting rig.
- **Martin Mac Ultras (48 units)** – High-output beams delivering intricate aerial effects.
- **Martin Mac Viper Performance (32 units)** – Providing sharp, vibrant beams to amplify stage energy.
- **Clay Paky X-Frame (12 units)** – Offering precise and rapid movements to



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enhance dynamic elements of the show.

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- **Battens RGBW (40 units)** – Ensuring smooth colour transitions across the performance space.
- **Nova 4 DTR Blinder (24 units)** – Producing intense flashes to heighten dramatic moments.
- **MaC Ultra Spot as Follow Spots (4 units)** – Ensuring precise performer isolation and spotlight control.
- **Smoke Factory Tour Hazer II (4 units) & Fan-Fogger (4 units)** – Enhancing atmospheric depth for immersive lighting.
- **grandMA3 3 FULL SIZE (2 units) & PU-L (3 units)** – Industry-standard lighting consoles for precise cue execution.
- **LED Par RGBW (48 units)** – Ambient lighting to enhance mood and aesthetics.

Integration with Stage Design

Ensuring cohesion between lighting and stage architecture was a critical component of the concert's success. Strategic positioning of strobes, washes, and intelligent fixtures allowed lighting cues to synchronise seamlessly with Dua Lipa's setlist and choreography, maximising the immersive experience for the audience.

A key player within the Star Group of Companies, **Spectrum AV** took charge of video and LED screen execution. The objective was to ensure high-resolution visuals that seamlessly complemented the performance, providing a captivating backdrop while maintaining synchronisation with live footage and pre-programmed content.

To achieve a flawless visual experience, Spectrum AV employed:

- **Barco E2 Processor** – Ensuring colour accuracy and frame synchronisation.
- **Fabulux LED Panels** – High-definition displays maximising clarity and detail.
- **Resolume Arena Software** – Operated by **VJ Azad Siddiqui** for real-time video effects and live content manipulation.

Managing LED calibration and synchronisation across multiple panels for a large-scale outdoor venue presented challenges. However, through meticulous planning and expert coordination, the Spectrum AV team delivered a seamless and visually stunning experience, elevating the artistic impact of the concert.

Delivering pristine, immersive sound to thousands of fans was the responsibility of Audio Dimensionz, the audio division of the Star Group of Companies. Under the leadership of **Neil Lean** and **Sean Lobo**, the team executed a world-class audio setup designed to ensure uniform sound distribution with optimal clarity.

Key audio components included:

- **DiGiCo Quantum Digital Mixing Consoles** – Managed by **Will Nicholson** (FOH) and **Alex Cerutti** (Monitors) for precise audio control.
- **d&b Audiotechnik KSL Series Line Arrays, SL G-subs, S16 SL Flying Subs** – Ensuring even sound distribution and deep, resonant bass.
- **Array Calc Software** – Optimising speaker placement for uniform sound coverage.
- **Shure & Neumann Microphones** – Ensuring high-fidelity audio capture.
- **Shure ULXD2/KSM9HS Wireless In-Ear Monitors** – Providing flawless on-stage monitoring.

Mumbai's outdoor venue conditions introduced environmental noise factors and unpredictable weather. Audio Dimensionz tackled these challenges by fine-tuning speaker placement and leveraging high-directivity arrays to maintain clear, powerful sound throughout the venue.

Coordination The Backbone of a Flawless Production

Executing a concert of this scale necessitated seamless coordination between technical teams. The Star Group of Companies deployed the latest Riedel Bolero professional radio communication system, ensuring real-time, uninterrupted collaboration between lighting, video, and sound departments. This system was instrumental in maintaining efficiency and resolving

on-site challenges promptly.

Leadership and Execution

Strategic oversight played a crucial role in ensuring the success of the concert. The event's technological execution was spearheaded by **Jay Mathuria** & **Ashish Mehta**, Directors of Star Dimensions India Pvt. Ltd.

Setting a New Benchmark in Live Production

The Star Group of Companies, through the expertise of Star Dimensions India Pvt. Ltd. (Lighting & Trussing), Spectrum AV (Video & LED), and Audio Dimensionz (Sound), has redefined live event production standards in India. By integrating state-of-the-art technology with precise execution, the team delivered an unparalleled concert experience.

With a steadfast commitment to innovation and technical excellence, the Star Group of Companies continues to push boundaries in live event production, setting new industry standards and solidifying its reputation as a leader in the field.

Selecting the Right Equipment

Ensuring an immersive sound experience for thousands at the Bandra Kurla Complex (BKC) required precise planning and advanced technology. The audio team relied on **DiGiCo Quantum digital mixing systems** for both front-of-house (FOH) and monitor mixing. Will Nicholson operated a **Quantum 852** for Dua Lipa, while the other acts used two **Quantum 338** at FOH. Alex Cerutti managed monitors with a third Quantum 338. Additionally, a **Yamaha PM5-Rivage** served as the main production console.

The system design was led by Neil Lean and Sean Lobo, ensuring extensive configurability. The setup featured the **d&b Audiotechnik KSL series** as the primary PA, supported by **16 S16 SL flying subs**, **28 SL-G ground subs**, and eight **V-10P point source fills**. Three delay stacks were deployed, consisting of two **KSL top rigs** and one **V rig**. Using Array Calc software, the team strategically positioned the speakers to optimise horizontal and vertical coverage while avoiding hotspots. Advanced array processing maintained a consistent Sound Pressure Level (SPL) variation within just 6dB, ensuring that every attendee experienced the same high-quality audio, regardless of their position in the venue.

The choice of the d&b KSL system initially raised industry concerns, but it proved to be the optimal solution. "There were doubts and industry gossip about whether the d&b KSL system was the right choice, but it delivered exceptional directivity and clarity while keeping noise pollution minimal in the surrounding areas. Against all odds, it was the perfect system for the job, proving once again that great sound is all about the right planning, the right gear, and the right team," said **Herman Lobo**.

Each piece of audio equipment was meticulously chosen to ensure clarity, powerful bass, and uniform coverage throughout the venue. The line arrays comprised 96 d&b Audiotechnik KSL series speakers, covering an area of 88,000 feet and ensuring consistent audio distribution without distortion. At FOH, Will Nicholson worked on a DiGiCo Quantum 852, while Alex Cerutti managed monitors using a Quantum 338. These consoles provided reliability, flexibility, and high-fidelity sound processing.

For low-end reinforcement, 284 d&b SL G-Subs were positioned on the ground, accompanied by 16 flown d&b SL Subs, producing deep, controlled bass. Dua Lipa and her team used a selection of **Shure SM58**, **Shure Beta 87A**, and **Neumann U87 microphones**, chosen for their clarity and warmth. The band and backup vocalists relied on **Shure ULXD2/KSM9HS wireless** in-ear monitors, ensuring interference-free performance.

"At the core of our setup was the need for reliability, consistency, and high-fidelity sound. The DiGiCo consoles provided the redundancy and configurability needed to handle any challenges, while the KSL system ensured a balanced, immersive experience for every listener in the crowd. It was all about delivering perfection and we made it happen!" Lobo emphasised.

Overcoming Challenges in Sound Engineering

Every large-scale concert presents unique challenges, and Dua Lipa's Mumbai performance was no exception. The BKC ground posed specific acoustic challenges, such as echoes and dead spots, which were mitigated through extensive soundchecks and speaker adjustments using **Array Calc software**.

(Continued on page 50)



India's Favorite Power Amplifier



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**1600+1600W RMS
@ 2 Ohms**

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**2500+2500W RMS
@ 2 Ohms**

MT-1601

**3000+3000W RMS
@ 2 Ohms**

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**Hall: 8
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US AT**



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PALM EXPO 2025: EMPOWERING INDIAN MANUFACTURING IN PRO AUDIO AND ENTERTAINMENT LIGHTING

India's Biggest Pro Audio & Lighting Expo revs up to welcome exhibitors and attendees

*The stage is set, the anticipation is building. India's Pro audio and lighting industry is gearing up for the biggest event of the year, the one and only **PALM Expo 2025**. From 29th May to 31st May, NESCO Mumbai, will transform into a dynamic arena where the latest advancements in professional sound, lighting, rigging, and AV technology take centre stage. This is where the industry's biggest names, game-changing innovations, and new players collide, setting the stage for three days of business and networking.*

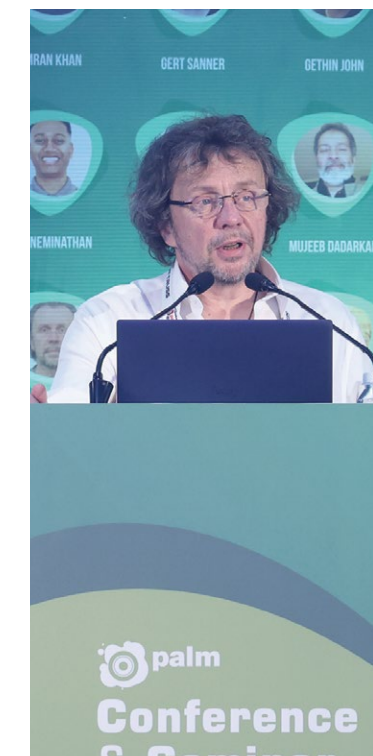
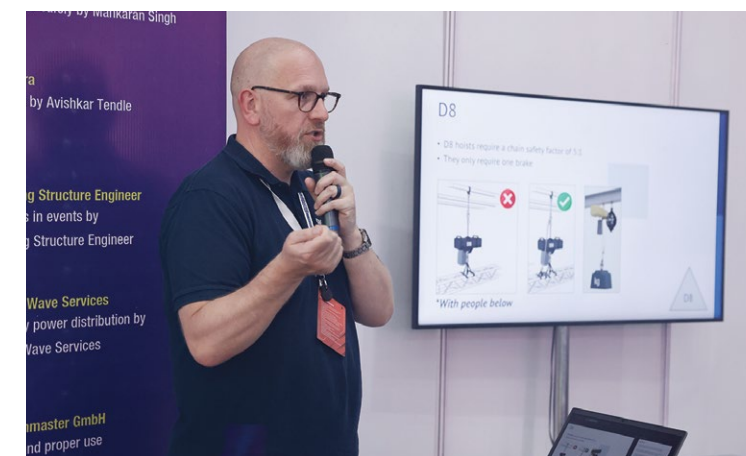
Crucially, the 2025 edition reinforces **PALM Expo's** founding objective, to nurture and develop India's pro audio, lighting, and AV industry. Over the years, this vision has shaped a growing ecosystem of distributors, integrators, and technology professionals in fields such as sound engineering, acoustics, system design, and installation. However, the next phase of growth lies in product design, manufacturing, and export. Indian manufacturers now face an unprecedented opportunity at this Expo with a vast domestic market supporting economies of scale and a global appetite for competitively priced, well-designed technology, India is poised to become a major exporter of professional audio products.

India's investments in semiconductor manufacturing also create a unique imperative—large-scale local production of AV products is essential to drive internal demand for components and make chip fabrication viable. In this Expo, **PALM** will aim to spotlight the evolution of Indian manufacturing, while continuing to feature the latest innovations and solutions from established international brands serving the Indian market.

For the 23rd edition, PALM Expo will remain a key platform for India's

professional sound and lighting industry, providing consistent opportunities for business development, networking, and product discovery. Spanning **45,000 square metres** at NESCO, the show will feature an expanded presence of brands, increased emphasis on high-performance sound reinforcement, and a stronger focus on digital and networked audio technologies relevant to live events and fixed installations. Additionally, the 2025 edition will highlight Made in India products, offering a unique spotlight on in-house manufacturing and domestic brands contributing to the growth of the Indian pro audio and AV sector.

With over **300 exhibitors** leading exhibitors showcasing the best in mixing consoles, line arrays, immersive audio solutions, stage lighting, visual effects, trussing, and rigging, PALM Expo continues to be the driving force behind India's thriving pro audio and lighting entertainment industry. With the previous year garnering a footfall of almost **38,000 attendees** we're expecting the same enthusiasm this year. Spread across four halls, **Hall 2, 3, 4** and **6** from which two halls are for pro audio, one for lighting and sfx and one for pro AV, the show is set to be a grand spectacle. Whether you're a rental



“

“PALM AV-ICN Expo 2025 continues to be the driving force behind India's booming pro audio, lighting, and AV industry. As the market evolves with cutting-edge innovations in immersive sound, digital displays, AI-driven integration, and smart AV solutions, this year's expo will showcase future of technology and cutting-edge solutions in immersive audio, intelligent displays, AI-driven integration, and smart AV solutions, empowering businesses across industries. With an expanded exhibitor lineup, engaging conference sessions, and a strong focus on business networking, we are committed to delivering a world-class platform where global brands and industry professionals come together to innovate, collaborate, and grow”.

RAMESH CHETWANI, Project Director, PALM AV-ICN Expo

company, system integrator, sound engineer, lighting designer, or consultant, this is where you'll find the tools, technology, and expertise to elevate your craft.

Three major players **POPE Professionals**, **AERONS**, and **N-Labs** will showcase their latest offerings at the **Demo Qubes**. **N-Labs** is set to make a significant impact, showcasing the **QLA Active Line Array System** and its new models allowing attendees to experience its live sound firsthand. Additionally, they will be unveiling their groundbreaking **DNA series amplifier** at their booth. **N-Labs** is saving the details for the show but promises an unforgettable experience. **AERONS** will demonstrate five line array models, **TTLA 3212**, **HDLA 212 V2**, **NOVA 122LA**, **HDLA 8055 V2**, and **LA 265**, with one **AUDIOCENTER** array model **ASTRA 210A**. At the time of going to press, these were confirmed.

PALM 2025 will once again feature a dynamic three-day conference series. Industry leaders, experts, and pro sound and lighting aficionados will take the stage, sharing insights and innovations. Stay tuned for more details!

For the first time in PALM history, **HARMAN Live Arena (HLA)** is set to deliver a complete immersive sound and light experience. Expect a mind-blowing showcase of **HARMAN's** latest technology, pushing the boundaries of live sound, lighting, and stage experiences. **Beta3 Professional Audio** is set to create an unforgettable experience in Grande C, featuring a top-tier artist, whose identity remains under wraps for now. Stay tuned for the big reveal!

The **PALM Sound & Light Awards** honours individuals and organizations for their unmatched contribution to the events entertainment industry in the fields of stage, sound and light. Over the past years, the awards have generated much expectation from live event organizers, rental companies and industry professionals like sound engineers, set designers, stage production companies and light designers. This year will be no exception.

In addition, PALM Expo continues to champion industry education and safety through its association with **EESA (Event Equipment Services Association)**. Together, we're hosting a specialised **Rigging & Trussing Workshop**, equipping professionals with crucial knowledge on health, safety, and best practices in event production.

PRODUCT INFO

Ansata, one of our exhibitors, will be showcasing several game-changers this year for the first time in India. Beginning with the **Waves eMotion LV1 Classic**, a compact yet powerful software-based live mixing system designed for touring engineers, broadcasters, and live sound professionals. Built to deliver studio-quality processing in a flexible and scalable setup, the LV1 Classic is powered by Waves' renowned plugins, making it a standout choice for high-performance live mixing. They are also displaying the **Avid Venue E6LX-256**, the powerhouse of the E6L series, built for high-stakes live productions. With 256 channels and expanded I/O, it delivers unmatched flexibility for complex shows. Designed for seamless S6L integration, it upgrades existing setups without a hitch. Built road-ready, the E6LX-256 is engineered to handle



Waves eMotion LV1 Classic

the toughest touring demands. Ansata also showcases Spottune which delivers 360° omnidirectional sound designed for retail, hospitality, and corporate environments. Ansata will be showcasing the **d&b D90 Amplifier** and the **d&b CL-Series**. A high-performance 4-channel Class D amplifier designed for touring and rental productions. Engineered for flexibility and efficiency, the D90 delivers maximum output voltage with an impressive 119 dB dynamic range, ensuring powerful, precise sound for high-voltage d&b loudspeakers. The d&b CL-Series, designed for small to medium-scale sound reinforcement. With broadband directivity control and low-frequency cardioid behavior, this passive, innovative system ensures precise, consistent coverage. Available in 80° and 120° dispersion, the CCL loudspeaker delivers exceptional clarity in a compact cardioid line array configuration, making it an ideal choice for versatile audio applications. The **DPA CORE+ Technology**, the final in Ansata's line-up this year, redefining condenser microphone performance with exceptional clarity, ultra-low distortion, and enhanced sonic fidelity. By neutralizing distortion across the full dynamic range, CORE+ delivers pure, transparent audio, making it the perfect choice for live sound, broadcasting, and recording applications.

Ahuja Radios will be launching **ALX-15000** an attractive and rugged Line Array Loudspeaker. The system features a power rating of 1200W RMS and is



Ahuja Radios ALX-15000

configured as a 2-way setup, offering a frequency response range of 58Hz to 20kHz and comes equipped with dual 30.48 cm (12") Neodymium low-frequency drivers.

Bosch will present some new game changers as well from **Electro-Voice**

and **Dynacord**, two powerhouse brands within the industry. Bosch will launch Electro-Voice's next generation of its acclaimed **EVID series ceiling speakers**, featuring two new series: the EVID-C-G2 and EVID-EC. These speakers cater to diverse audio needs, ranging from 3" full-range to 8" two-way configurations, including specialized models for various applications, such as high-performance and EVAC-certified options. They will also launch the **EVOLVE 70 & b**, which are the most powerful additions to the EVOLVE family yet. The three pieces system fits together in two clicks to form one system. Both the 70 & 90 are powered by a 2000 Watts Amplifier, Column Arrays feature 8x 4.7" neodymium drivers. In addition, they shall introduce **Electro-Voice's LRC se-**



Electro-Voice's LRC series

ries, three passive column loudspeakers with advanced 2.5" drivers and PaSS dispersion control, delivering premium sound and sleek design for installed audio environments. The **Dynacord's IX Series**, a lineup of IP-networked multi-channel DSP power amplifiers designed for modern sound amplification, featuring five models with power outputs of 6 kW, 3 kW and 1.5 kW powerTANK for Hi-Z and Lo-Z operations, available in compact 1U form factor with both 8-channel and 4-channel configurations. In addition, Bosch is launching **EVIVA** at their booth. EVIVA is a lightweight powered speaker series with 12", 15" tops and an 18" sub, delivering pro sound and Bluetooth connectivity. With EV tuning, XLR/TRS inputs, durable enclosures, and easy setup, it's perfect for events and mobile gigs.

Cambium Retail will unveil the **AM-S1 studio monitors**, featuring a 4" woofer, 1" tweeter, 60W Class D power, and versatile I/O for pro-grade clarity, custom tuning, and all-device connectivity. They will also introduce the **SB-01 soundbar**, delivering 16W of immersive sound with dual bass drivers, Blue-



AM-S1 - Studio monitor speakers

tooth 5.3 for seamless wireless streaming, and up to 10 hours of battery-powered playback, complete with RGB lighting and versatile AUX and USB connectivity in a sleek, compact design.

Canara Lighting will also be participating with its latest 430W LED Mov-

Professional Mixing Consoles

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For LIVE & INSTALL Sound

AHUJA

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YEARS
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PROMIX-1442R

Professional PA Mixer



FMX-212PRO

PA MIXER with ECHO-REVERB



ing Head Fresnel Light. Featuring high power 430W LED engine, its zoom angle can be 2.7-40°. It has motorized linear iris and focus to create colourful patterns and effects, 2 colour filters with 12 colours and 1 CTO, high speed shutter and strobe, full colour 180° reversible LCD menu display, and a multi-voltage universal auto switching power supply 100-240V. It's suitable for TV studios, theatres, large-scale performances, and more. Canara's high-quality, slim, compact and uniquely designed 60W Mini Panel Light used for studio, photo, and YouTube video with dimming option for creating many effects for multiple applications, will also be displayed at the show floor. The LED light has a 60W LED Lamp light source with the LED lamp life of 50,000 hours and colour temperature 3200K or 5600K.

HARMAN will unveil another list of show stopping products to this year's Expo. They will unveil the **Martin MAC Aura Raven XIP** for the first time in India. It is the brightest fixture in the **MAC Aura family**, delivering 27,000 lumens with exceptional optical performance for both indoor and outdoor use. Ideal for festivals, theatres, corporate events, and broadcast, it features an RGBL light engine for enhanced skin tones and a massive 343 mm lens that creates high-intensity beams and captivating Aura backlight effects. With innovations like a Universal Connect Module slot, Companion Mobile app control, and P3 control, it offers 50% more brightness than the MAC Quantum Wash with reduced maintenance, making it a top choice for rental and installation users. HARMAN will also debut the **JBL PRX935** and **PRX925** which redefine portable PA performance with powerful DSP, advanced acoustics. The PRX935 is a three-way, 15-inch system designed for exceptional mid-frequency clarity, ideal for houses of worship, live events, and corporate A/V, while the PRX925, a two-way dual 15-inch system, delivers deep low-end and high SPL for larger spaces. HARMAN will also introduce the **MiRA** family from **FLUX**, a powerful stand-alone software suite for comprehensive audio analysis, supporting mixing, mastering, system calibration. Delivering detailed real-time processing and superior visual feedback, MiRA ensures precise audio capture and enhanced visualization for both studio and live environments, making it an essential, intuitive solution for audio professionals, engineers, and sound designers alike.



JBL PRX93

Generation AV is set to make a significant impact at this year's Expo with the introduction of a comprehensive range of high-performance installation products from **HH Audio**, **LEA Professional**, and **Optimal Audio**. Marking its debut in the Indian market, the **HH Audio Aptur Series** delivers premium loud-speaker solutions for commercial spaces. The APT-W8S compact subwoofer offers immersive bass in a discreet form, while the APT-CL63 and CL103 column arrays provide excellent intelligibility in reverberant spaces. The APT-C4, C6, C8, and C8S ceiling speakers feature coaxial Celestion drivers and refined aesthetics. The APT-P6 pendant speaker completes the range, designed for architecturally complex spaces requiring clean, high-quality sound.

Generation AV will also showcase the latest from **LEA Professional**, including the CS124, CS64, CS34 half-rack smart amplifiers and their Dante-enabled variants. These compact models feature Smart Cloud connectivity, full DSP, and Smart PowerBridge technology, with both RCA and mic/line inputs, making them ideal for education, hospitality and corporate environments. The high-powered CS3004 and CS3004D are engineered for large venues and cinemas, delivering up to 5000W per channel. New advanced DSP models, **CS352**, **CS702**, **CS704**, and **Dante** versions, offer linear phase FIR filters, fast PoE

boot, and precise system control.

From Optimal Audio, Generation AV introduces the powerful new Sub 18, expanding a subwoofer range that already includes the compact Sub 6, ideal for space-constrained installations. The intuitive ZonePad 8 controller offers touchscreen management of eight audio zones, while the Talk 8 digital pag-



Optimal Audio SUB-18 subwoofer

ing station enables customised announcements across multiple zones with scheduling and priority control via WebApp.

Generation AV brings exciting updates from **SurgeX**, expanding the brand's reputation for robust power protection with smarter, network-integrated solutions. The latest **Defender Series+**, **Access+**, and **Vertical Series+** now feature IP control, remote power management, power sequencing, AutoPing, and advanced scheduling via the **SurgeX CONNECT** platform.

The Defender Series+ and Access+ ranges include individually switchable outlets, swappable locking power cords, and nine IEC outlets—eight switchable and one always-on—providing flexible control and reliable protection for AV systems in hospitality, education, corporate, and entertainment spaces. The Vertical Series+, tailored for large installations, delivering the same advanced remote management capabilities in a compact footprint.

Eminent AV is set to unveil a powerful lineup of **Amate Audio** products at the Expo, for the first time in India. Leading the showcase is the X102FD, Amate Audio's new flagship point source system designed as a compelling alternative to small-format line arrays. With dual 10" LF drivers and a 3" titanium diaphragm HF driver housed in a V-shaped cabinet, the X102FD delivers 3000W of Active+ amplification with integrated DSP and Dante, achieving a remarkable 136 dB SPL continuous output. Also featured is the XA211, a next-generation dual 10" bi-amplified line array speaker boasting 3000W Class-D power, 136 dB musical program SPL (139 dB peak), neodymium components, a high-performance waveguide, touchscreen control, and robust overvoltage protection. Completing the line-up is the XW218, a high-performance dual 18" subwoofer offering 5000W amplification, F.I.R filters, integrated DSP, and cardioid presets, capable of delivering up to 144 dB SPL.



Amate Audio XW218 perspective

Narain Audio is set to make a commanding come-back at PALM Expo 2025 with the first official showcase of several products and technologies from Nx



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Lavoce WAN103.01

Audio and Lavoce Italiana. Leading the launch is the Nx Audio DGN9.2K, a high-performance Class D amplifier delivering 4600+4600W RMS at 4Ω, featuring GaN (Gallium Nitride) technology for superior efficiency, >5000 damping factor. Following soft releases limited to under 50 pieces, this model now makes its full-scale entry. Also debuting is the RX2004, a rugged 4Ω Class H amp in the Proton RX Series, boasting a copper transformer with silicon steel core and premium capacitors for bass-heavy, warm output. The **CX4000 PRO**, now upgraded with **Bass Boost**, delivers 1700+1700W @ 2Ω, ideal for touring and install scenarios. On the microphone side, the UHF200 GG introduces a dual gooseneck version of the UHF200 wireless mic, retaining its 400 ft range and robust RF performance. From Lavoce, Narain Audio brings the powerful **SAN216.00iP**, a 21" subwoofer designed for iPalMod systems, featuring a 2500W AES rating and a 6" voice coil. Also debuting are the **WAN103.01**, a compact 10" 450W AES woofer with water-resistant paper cone, and the **DN20.300T**, a high-frequency neodymium compression driver designed with advanced linear and nonlinear modeling. Multiple new models in the DN Series will also be introduced, covering a broad range of pro audio needs. These products, many of them previously teased online—will receive their full public unveiling at PALM Expo 2025, marking their first formal introduction to the Indian market.

Pink Noise Professionals is debuting several international pro audio and AV products in India at this year's Expo. The **Symphony Studio Series** by **Apogee** includes high-performance USB-C interfaces with Apogee AD/DA conversion, 75dB gain preamps, Room EQ, bass management, and support for immersive formats like Dolby Atmos. From EAW, the RSX212L, RSX218, and RSX12M deliver high-output performance with integrated Dante™ networking and EAW's OptiLogic™ for faster setup. **WorkPro's NEO 5 AIR** brings wireless digital audio to compact loudspeakers. The MSH 60 is an all-weather, full-range speaker



Workpro MSH 60

with 70/100V or low impedance modes, suitable for outdoor environments. The **LightShark LS Series** offers lighting control via browser interface, MIDI, and third-party protocols. From the compact LS-Core to the hybrid LS-1 and AV-ready LS Core io, these consoles offer 8-universe control in portable or installed setups. Pink Noise Professionals will also introduce three products from Erthpot at the Expo 2025. The Keyer series DSP offers powerful digital signal processing with Dante integration, echo cancellation, and a dual-core

ARM9 processor, ideal for pro AV and conferencing setups. The Novo Conference System is a sleek, plug-and-play wired discussion system supporting up to 110 mic units, with video tracking capabilities and a durable die-cast design, perfect for classrooms and boardrooms. Rounding off the lineup is the Accipiter, a 4K broadcast-grade PTZ camera featuring AI-powered human tracking, ultra-smooth motor control, and multiple output interfaces including HDMI, SDI, USB, and NDI, crafted for seamless, high-performance video production.

Celto Acoustique LLP will unveil the **VAL Audio X-Line12** all-in-one powered PA, which features an acoustically optimized column array featuring a 2-channel digital mixer, a full suite of professional DSP, class-leading audio connectivity and TWS Bluetooth functionality. Enjoy unmatched power, flexibility and performance in a sleek, compact package. Celto Acoustique LLP will also launch its S Series touring amplifiers, ultra-compact 1U powerhouses delivering up to 12kW RMS with studio-grade preamps, proprietary Class D output, and robust protection.

With universal 90–260V AC input, NEUTRIK connectors, and >107dB SNR, this lightweight beast is built for serious touring performance.



Celto Acoustique LLP VAL Audio X-Line 12

POPE Professional is unveiling its own line of audio products at the Expo, starting with the new **IC Series subwoofers**, designed for high-impact bass with low distortion in a compact form. Using an isobaric configuration of long-excursion 18-inch ferrite transducers (two in the IC-218B, four in the IC-418B), the system delivers clean, deep low-end energy from 25 Hz to 300 Hz. With built-in handles (IC-218B) and rear casters (IC-418B), the series is engineered for easy transport and reliable performance across touring, fixed installs, theatres, houses of worship, and large venues. To power these subs,



POPE Professional IC-418B

POPE is also launching its **MF Series Amplifiers**, equipped with Class TD circuitry for efficient, cool operation. Designed for both mobile and installed use, they offer short-circuit, DC, and over-temperature protection, with a variable-speed fan system and built-in compressor to prevent distortion under heavy load.

At **Trimac's** booth, exhibitors will witness the launch of several game-changers. Trimac will launch the **HAWK** brand at their booth with three dynamic audio series. The **Vibe Series** active speakers will deliver electrifying sound, deep bass, and crisp highs. The Pulse Series will bring sleek design and



Professional Microphones

ST-5030

ST-5050i

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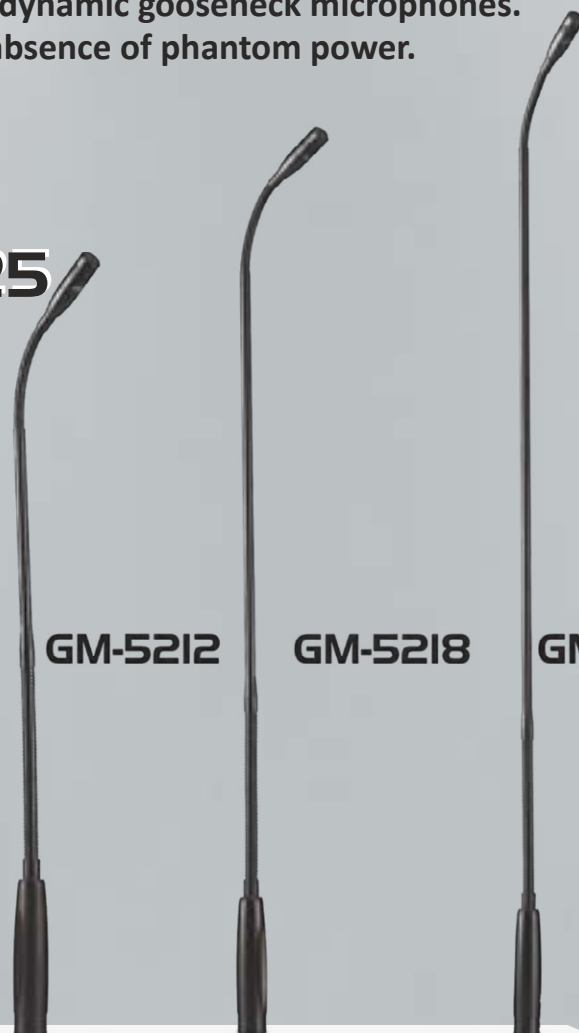


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Gooseneck Microphone

- ▶ Definitive polar pattern allows for demanding sound pickup applications.
- ▶ The small diameter gooseneck design permits flexible position.
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- ▶ Equipped with XLR connector for GM-5206/GM-5212/GM-5212L/GM-5218/GM-5218L/GM-5225/GM-5225L an extension cable for GM-5212C
- ▶ Foam Windscreen provided for shielding against wind noise and "popping"



GM-5212

GM-5218

GM-5225



Sonotone

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Tel: +91-22-66439999, Fax: +91-22-66439900

Email: info@sonotone.in, Website: www.sonotone.in





Trimac HAWK VIBE 12

pulse-pounding power to live performances. Also debuting is the **WDH Wireless Mic Series**, promising seamless wireless integration and crystal-clear audio.

Trimac will also debut **dBTechnologies' VIO Series** at their booth. The VIO L212, is a powerful yet compact line array built for large-scale touring with unmatched output and coverage. The VIO L1610, Astonishing 3-way Power, features dual 10" woofers and a coaxial MF/HF driver on a custom waveguide, delivering pristine, coherent sound. For low-end reinforcement, the Bass-Reflex Power VIO S218 offers dual subs with advanced DSP and network integration, while the VIO S118 combines

a horn-loaded design with portability, 1600W Class D power, Dante™ readiness, and cardioid presets, ideal for long-throw bass in professional setups. Trimac will also unveil RØDE's latest innovations at the Expo, highlighting powerful tools. The Wireless GO (Gen 3) redefines wireless audio with 32-bit float recording, intelligent Gain Assist, enhanced built-in mics, and pro-grade features—building on the legacy of the original game-changing system. The Wireless Micro offers a pocket-sized, cable-free solution for pristine smartphone audio, with dual clip-on transmitters, up to 21 hours of battery life via charging case, and instant plug-and-play usability. Also launching is the RØDE Caster Video, a revolutionary all-in-one console combining video switching, recording, and production with a fully integrated pro audio mixer—perfect for podcasts, interviews, studio shoots, and broadcast-quality live streams.

Stage Illumination will launch the, NPF-03 and CPF-03, which are 10-output DMX splitters with 1 input, front-facing signal LEDs, Powercon, surge protection, and service-friendly IC bases for reliable indoor/outdoor use. They will also launch ABN-03 and ABC-03 A and B Model DMX splitter with 2 inputs, 10 switchable outputs, dual universe LEDs, Powercon, CAT5 splitter looping, surge protection, and service-ready IC bases. The 6U Compact ARTNET RACK comes with ACME ARTNET model A28 which has 08 dmx universes as outputs and it has ethernet port with input and thru for artnet to artnet looping using Ethernet cable.



Stage Illumination 10U ARTNET TO DMX

Yash Enterprises is set to launch its **Yash 400A Industrial Connectors** at the Expo, featuring panel plugs, panel sockets, cable plugs, and cable sockets in red, yellow, blue, black, and green. Rated for 400 amperes, these connectors are built with high-grade industrial plastic and brass contacts, offering

durability and high current capacity.

At **4 Square Corporation's** booth, visitors will be witnessing the launch of the JBL Control 400 Enhanced Coverage Series, successor to the iconic Control 20 Series, offering improved coverage, superior sound, easier installation, CRBI™ baffle design and support for both 70V/100V and low impedance systems.



4 Square Corporation JBL Control 400 Series

Audio Plus's booth will feature Studiomaster Professional's SMS 480 Digital Speaker Management System and ADI 24.12 Digital Mixing Console to this year's Expo, being launched for the first time in India. The Studiomaster Professional ADI 24.12 is a premium 24 Channel Digital Mixing Console. Featuring multiple inputs and outputs, abundant DSP EFX



Studio Master SMS 480

processing tools and more, the ADI 24.12 is engineered to deliver a complete integrated solutions. The SMS 480 is a premium 4 IN / 8 OUT Digital Speaker Management System. Integrating 16-band PEQ, multiple crossover filters and slopes, speaker output delay, advanced matrix mixing, easy PC software and abundant audio processing tools, the system offers full sonic control over your speakers.

Candescent Lighting is set to launch Tiger Truss' Aero Max Roof AM25, built on an SS40S Ground Support system with four LL40S Towers. The roof features



Tiger Truss' Aero Max Roof AM25

MS6555 Truss for the main structure and SS40S beams for support, offering a high load-bearing capacity with a substantial middle span from front to back.

Decibel Pro is set to launch the **Celestion Ten Squared Series** at the Expo, featuring cast aluminium, neodymium LF drivers built for high-performance sound reinforcement. The series includes five models—TSQ2460 (24"),

ZEAW

ADAPTive[™] systems


Adaptive systems have the unique ability to assess and then perfectly match the three dimensional performance requirements of any venue.

ANNA

3-WAY FULL-RANGE
ADAPTIVE ARRAY MODULE



ADAPTIVE PERFORMANCE 

DYNO 

CONCENTRIC SUMMATION ARRAY 

FOCUSING 

BEAMWIDTH MATCHED CROSSOVERS 



AC6

Powered 6 x 6" woofers and 30 x 1" dome tweeters mounted to a CSA waveguide.





Decibel Pro Celestion-Ten-Squared

245, premium birch plywood acoustics solutions pairing active subwoofers (15" and 12") with passive dual speakers (6.5" and 4.5"). Designed for versatile

TSQ2145 (21"), TSQ1845 (18"), TSQ1535 (15"), and TSQ1230 (12")—designed for subwoofers, bass units, and large-format line arrays.

Clarion is set to unveil a dynamic lineup of audio innovations at the upcoming Expo, including the JM KAL 265 and JM KAL

installations in venues like restaurants, churches, hotels, and multifunctional spaces, both deliver up to 800W RMS of clear, powerful sound.

Also debuting is the JM 4D12000 CLASS-D amplifier, built with GANT and PFC tech for high efficiency and up to 95% energy conversion. Rounding off the launch is the JM KDL210: a 1400W dual 10" active line array system with a

Clarion JM-KAL 265

3" compression driver, DSP-controlled input, and rugged ABS housing, ideal for indoor and outdoor pro-audio applications.

Davdajis Pluto Disco Lights & Sound is launching the **LongLife Beam 550 Prism King** and **BSW 580** at their booth. The Beam 550 Prism King delivers dynamic visuals with enhanced gobo effects and eye-catching prisms, perfect for clubs and stage performances. The BSW 580 is a high-powered moving head fixture that combines Beam, Spot, and Wash functions, featuring a CMY + CTO colour wheel, wide zoom angles, and a powerful lamp, ideal for professional stage shows and shoots.

Imax Lighting will be launching a variety of new products. The **Marvel 440 BSW** is a new generation professional and intelligent compact LAMP BSW moving head light designed with a full CMY color mixing system, smooth and linear zoom from 4°-32°. The Marvel 440 beam is an ultra compact and light weight stylish moving head beam light with an OSRAM SIRIUS HRI 420W lamp, integrated with a set of unique high resolution



Davdajis LongLife Beam 550 Prism King

optical system. The IMAX EYZ 2/300 is a rugged IP65-rated 2 × 300W RGBAWW LED fixture with advanced colour mixing, wide beam angle, silent cooling, and versatile DMX control modes. The IMAX FX STROBE 1500IP is an ultra high-power IP65-rated strobe with 144 × 5W CW LEDs and 576 × 0.6W RGB LEDs in 24 controllable segments, delivering wide-angle, high-speed strobe and dynamic tilt effects for large-scale outdoor events. The IMAX MAGIC BAR 66 is a rugged lighting bar with 6 × 60W RGBW moving heads, 360°/540° PAN,



Imax Lighting FX strobe 1500 IP

270° TILT, mirror optics, neon rings, and 3.5° beams—perfect for sharp chase effects, wave movement, and flicker-free performance across concerts, TV, and club shows. The IMAX MAGIC CUBE 46 is a groundbreaking moving head with 4 × 60W 4-IN-1 RGBW LEDs, 3.5° narrow beams, individual PAN/TILT (76°) control, continuous movement, and flicker-free performance for concerts, TV, and events.

PLS Instruments will unveil the **PLS 1940 Moving Head** which has 19 powerful LEDs 40 W 4in1 QCL RGBW (homogenous colour mix) LEDs, controlled separately along with OSRAM LED installed.

HiFiDeco will be launching High Performance **DSP/Touring Digital Amplifiers** and **MYS Touring Loudspeaker Components** at their booth.

Lloyd Lee Company will be showcasing a range of professional audio solutions at their booth, including the ELECTRON Series of powered speakers, designed for both portable and installed sound applications. These systems feature European transducers and DSP-based amplification modules for reliable, high-performance output. Also on display will be the ELECTROCORD Q Series Class D amplifiers, offering compact design, high efficiency, and low thermal output, suitable for both touring and fixed installations. Additionally,



ELECTROCORD

the EMPOWER PM180A will be presented as a robust power management solution that safeguards critical equipment from power anomalies often encountered in outdoor environments. They will also be launching OUTPLAY systems, which offer high-performance, professional audio solutions tailored for a wide range of install applications—from restaurants and lounges to educational institutions, places of worship, and amusement parks

As the countdown begins, **PALM Expo 2025** is set to welcome stakeholders from across the industry for three days of product showcases, networking, and collaboration. The Expo continues to serve as a key stage for the pro audio, lighting, and AV integration sectors.

Don't take our word for it, be there to experience it firsthand.

For more detailed information on the exhibitors and their launches, head to the PALM Expo Website.

*This information is accurate at the time of going to the press.



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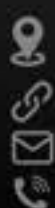
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Experience the Future of Immersive Audio at the **Harman Live Arena** @ PALM Expo 2025

Immersive technologies are transforming the AV landscape, redefining how we engage with sound, space and storytelling. But immersive isn't just about tech, it's about creating environments that feel real, where the boundaries between the physical and virtual worlds disappear. From live entertainment to fixed installations in retail or hospitality, immersive experiences are reshaping the way we connect with content.

In late 2023, **HARMAN International** took a bold step forward by acquiring **FLUX::**, a leader in immersive audio innovation. This powerful synergy is on full display at the **HARMAN Live Arena**, where we're showcasing the synergy of JBL x FLUX:: technologies, setting a new benchmark for immersive audio excellence within the HARMAN ecosystem.

Join us as we share HARMAN strategic vision for immersive technology. Discover and experience how we are implementing and evolving these solutions across our key domains of audio, video and lighting. Through real-world examples with SPAT revolution, we'll explore how immersive experiences are revolutionizing the live and touring industries—while also opening up exciting new possibilities in retail, hospitality and corporate environments.

We are also proud to introduce **MiRA**, the brand-new analyzer and visualization software from FLUX::. Fully customizable and already embraced by top sound engineers worldwide, MiRA reflects HARMAN's continued investment in software innovation. With MiRA, HARMAN now stands as the only manufacturer offering a true end-to-end ecosystem with Design (Venue Synthesis),

Control, Monitoring (Performer) and Analysis (MiRA) software packages. Don't miss the daily live demonstrations of SPAT Revolution and MiRA in action—see for yourself how it enhances audio workflows and deepens insight into your sound environment. Step into the HARMAN Live Arena and experience what's next in immersive technology.

Focus Products at Harman Booth

HARMAN brings another game-changing list of products to this year's Expo. HARMAN unveils the **Martin MAC Aura Raven XIP**, the brightest fixture in the **MAC Aura family**, delivering 27,000 lumens with exceptional optical performance for both indoor and outdoor use. Ideal for festivals, theatres, corporate events, and broadcast, it features an RGBL light engine for enhanced skin tones and a massive 343 mm lens that creates high-intensity beams and captivating Aura backlight effects. With innovations like a Universal Connect Module slot, Companion Mobile app control, and P3 control, making it a top choice for rental and installation users.

HARMAN will introduce the **JBL PRX935** and **PRX925** portable PA performance with powerful DSP, advanced acoustics. The PRX935 is a three-way, 15-inch system designed for exceptional mid-frequency clarity, ideal for houses of worship, live events, and corporate A/V, while the PRX925, a two-way dual 15-inch system, delivers deep low-end and high SPL for larger spaces.

Artist Line-up for Harman Live Arena

More information on the products on page 00.

29th May 2025			
Start Time	End Time		
10.30 AM	11.30 PM	MiRA Analyser India Launch	
11.30 PM	12.30 PM	SPAT Live Immersive audio demo with Himanshu (Electronic Music)	
1.10 PM	2.10 PM	Bombay Bandook	
2.10 PM	2.15 PM	Immersive Audio and Light DEMO	
3.00 PM	4.00 PM	Wild Wild Women	
4.00 PM	4.05 PM	Immersive Audio and Light DEMO	
5.00 PM	6.00 PM	The Indian Choral Ensemble - Live Immersive performance on SPAT Revolution	
30th May 2025			
Start Time	End Time		
10.30 AM	12.30 PM	Light it Up - A Martin Professional Lighting Workshop	
1.10 PM	2.10 PM	TaFMA presents Street Stories	
2.10 PM	2.15 PM	Immersive Audio and Light DEMO	
3.00 PM	4.00 PM	Merkaba	
4.00 PM	4.05 PM	Immersive Audio and Light DEMO	
5.00 PM	6.00 PM	Two Summ - Viveick Rajagopalan & Anantha Krishnan - Live Immersive performance on SPAT Revolution	
31st May 2025			
Start Time	End Time		
12.00 Noon	1.00 PM	Selva's ECM	
1.00 PM	1.05 PM	Immersive Audio and Light DEMO	
2.00 PM	3.00 PM	Sutej Singh Live	
3.00 PM	3.05 PM	Immersive Audio and Light DEMO	
4.00 PM	5.00 PM	Live Immersive performance on SPAT Revolution - TBD	



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MASTERING WITH HEART: BLENDING SCIENCE AND SOUL IN SOUND ENGINEERING



L to R: Donal Whelan and Gethin John of Hafod Mastering deliver a heartfelt session on Mastering to an enthralled audience

At the *PALM Expo 2024*, sound engineers **Donal Whelan** (Senior Engineer, *Hafod Mastering*) and **Gethin John** (Chief Engineer, *Hafod Mastering*) captivated the audience at an engaging session that discussed in depth, the emotional and technical dimensions of sound engineering. *PALM Expo Magazine* team brings you the highlights from this riveting discussion, read on to know more.

From the magic of music to the intricacies of mastering, the panelists' insights highlighted the delicate balance between art and science that shapes every sonic experience. Their session explored the fine balance between technology and emotion, highlighting the role of the engineer as both a scientist and an artist. With a perfect blend of technical depth and philosophical wisdom.

Understanding the Human Element of Technology

Whelan opened the session by moving away from the purely technical side of the work. "Music is magic," Whelan asserted, referencing **Arthur C. Clarke's** famous quote:

"Any sufficiently advanced technology is indistinguishable from magic."

However, Whelan clarified that the technology he was referring to wasn't the gear in the studio or the advanced tech on display at the Expo, it's us, the human beings. "Our work as sound engineers is technical, it's in the title. We're engineers. But I think you'll agree that we do a better job if we can connect with the heart, the soul and the magic. If we're aware of that, if we can bring it to our work," Whelan explained.

Walking A Fine Line Between Art and Science

Building on Whelan's thoughts, John highlighted the duality at the

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"In order to listen with our heart and with our soul, we need to be present in the room with the music. Our life would improve, our work will improve. Our clients' work will improve because we're bringing more heart and soul to it. As a result, we'll get more work because the word will spread, so we'll be happier humans who earn more money."

heart of sound engineering. "We all know now that we're dealing with a magical substance that is music," John remarked. "Everyone in this room has the privilege of working right on that boundary of art and science. And we have a foot in both of those worlds."

John described mastering as a series of decisions, decisions that blend logic with emotion. "You start with the scientific, you start with the logical, you start with everything you learned and then you very quickly forget everything you learned and sit back in your emotional self and go right or wrong, do I do that, or do I do nothing or do I do something else?" he explained.

His process involves starting with surgical EQ adjustments, carefully attenuating resonant frequencies with precision, and then switching gears to ask: "Does this make me feel better or feel worse?" This iterative process repeats for every limiter, compressor, and adjustment in the studio. "Always listen as a human first, and as a sound engineer second," John advised.

Storytelling in Music with Cultural Perspective

Whelan shifted the discussion to storytelling: a fundamental element of music across cultures. "Stories are how we frame our lives. Stories are a great way to tell eternal truths," he said, drawing parallels between Indian film songs and Western pop music.

"In India, film songs sit in a particular place in a story arc. The song itself has a story told through melody and poetry about the characters, and these songs are the most popular in India. The most popular songs in the West tend to be pop songs with a general theme, a groove, and a hook chorus to pull you in. To me, that's way down the scale of storytelling," Whelan observed.

John acknowledged this as a significant cultural difference but noted that storytelling is universal. "It's a really live discussion because since we've been here, we've had two conversations with clients and friends, both of whom have brought up the importance of myths and epic legends and how that's en vogue or fashionable in some way in India at the moment. I think it's there in all cultures. But you find it comes forward and backwards at different places in time," he reflected.

Technical Brain, Emotional Brain

Whelan introduced the concept of balancing the analytical and emotional sides of the brain, the left and right, the technical and the spiritual. "Building a studio is very much a technical process. And when it's finished, you sit back and you listen to your studio emotionally," Whelan noted.

He shared anecdotes about a research and development team in New Zealand that collaborates closely with their studio, iterating technical improvements week by week. "Their technical, emotional iterative process is one week. They get together every Sunday night, and our studio designer, Murray, cooks a curry. They open a bottle of wine, they plug in whatever they've built that week, and they sit back and listen. They luxuriate in the musicality and the detail of what they can hear," Whelan recounted.

Pushing the Boundaries: The Pursuit of Better Sound

Whelan described the relentless pursuit of sonic improvement that led the

team to experiment with high-quality buffer amps, custom toroidal transformers from Poland, and specialist voltage regulators. Each upgrade was rigorously tested. "They upped it to 15 volts and they blew one up. There's a lot of smoke," Whelan recalled with a smile, highlighting the trial-and-error approach that ultimately led to superior sound quality.

Their upgrades extended to replacing studio cabling with Mogami cable after an exhaustive listening process. "We ran music through them for two weeks before even listening, and then we stripped down our signal path and auditioned the cables blind," Whelan explained. However, the initial results were disheartening: "The new cabling sounded worse. The low end was undefined. The stereo image was blurry, and the top end was brittle."

Whelan described the realisation that saved the day: "I had the light bulb moment. All these cables are straight off the reel, solder's fresh, they haven't been run in. We came in the next morning and it'd been running for 15, 16 hours, and I pulled up the same recall, the sound had settled."

The Last Checks

Whelan and John returned to the core of their philosophy, the emotional connection. Whelan emphasised, "When we send something back to the client, we're sending a master. But it always ends with the question: How does this make you feel?"

For these engineers, mastering is ultimately about serving the music and the artist's intent. As Whelan aptly summarised, "We use the technical brain to facilitate emotional experiences, and that's the magic of what we do."

Balancing Faith and Technology

John reflected on the often overlooked emotional element that underscores the technical process of sound engineering. "All of the technical development, all very intellectual, all very electronic, it's a long process. It involves faith," John explained. "You have to have faith that by the end of the process, if you follow it through, you'll get there. That's a very emotional thing."

John highlighted that even seemingly small decisions like selecting cables go beyond the technical. "That final decision where you listen to the different cables and you install and you go, yes, this is what we're going to do. That's an emotional decision," he emphasised. For John, every stage of studio development, just like mastering, ultimately circles back to trusting one's instincts and emotions.

Tool or Threat?

As the conversation shifted towards AI, Whelan acknowledged its growing influence in mastering but made a clear distinction between Artificial Intelligence and genuine human creativity. "AI and mastering, it feels like I've set AI up to be knocked down because clearly AI doesn't have a heart and AI doesn't have a soul," Whelan said candidly.

He referenced Australian journalist John Pilger's description of AI as "plagiarism software," highlighting that while AI can generate impressive approximations, it lacks the emotional core that defines true art. "It can do a very good impression of heart and soul because it's been trained on thousands and thousands of songs, thousands of human expressions of heart and soul," Whelan observed.

However, Whelan pointed out that AI does not operate in isolation. "It's got a human being running it. It's got a human being using it who has heart and soul, and that human is working it, tweaking it, iterating it, and making creative decisions," he explained. Ultimately, AI is just another tool in the hands of a human artist.

A New Friend in the Studio

John echoed Whelan's sentiments, urging engineers to embrace AI as a complement to their skills rather than a threat. "Don't be scared of AI. It's not coming to entirely replace us. But the people who get used to those tools, it's a brand new tool that we've never had before. So let's all get comfortable using it," John advised.

He outlined two types of AI mastering software currently in use:

1. **Whole Song Analysis** – Used by platforms like **LANDR** and **ARIA** (from **Queen Mary University**), these tools analyse an entire track and generate a holistic solution.
2. **Cumulative Decision Assistants** – Tools like **Soundtheory's Gullfoss**, **iZotope's Ozone** mastering assistant, and **Logic's** recent mastering equivalent

provide incremental suggestions.

John shared how he uses these tools in his day-to-day mastering work, "Sometimes, if I'm uncertain, I'm going to go right, let's ask my friend. Drop Gullfoss on a certain section of a track and go, what do you think?" He described this process as a conversation, where AI suggests EQ curves or dynamic controls, and he then makes an informed decision.

The Ultimate Decision Maker

Despite AI's growing capabilities, John emphasised that the final decision still rests with the human. "The ultimate decision maker is still the emotional human being," he stated. He recounted instances where AI suggested drastic changes, such as cutting sub frequencies that were deliberately added by a composer, highlighting the importance of trusting human judgement.

"There is quite a lot of square wave energy. Yes, there's a lot of harmonic content. But I'm happy with that. Thank you very much, though, for your solutions for what to do in the midrange," John recalled with a smile.

Riding the Wave of Online Mastering

Reflecting on the evolution of the industry, Whelan shared his experience of being an early pioneer in online mastering. "In May 2005, there were six on-line mastering studios on the entire internet, and ours was one of those six," he recalled. For several years, his studio enjoyed an unchallenged presence at the top of Google search results.

"We only had between five and ten years of that advantage and it's gone now. For three or four of those years, if you typed in online mastering to Google, our studio would come up on top, before SEO was even invented," Whelan said. While the competitive edge may have diminished, the experience laid the foundation for a thriving business that continues to adapt and evolve.

Technical Foundations of Mastering

To conclude, Whelan touched on the technical principles that underpin

great mastering. "We make the room as balanced and as neutral as possible, so that when we master something, it goes out balanced and neutral," he explained.

He highlighted the importance of ensuring that mastered tracks adapt to the playback system they encounter. "If you play it on a small, tinny phone speaker, it'll sound small and tinny. If you play it on a soundbar that's a bit boomy, it'll sound a bit boomy. If you play it in a club where it's deep and strong, it'll sound deep and strong," Whelan concluded.

The Final Word

Whelan returned to the importance of heart-centred practices. "In order to listen with our heart and with our soul, we need to be present in the room with the music," Whelan stressed. He highlighted the challenges of staying present in today's fast-paced, consumer-driven society.

Whelan left the audience with a powerful reminder that resonated long after the session ended. "Our life would improve, our work will improve. Our clients' work will improve because we're bringing more heart and soul to it. As a result, we'll get more work because the word will spread, so we'll be happier humans who earn more money," he said with a smile.

In an industry often defined by technical excellence, Whelan and John's insights served as a poignant reminder that true mastery comes from blending science with soul, and that the heart will always be the ultimate decision-maker.

To view the full conference session, visit the link –

<https://www.youtube.com/watch?v=5c1YfpNkTaQ>

Head to the **PALM Expo Official YouTube channel** for more conference videos on industry pathbreakers!

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EESA AND PALM EXPO: A POWERHOUSE COLLABORATION ELEVATING INDUSTRY STANDARDS

The synergy between **PALM Expo** and the **Event Equipment Services Association (EESA)** has once again proven to be an undeniable success story. Now in its second consecutive year, the collaboration in curating the **Rigging and Trussing Workshop** at PALM Expo has reinforced the commitment of both entities to elevating industry standards and providing an invaluable learning experience for event professionals.

PALM Expo, India's leading trade show for pro audio, lighting, and AV integration, has long been recognised as a premier platform for professionals seeking the latest in cutting-edge technology. Its credibility as a host, combined with EESA's expertise in curating technical training programs, creates a

perfect match that delivers tangible value to industry stakeholders. As an association committed to knowledge-sharing, skill development, and safety awareness, EESA brings essential insights into rigging, trussing, and structural safety—critical aspects of the live events industry.

Visitors to PALM Expo not only gain access to state-of-the-art products but also benefit from live training sessions conducted by industry experts. The Rigging and Trussing Workshop, meticulously curated by EESA, serves as a vital resource for technicians, engineers, and event managers, equipping them with hands-on training in best practices, safety protocols, and

emerging technologies. By integrating practical knowledge with real-time demonstrations, this initiative has significantly enhanced the learning experience for attendees.

This year, EESA has moved forward to co-brand the event as the **PALM-EESA Rigging and Trussing Workshop** for all the right reasons. As we look forward to yet another impactful edition, this continued partnership reaffirms

that when expertise meets opportunity, the industry thrives. With PALM Expo as the perfect host and EESA as the dedicated curator, the event continues to set new benchmarks, making it a must-attend for every serious industry professional.

Catch us Live at the PALM-EESA Rigging and Trussing Workshop at HALL 4!



NEUTRIK MARKS 50 YEARS OF INNOVATION IN INTERCONNECT TECHNOLOGY

Neutrik Group, one of the global leader in interconnect solutions, has announced the **50th anniversary** of its **NEUTRIK brand**, marking a significant milestone in the company's long-standing contribution to professional audio, video, data, and power connectivity.

Founded in 1975, the NEUTRIK brand has played a pivotal role in shaping the standards of interconnect solutions. From its earliest innovations to the modern advancements in fibre optics and data transmission, NEUTRIK has consistently delivered products renowned for their durability, performance, and engineering precision.

Since its inception, NEUTRIK has been responsible for numerous benchmark innovations in the field of connectivity. Among the most recognisable are its **XLR** and **speakON connectors**, which have become staples in professional audio environments. The brand further expanded its technological range with the

introduction of the **powerCON series** for power connections, **opticalCON** for fibre optic applications, and **etherCON** for data solutions.

Over the decades, these technologies have supported a wide array of global industries, powering "hundreds of millions of live performances, recording sessions, and broadcast events," according to the Neutrik Group. The company credits

this success to its focus on engineering excellence and forward-thinking product design.

The anniversary is being celebrated under the theme "*Connectivity is Our Passion*," highlighting the company's enduring commitment to engineering leadership. This theme also reflects the organisation's vision of continuing to redefine connectivity through evolving technologies and

applications.

This 50th anniversary presents a unique opportunity to celebrate the brand's accomplishments while unveiling its vision for the future.

To commemorate the occasion, the Neutrik Group has announced the release of a special "50th Anniversary" product line. This series will feature a distinctive aesthetic, combining modern design with premium performance characteristics.

The first phase of the 50th anniversary product line includes the following items:

- Male and female 3-pin XLR connectors
- An instrument plug

These products are distinguished by a unique dark grey conductive metal plating and a laser-engraved 50-year anniversary logo. Gold-plated contacts are integrated to ensure superior conductivity and performance. The female XLR connector



Neutrik Group unveils a commemorative product line as it celebrates five decades of the NEUTRIK brand

(Continued on page 45)

TRANSFORMING BROADCAST & MEDIA: LAWO AND COMCON'S IP TECHNOLOGY DAY IN DELHI & MUMBAI A RESOUNDING SUCCESS

Lawo, one of the global leaders in IP media production technology, and its Indian partner Comcon successfully concluded the highly anticipated IP Technology Day in Delhi and Mumbai. The event brought

together professionals from broadcasting, audio production, and media infrastructure to explore Lawo's latest innovations in IP-based workflows. Attendees experienced live demonstrations of Lawo's mc²36 all-in-one live production console, including

hands-on experience of the mixing desk's seamless integration into modern media infrastructures. The event also featured Lawo's IP video processing and transfer solutions powered by the microservice-based HOME Apps running on COTS servers, with a demo

professionals. Gaurav Aggarwal, Director at Comcon, added, "India's media landscape is rapidly evolving, and innovations in production workflows with IP and fiber are at the heart of this transformation. Our partnership with Lawo enables us to bring world-class technology to the industry, ensuring our customers can deploy solutions built for the future."

With the success of IP Technology Day, Lawo and Comcon reaffirm their commitment to advancing media production in India. The event provided a valuable platform for knowledge exchange and hands-on learning, setting the stage for future collaborations and innovations. The event saw participation from radio as well as TV networks as well as interest from the pro-AV community and both the organising teams are enthusiastic about making these events a regular feature of their marketing initiatives for India.



Lawo and Comcon's team celebrating IP Technology Day in Delhi and Mumbai

NEUTRIK MARKS 50 YEARS OF INNOVATION... *(Continued from page 44)*

also includes a matching plated push button to ensure seamless design coherence. Neutrik confirmed that this initial release is just the beginning, with further products featuring new technologies scheduled for launch throughout 2025. The company has

encouraged customers and industry professionals to visit its booths at exhibitions and to stay updated through its official website. In reflecting on this five-decade journey, the Neutrik Group reiterated its commitment to innovation and trustworthiness in the global market.

The anniversary also serves as a springboard for the company's future ambitions. Looking to the future, the company continues to pioneer advancements that empower customers and end users to experience interconnectivity in ever more seamless and innovative ways.

The NEUTRIK brand, long associated with high standards in professional connectivity, now looks ahead to the next era of interconnect solutions. With a continued emphasis on quality and technological advancement, Neutrik appears poised to maintain its leadership well into the future.

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COMCON

BRIDGING THE GAP: ECONOMICS, EDUCATION, AND THE EVOLUTION OF AUDIO ENGINEERING



L to R: Dr. Pramod Chandorkar, Mujeeb Dadarkar, Tarundeep Singh Anand, Sreejesh Nair and Shraddha Sankulkar

*PALM Expo 2024 witnessed an engaging and insightful panel discussion on the intersection of audio education, evolving industry demands, in shaping future professionals. Moderated by **Dr. Pramod Chandorkar** (Director, SoundIdeaZ Academy & Program Director, Universal AI University), the panel featured industry stalwarts **Mujeeb Dadarkar** (Co-Founder, OdBle Consultants), **Sreejesh Nair** (Avid Pro Audio Solution Specialist), **Shraddha Sankulkar** (Psychologist & Founder – Director, Mind Matterz), and **Tarundeep Singh Anand** (Chancellor of Universal AI University).*

Mujeeb Dadarkar compared the journey of audio professionals to “trying to stand on a football.” He stressed that without continuous learning, one risks falling behind in a rapidly evolving industry.

“We are all still students because things evolve. Something you learned yesterday may no longer be valid today. Your core fundamentals have to be strong,” Dadarkar explained. However, he pointed out that many young engineers enter the field eager to mix but lack the patience required to build that trust and skill over time. “Who is going to let you mix?” he questioned, emphasising that success requires persistence and ongoing learning.

Structured Education

Sreejesh Nair highlighted the lack of a structured pattern for continuing education. He observed that many engineers only begin to grasp the importance of certain concepts once they face challenges in the workplace.

“There’s always the relearning that happens in this industry. And a lot of times, I’ve heard about this term, unlearning. What you’ve learned may not be

valid for the industry,” Nair remarked, stressing the importance of adapting to evolving industry standards.

Nair advocated for tying knowledge to practical skillsets, cautioning that without this balance, engineers risk stagnation. “Our problem very often is we either have knowledge or we look for the skill,” he said, adding that in a service industry, success also hinges on developing emotional intelligence and people skills.

Product Training: A Double-Edged Sword?

Dr. Chandorkar steered the discussion towards the role of manufacturer-led product training in supplementing education. He highlighted that while these sessions offer exposure to new technologies, they often create a narrow skillset focused solely on operating specific products.

“For manufacturers, as long as you can use their product, that’s enough,” Chandorkar pointed out. This narrow focus leads many young engineers to believe that being able to operate a particular console makes them a mix

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*Based on Futuresource Consulting. ^Colour brightness (colour light output) in brightest mode, measured by a third-party lab in accordance with IDMS 15.4. Colour brightness will vary depending on usage conditions. Top-selling Epson 3LCD projectors versus top-selling 1-chip DLP projectors based on NPD sales data for May 2017 – April 2018. *3 years or 20,000 hours, whichever is earlier.

engineer. "In today's time, it's the personality, it's your impression that fetches you the work more than how well you're technically equipped," he observed, raising the question of how soft skills influence career trajectories.

EQ, SQ, and the Changing Face of Education

Shraddha Sankulkar called for a paradigm shift in audio education, arguing that the current system prioritises IQ over emotional and social intelligence.

"It is very important for educational institutions to think about the EQ and SQ aspects of education. Emotional quotient and social quotient are equally critical in shaping well-rounded professionals," Sankulkar emphasised. She pointed out that **Generation Z** and **Millennials**, entering the industry with a more stable economic background, often lack the hunger and resilience that earlier generations developed through hardship.

AI and Formalising Audio Education: A New Era

Bringing a futuristic perspective, **Tarundeep Singh Anand** spoke about India's rise in the global entertainment landscape and the role of AI in shaping formal education for audio engineers. As the founder of India's first AI-equipped university and with decades of experience in academic management, Anand expressed his excitement about structured audio education.

"India is showing its power in the world. Our musicians are winning Grammys, and the entertainment scene is booming. But formalisation of that education is critical. You should be able to produce that sound in the classroom, and that's your output," Anand explained, drawing inspiration from European design schools where a one-minute animation can take months to perfect.

He highlighted that their curriculum focuses on skilling as much as knowledge. "50% of learning happens in the classroom or the studio, and 50% happens outside, where all the wonderful stuff on EQ, problem-solving, and critical thinking happens. That's what the industry values," he asserted.

Earning Trust: The Key to Higher Pay

The panel also touched on the critical issue of salaries in the industry, with Dr. Chandorkar asking how fresh graduates can break free from stagnant pay scales that haven't evolved in decades.

Dadarkar was candid in his response: "It has to do with trust. You have to be exposed at work to your potential clients for long enough for people to want to pay you more or hire you. And it's not going to happen overnight."

Dadarkar acknowledged the friction between seasoned professionals and new graduates who enter the industry with better fundamentals but lack practical exposure. "There's always going to be this friction," he said, reflecting on the challenges faced by new entrants.

The Path to Being Beyond Average

Nair reinforced the idea that success in the audio industry is not linear and that merely possessing knowledge is not enough.

"If you can't put your skillset and knowledge into action and understand how to deal with people in this service industry, your income is going to stay the same for a long time. If you want to be known, you cannot be average," Nair concluded, stressing that exceptional performance is key to long-term success.

Anand highlighted the vast opportunities that formal audio education can unlock. "It opens up a whole new gateway for passionate musicians and sound engineers to refine their skills and turn their passion into thriving careers," he stated.

As the audio industry continues to evolve, the emphasis on a holistic approach to education, blending technical proficiency, emotional intelligence, and real-world application, will undoubtedly shape the next generation of industry leaders.

Standardising Audio Education for Greater Industry Impact

Dr. Pramod Chandorkar highlighted a critical issue facing audio education — the lack of standardisation. He observed that only 4-5% of individuals in the industry gain notable recognition, leaving a significant percentage unmotivated. Chandorkar stressed the need for a placement cell that bridges the gap between academia and industry requirements.

"We are going to make them identify their potential candidates from year one so that they see the build-up, then they will be in a comfortable

position," Chandorkar explained. He emphasised the importance of tailoring training to match industry needs, ensuring that students develop relevant skills over time.

Expanding the Definition of the Industry

Nair underscored the narrow perception of the audio industry, which often focuses only on films and music. He pointed out that research in areas such as binaural audio and audio installations remains largely overlooked, despite its vast potential.

"When we call this industry, we are only looking at the film and the music part. That is a very small portion of sound, but unfortunately, that is the one that is actually the most seen part," Nair remarked. He advocated for a broader view, encouraging institutions to expose students to these underexplored fields to diversify career prospects.

Training the Trainers

Dr. Chandorkar raised a pressing concern — the lack of faculty training in audio education. He emphasised that knowledge alone does not make an effective teacher.

"I understood that you have to get down to their level. So there is a thing called training for the teachers. Train the trainers," Chandorkar remarked, stressing the need for experienced professionals to develop teaching skills. He called for initiatives that incentivise industry experts to take on teaching roles, ensuring a higher standard of education.

Sankulkar echoed this sentiment, highlighting the importance of identifying potential educators early. "We need to tap them early, that this person also has a teaching skill and accordingly help them, present or absorb them as new faculty and give them incentives," she suggested. She acknowledged the burnout experienced by experts due to their workload and advocated for a system that supports and rewards their contributions.

Professionalisation and Faculty Attraction

Tarundeep Singh Anand brought attention to the correlation between income levels and faculty quality. He pointed out that the imbalance between industry demand and available talent affects salaries, which in turn influences the quality of faculty entering the field.

"As I said, more professionalism will aid the attraction of the best faculty," Anand asserted. He introduced the concept of instructional design, a practice prevalent in top global universities but largely unheard of in India.

"You have a coach assigned to the faculty, which is trying to move the needle in terms of getting that quality, the gaps, which you did mention, and then over time that goes away," Anand explained. He advocated for a system where faculty performance is continually evaluated and improved through coaching, ensuring consistent growth.

Addressing Diverse Student Expectations

A key takeaway from the discussion was the diversity in student expectations. Dr. Chandorkar pointed out that some students approach education with a narrow focus, aiming to master only specific aspects of audio.

Mujeeb Dadarkar stressed the importance of adaptability in both students and teachers. "Teaching is a unique skill, which is independent of the skill that you have in your business," Dadarkar noted. He highlighted the need for students to adapt to different teaching mechanisms and for teachers to recognise that not all students learn the same way.

"I have no cure for indifference. If you're not interested in what you're learning, I can't help you. Everything else we can deal with," Dadarkar remarked, advocating for fostering curiosity and engagement in learning.

Sreejesh Nair passionately defended the art of teaching, dismissing the notion that teaching is a fallback for those unable to excel in their profession.

"Actually, the teaching skill is the way of putting things forward and making sure somebody understands something — it's an extremely gifted art," Nair emphasised. He echoed Dadarkar's belief that curiosity is key, stating, "There are really stupid answers. There are no stupid questions."

The Future is Bright: Opportunities in Audio Education

Anand concluded the discussion by highlighting the need for adaptive curricula that align with evolving industry demands. He pointed out that some universities are breaking free from traditional UGC guidelines to create

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industry-oriented programmes.

"We have a bunch of new universities who are willing to mould the programme around what the industry requires as opposed to what UGC requires. And that's what is gonna be the future," Anand predicted.

The panel concluded with a consensus on the importance of creating a sustainable ecosystem that nurtures talent, rewards educators, and aligns educational practices with industry expectations. By addressing gaps in faculty development, expanding industry perspectives, and adapting to evolving

trends, the audio education sector can create a dynamic and rewarding environment for both students and educators.

As Anand aptly summarised, "Let's make the ecosystem so exciting that we attract some amazing faculty."

To view the full conference session, visit the link –
<https://www.youtube.com/watch?v=nmUfK32V4cY>

SOUND, LIGHTS, PERFECTION: THE STAR GROUP'S...

(Continued from page 24)

Weather resistance was a priority, with contingency plans in place to handle sudden changes in conditions.

Managing the balance between audience energy and the music required high-directivity d&b Audiotechnik KSL line arrays to minimise spill into non-essential areas. "The area behind and around the venue was absolutely silent up to -26dB compared to the venue," Lobo explained. Technical failures were anticipated with redundant DiGiCo Quantum consoles and backup systems in place.

Seamless coordination with other departments was also crucial. Effective communication with lighting, stage, and production teams, facilitated by professional radio systems, ensured smooth operations. Through meticulous planning, cutting-edge equipment, and a dedicated team, the engineers delivered an unparalleled listening experience.

Achieving pristine audio clarity for both the audience and the performers required multiple layers of precision engineering. Extensive pre-show sound-checks ensured all components functioned optimally, while the strategic placement of d&b Audiotechnik KSL line arrays minimised hotspots and dead zones. Custom in-ear monitor mixes provided the artists with precise on-stage audio, and the engineering team continuously monitored and refined the mix during the performance.

Adapting to the Energy of the Crowd

A dynamic audience significantly influences sound mixing and setup. Live audio levels were adjusted in real time to maintain clarity over the crowd's ambient noise, and the FOH engineer fine-tuned the mix to align with the concert's energy. Carefully placed microphones and in-ear monitoring systems prevented unwanted feedback, while the sound team accounted for the acoustic impact of a dense crowd in their initial setup calculations.

Executing a concert of this scale required precision in planning, coordination, and real-time adaptability. Multiple pre-event planning meetings were held to outline every detail of the event, and a thorough site inspection helped optimise speaker placement and pre-empt potential challenges.

Communication was key, with professional radio systems ensuring seamless real-time coordination. Full-scale rehearsals allowed the team to fine-tune all aspects before the live performance. Specialised teams managed different components, audio, lighting, visuals, and stage design, while spare equipment and backup systems were in place to mitigate unforeseen issues. Throughout the show, engineers actively managed every aspect of the audio setup, making real-time adjustments as necessary.

The results spoke for themselves. "It sounded so good that many people who recorded the concert and posted on social media got copyright notices," Lobo quipped.

Through a combination of expertise, innovation, and seamless execution, the audio engineering team ensured that Dua Lipa's *Radical Optimism* Tour in Mumbai delivered an unforgettable auditory experience.

The success of a large-scale concert like Dua Lipa's *Radical Optimism* Tour in Mumbai depends not only on superior sound engineering but also on delivering a seamless, high-quality visual experience. The video production team utilised an advanced setup combining **Barco E2**, **Fabulux LED panels**, and **Resolume Arena software** to create stunning, synchronised visuals that enhanced the overall performance.

The **Barco E2 system** played a crucial role in integrating multiple screens, ensuring that they were synchronised, colour-accurate, and free from glitches or distortions. Paired with high-quality Fabulux LED panels, the setup provided bright, clear, and immersive visuals that captivated the audience.

Resolume Arena software offered real-time flexibility for video and graphics manipulation. This allowed Visual Jockeys (VJs) to adapt dynamically to the performance, ensuring the visuals responded seamlessly to the music and audience energy. This combination of equipment is specifically chosen for its ability to provide high-quality, dynamic visuals in a fast-paced, live environment like this concert, allowing technicians and visual artists to have precise control over the video output while maintaining flexibility and creativity.

- **Calibration and Colour Matching:** Ensuring consistency across multiple LED screens was a key concern. The team meticulously calibrated the **Fabulux LED panels** using precise colour matching tools to achieve uniformity.
- **Synchronising LED Screens with the Performance:** Maintaining frame-accurate video playback in sync with live music required high-performance processing from the Barco E2.
- **Managing Multiple Video Sources and Complex Inputs:** With multiple video feeds running simultaneously, careful planning was necessary to prevent latency issues and ensure smooth transitions.
- **Large Venue Setup:** In an expansive outdoor venue like the Bandra Kurla Complex, covering large audiences from different angles and distances presented challenges in signal distribution. The team strategically positioned LED walls and IMAG screens to provide an optimal viewing experience for all attendees.

Despite these challenges, the video team successfully delivered an uninterrupted, visually engaging experience. "The biggest challenges in setting up the video for this concert were calibration and colour matching, syncing the LED screens with the performance, and managing multiple video sources. In large venues like this, the complexity of signal distribution can be a challenge, but we planned meticulously and overcame them all."

The Team Behind the Visuals

Executing a production of this scale requires a dedicated team of professionals, each with a specific role to ensure seamless integration and operation of the video systems.

- **Pawan Vishwakarma** – Technical Director of Video
Role: Oversaw the integration of all technical systems, including LED screens, switchers, graphics, playback, and IMAG screens. Was responsible for ensuring that all video components work together smoothly and troubleshooting technical issues as they arose.
- **Karan Saxena** – Video Engineer
Role: Managed the setup, configuration, and maintenance of video equipment. Ensured proper routing and display of video feeds while troubleshooting any technical issues that occurred during the performance.
- **Azad Siddiqui** – VJ / Video Playback
Role: Handled live video manipulation, graphics, and effects in real-time. Worked closely with the music and audience dynamics to create visually immersive experiences that enhanced the concert atmosphere.

By combining technical expertise with state-of-the-art equipment, the video production team delivered a visually stunning performance that matched the energy and scale of Dua Lipa's *Radical Optimism* Tour. The meticulous planning and seamless execution ensured that the audience experienced a concert that was as visually spectacular as it was sonically immersive.

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VERSATILE CLAYPAKY SHARPY X FRAMES ILLUMINATE SHAAN'S CONCERT

Shaan, one of Indian cinema's most celebrated playback singers, delivered a captivating live performance in Bangalore. The concert, which was visually enhanced by an intricate lighting design crafted by **Jasangat Sonpal**. To achieve the desired dynamic and immersive lighting effects, Sonpal selected 62 **Claypaky Sharpy X Frame** fixtures, provided by **Reynold's Sound & Lighting Services Pvt. Ltd.** in Bangalore.

Shaan's set included a thematic segment titled "the four stages of love," comprising a series of ballads and heart-felt numbers. Sonpal worked closely with the artist's manager, **Sidharth Ghanta**, to develop the show's visual aesthetics while ensuring the seamless integration of the Claypaky Sharpy X Frames into the production.

"Sharpy X Frames are my go-to light: I love playing and switching between their spot and beam modes," said Sonpal. "The fixture is truly a hybrid light

with characteristics of an LED-like spot and a punchy, laser-style beam. If there is mid-air projection or if we need to highlight the artist on stage, X Frame can do both, which makes it a unique light in today's market."

To achieve a balanced and dynamic lighting arrangement, Sonpal positioned the Sharpy X Frames across multiple trusses, distributing 12 fixtures each along three horizontal trusses placed upstage, mid-stage, and downstage. The remaining

fixtures were strategically placed on three five-metre trusses positioned on either side of the LED screen. This configuration allowed for versatile lighting transitions, with seamless shifts between bold beams and precise spotlights.

In addition to his role as Lighting Designer, Sonpal also took on the responsibilities of Programmer and Lighting Operator. His expertise in harnessing the full potential of the Sharpy X Frames contributed to

the concert's overall impact, heightening the energy of the performance and enhancing the audience's engagement.

The Claypaky Sharpy X Frame has become a preferred fixture for live event productions due to its hybrid capabilities, combining the attributes of a high-output spot fixture with those of a powerful beam light. The lighting equipment was supplied by **Felix Remedios** and **Selvin Remedios** of Reynold's Sound & Lighting Services Pvt Ltd. Their contribution ensured that the concert met the highest technical standards, complementing Shaan's musical performance with a visually stunning light show.

Shaan's concert in Bangalore was a testament to the synergy between music and lighting design. With Claypaky Sharpy X Frames playing a pivotal role in creating a dynamic visual experience, the event reinforced the importance of advanced lighting technology in the modern live entertainment industry.



Jasangat Sonpal selected Claypaky Sharpy X Frame fixtures ensuring an even wash of light in the performance

MARTIN UNVEILS THE MAC AURA RAVEN XIP MOVING HEAD FIXTURE

HARMAN Professional Solutions has introduced the **Martin MAC Aura Raven XIP**, a premium moving head fixture designed for versatile applications. Integrating advanced wash, beam, and eye-candy effects with robust weatherproofing, it suits lighting designers, rental companies, and installation customers for festivals, theatre, corporate events, and broadcast applications.

Delivering 24,000 lumens of output, the MAC Aura Raven XIP ensures powerful illumination. Its 343 mm (13.5 in) front lens enhances beam intensity while maintaining a smooth wash field, free of colour artifacts or hotspots.

Utilising an RGBL (Red, Green, Blue, Lime) light engine, the fixture ensures accurate colour reproduction and improved skin tones. Its dark lens al-

lows discreet integration into various environments.

The MAC Aura Raven XIP's XIP smart weatherproofing technology enables both indoor and outdoor



MAC Aura Raven XIP delivers 24,000 lumens of output

use. It combines the compactness and quiet operation of an indoor fixture with the ruggedness of an outdoor-rated unit, making it ideal for demanding environments.

A belt-driven zoom system ensures rapid, near-silent operation, making it suitable for noise-sensitive settings like theatre and television. Additional features include a Universal Connect Module slot, yoke handles for easy transport, Martin's P3 control for seamless DMX and video integration, and Companion Mobile app control.

Providing 50% more brightness than the **Martin MAC Quantum Wash**, the MAC Aura Raven XIP offers reduced maintenance needs, making it ideal for theatre, television, corporate events, and large-scale concerts.

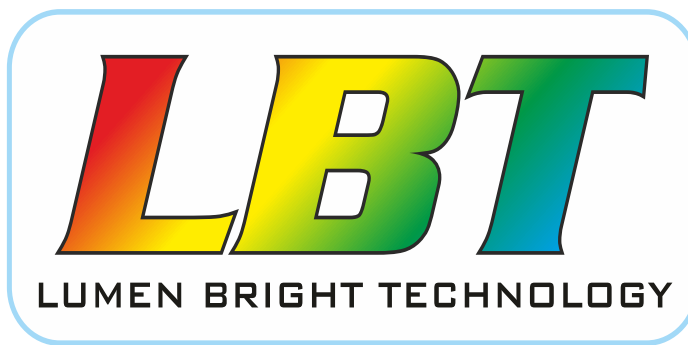
Wouter Verlinden, Product Manager of **Martin Professional Creative**

LED, Lighting & Control, explained: "When it comes to a product that checks all the boxes and continues to surprise, the new MAC Aura Raven XIP is that fixture. We intentionally designed this fixture's large lens to be dark and able to seamlessly blend into its surroundings much like the raven bird does."

The fixture ensures intense yet smooth washes with a soft edge. The optional BeamShaper accessory enhances adaptability and cost efficiency.

The MAC Aura Raven XIP stands out as the flagship of the Martin MAC Aura family, offering superior light quality, advanced weatherproofing, and innovative features. Its durability, versatility, and performance make it an essential tool for professionals in entertainment, broadcast, and installation markets.

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ELATION UNVEILS KL CORE IP WEATHER-RESISTANT LED LUMINAIRE

Elation Lighting has announced the release of the **KL CORE IP**, the latest addition to its **KL 'Key Light' Series** of LED luminaires. Designed to meet the needs of today's fast-paced and light-critical environments, the KL CORE IP offers exceptional versatility by functioning as an ellipsoidal, Fresnel, or monolight. This innovative fixture promises to deliver broadcast-quality illumination in a variety of settings, from outdoor film sets to indoor TV studios and theatres.

The KL CORE IP is particularly well-suited for outdoor applications, thanks to its rugged, IP65-rated design. This rating ensures that the fixture is protected against water, dust, and other environmental factors. Consequently, it is an ideal choice for live productions where durability and performance are essential.

At the core of the KL CORE IP is a

powerful 400W RGBMA LED engine, capable of producing over 15,000 lumens. For ellipsoidal applications, the fixture can be paired with an optional KL CORE IP Shutter Barrel and used with any of the IP67-sealed

lens tubes to function as a traditional LED ellipsoidal.

The KL CORE IP offers fully variable 16-bit colour temperature adjustment, ranging from 2400K to 8500K, allowing for ultimate precision in



Elation Lighting's IP65-rated KL CORE IP Luminaire offers versatility adapting to various lighting needs

adapting to various lighting needs. This feature is complemented by dim-to-warm and redshift emulation, providing a classic incandescent glow for productions that require a more traditional aesthetic.

The KL CORE IP's adaptability extends beyond its physical versatility to its ease of use. The fixture is equipped with a touch bar encoder for straightforward standalone operation. For advanced control, the KL CORE IP supports Aria x2 wireless management integration, and NFC configuration.

The KL CORE IP is no exception, offering a powerful combination of high output, exceptional colour performance, and unmatched adaptability.

The fixture's adaptability, durability, and superior colour rendering make it a valuable addition to any production environment.

ROBE EXPANDS PRODUCT LINE WITH NEW LAUNCHES AT ISE 2025

Robe continues to push the boundaries of professional lighting with the launch of two new products: the **iSTROBE** and the **iESPRITE LTL WashBeam**. These latest innovations reinforce Robe's commitment to developing high-performance lighting solutions for the rental, staging, and live events sectors.

The iSTROBE is designed for high-intensity stroboscopic effects, and the iESPRITE LTL WashBeam is a versatile fixture catering to concerts, theatre, and broadcast applications. These new products join an expanding range that also features the recently introduced **iFORTE Fresnel**, **PAINTE Fresnel**, **SVOPATT**, and **SVB1**.

iSTROBE: High-Performance Strobe Technology

The iSTROBE is built for powerful strobe effects, featuring three rapid motorised zoom functions, including a unique linear zoom for its central white LED strobe. Its continuous pan

and tilt rotation control ensures dynamic movement, making it one of the most versatile strobe fixtures available.

Key features include extreme output levels, precise zonal control, and fast pan and tilt movements. The fixture integrates Robe's patented **RAINS**, **POLAR+**, and **parCOAT IP65** active protection technologies, ensuring durability and reliability in diverse environments. Additionally, variable flash durations offer precise control over every beat and effect, enhancing programming flexibility.



Robe's recent launches at ISE 2025 are both versatile and high-intensity fixtures catering to a broad range of applications

iESPRITE LTL WashBeam: Versatility and Performance

Inspired by the award-winning iFORTE LTX WB, the iESPRITE LTL WashBeam is a compact yet powerful fixture designed for both indoor and outdoor use. Weighing 37 kg, it features an advanced optical system, including a 200 mm front lens, and is optimised for medium-to-long throw applications.

The iESPRITE LTL WashBeam utilises



Robe's internally manufactured iSE-TE 750W XP (Xtra Power) and HCF (High Colour Fidelity) White LED engines, ensuring longevity and consistent output. It offers full colour control via a CMY colour mixing system and a flexible zoom range, with no intensity loss when the iris is engaged.

Additionally, the iESPRITE LTL WashBeam is designed for integration with Robe's RoboSpot system. This adaptability makes it suitable for use as a remote follow spot or as part of a larger lighting setup.

With the introduction of the iSTROBE and iESPRITE LTL WashBeam, Robe reaffirms its position at the forefront of lighting technology. These additions to the product line demonstrate the brand's dedication to delivering durable, solutions for the professional lighting industry. As Robe continues to expand its offerings, it remains a key innovator in stage and event lighting.

by Viraf Pocha



Learn from other people's mistakes. Learn from your betters, elders. The more experienced.

The customer is king. Sell solutions not products. Focus on value not price. Specialise before you diversify. Do not spread yourself too thin. No matter how popular you are. No matter how in demand your services are. If you do not structure your finances correctly / properly – you will not make money. The last nugget. Failing to plan is planning to fail.

We all know these nuggets. We come across them every few days. So, now a very provocative question. Why are you not practicing them? Come on. Be honest with yourself. Why are you not following them? As applicable to your world of operations. I have heard so many defensive answers. The most common being.

No time. Or it's not applicable to me/ my career. Perhaps true. You do not have time today. Not applicable to me today.

Problem is, it will be applicable eventually. Chances are, if you have not set it in place now. It is going to overwhelm you tomorrow. The enforced suspension of our activities meant many things to all of us. We all went through our own catharsis and thinking. I heard so many people swearing that things will be different in the indefinite future. During COVID, our industry's people (in particular) went through three common personal reflections / activity. Why am I working so hard for so little? Is it worth it? The toll on my health & family.

Or, now I have to think for myself. Each person for themselves. How can I get through this?

Or take stock of where I am and figure out how to make the best of the future. From what I understand, many of the resolutions flew out of the window as soon as life restarted.

True, life restarted vigorously. At a furious pace. Many were left short staffed as so many of our industry had dispersed to other countries or other pursuits. In the mad scramble to recover from months of enforced inactivity, it was a day-to-day coping. In that turmoil, many of the resolutions collapsed. A wide rift seems to

have formed. Shaped by the way things have turned out post COVID.

Music festivals seem to have become the mainstay of our industry. World-renowned artists are finding their way to India. A set of circumstances are encouraging top acts to stop by in India. As new centres open, these acts are now doing tours across India. To meet these performance demands a huge amount of branded equipment is being brought into the country. At the lower end, cost and price are the only criteria. The market is being flooded with equipment from the far east. Repairs and maintenance are tough so it must be replaced or go out half-functional at best. If you are doing a larger show, it's almost impossible to get a set of matching equipment. Colours do not match, features like prisms, gobos, frost scales go astray. It's impossible to mount a show at that point. So, you end up with a set of lights moving and flashing away, blaring sound and led walls that play flashy graphics in a never-ending loop. The industry seems to be just pulled along and, in my opinion, not in a healthy direction. Which is the reason I am asking my colleagues to ask yourselves why? Why are you doing what you are doing? Why are you doing things the way you are?

During COVID, so many seminars and training sessions were attended. In hindsight, it became apparent that they were all bunched up at the beginning of the lockdown and everybody had the capacity to pay attention. As the lockdown dragged on and issues that are more vital took precedence – many of the learnings were put on the back burner.

I think we have had enough time to reflect on what we were thinking during those times and how things have played out after.

If you one of the lucky ones who could implement and execute your plans – great.

So many industry bodies have been set up to bring industry people together. I personally have not heard of anyone sharing best practices so far. In my mind this could be due to reticence of sharing their company information (understandably).

Sadly, in our business of communication, only a handful are great communicators.

A huge number of people in our industry are not fluent in technical language

I can speak from experience here.

Remember – our industry is about people first. Services provided by people – for people.

Too many of us focus on equipment and not so much on our people.

Yes, it is true that technical riders often focus on specific brands and models. If you do not have a specific brand in stock, you immediately drop out of contention for a job.

That is great if an engineer or operator who knows that brand will use it to do the job he was contracted to do. That equipment is going to stay in stock long after that job was done. Will you sell it? Will you train your team to use it to the fullest?

My own experience. In the last few years, a series of lighting boards were released in the country. Many workshops were conducted to get a set of operators ready to use those boards. Many certificates were handed out. Unfortunately, on site if I ask for something to be programmed, usually there is a struggle to get even the basics programmed.

It is easy to dismiss me as fussy and demanding. Crouch in defensive mode. Not once has the operator stepped up and asked, "Where do I learn?" The technical manual that came with the board is never available.

Ask why?

Tonnes of excuses like "He will learn and then leave. Whatever I spend on training him, my competitors would get for free."

If you gave him his due, why would he leave?

I hear it's a Gen-Z thing to always want to be somewhere else. But within our vast population surely there will be a set of hungry committed people who want to be the best there is, just because they want to be.

Another truism. Be great. The money will follow. Rarely is there a situation where somebody who is chasing money from day one ends up being great.

In my view, all of these stumbles can be avoided with a simple why?

Boldly ask yourself and your team – why are you doing what you are doing. Initially there will be scepticism. You must have the courage to see

this through. To get your people to commit to these ideas.

It will break them out of this cycle of doing.

A recent example. I was setting up with a totally new team. I had sent them a clear drawing of the lighting positions and the patching numbers. The leader did not have even the courtesy to share that with the team. As a result, nobody knew what they were supposed to do.

I got the team to stare at the plans – on paper, not some WhatsApp screen. Of course there was confusion. I got the boys to physically lay out the lights under the truss exactly where it was to be placed. I could clearly see the lack of care. Lights were placed meters away from where they were to be hung (truss was at working level). When I demanded exact positioning, I was dismissed as being anal. It took maybe 15 minutes. "Wasted 15 minutes," I was hearing all around.

At the end of those 15 minutes, every person on the team, including loaders knew what went where. Cables and hooks were distributed clearly to everyone. Set up ready in record time. The team was so focussed on what they were doing – even they did not realise how fast they were going.

I sincerely hope they have learnt why those 15 minutes were "wasted." Henceforth, will continue to know why they did what they did.

A tiny beginning. Sincerely hope they have the positive reinforcement to go on asking why? If the leader can answer that question to the satisfaction of every member – including the loaders.

Suddenly all the truisms I started this article with will begin to be real and a work ethic will begin to set in.

Try it. Why not?



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HOW I HAVE SEEN STUDIOS EVOLVE

Growing up in a studio environment

by **Aditya Mehta**

I was about three years old when we were suddenly moved to another bedroom in our house in Andheri. My father, (late) **Nikhil Mehta**, urgently needed to build a studio in our house in a timeframe of 3 days! The year was 1977. He borrowed carpets and mattresses from his uncle's bungalow next door. Jute mats and heavy curtains were placed on the walls, and a makeshift control room was constructed in one balcony. All windows were sealed with plywood. A wall between the balcony and the living room was broken down to install a glass partition. A small mixer sourced from Lamington Road cost him Rs. 650. Sitting all night, he personally converted that mono mixer into stereo. With borrowed microphones and his spool tape recorder, he recorded a full 7 song album, with six singers and eight musicians together. It was later commercially released and distributed by **Oriental Melodies** on audio cassettes. A company called **Movac** had introduced cassette tapes in India the same year.

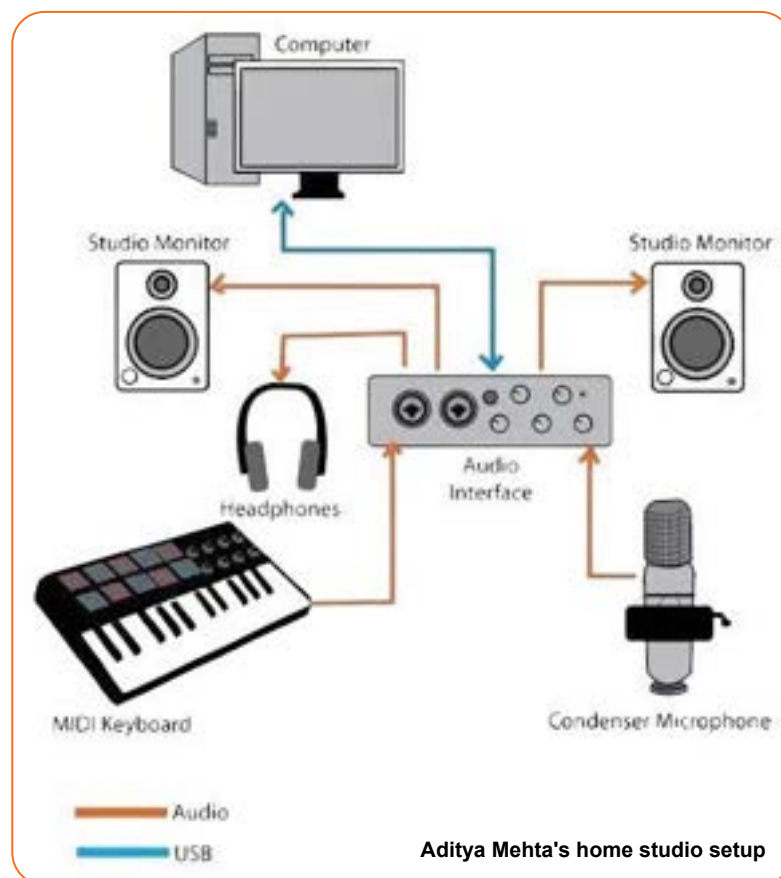
Much later I learnt that this makeshift studio was born out of necessity, as a music label had gone back on its promise. The entire household had pitched in to help my father. My aunt, Kishori, became an album producer. My mother, Sudha, handled the canteen service (and later worked on translations for some audiobooks). Within a couple of months, the control room was moved to the other balcony. Our living room became the main recording hall. And a much-better acoustically treated studio was built. The studio spanned about 1,500 sq. ft., with our home becoming the remaining half, but had a separate entrance.

At the time, Bombay had only six to eight recording studios. Import duties on audio equipment stood at a staggering 350%. **All India Radio** had its own studio for content production for its various broadcast stations, while the other commercial studios focused on film music - where the equipment was to be recorded audio directly onto film rather than on a separate tape. The level of live music recording skills in those days is unparalleled today - both for music and background score. Suburban Bombay had no studios yet; Mehboob Studio in Bandra was the last stop before heading to Tardeo for the majority of the film studios there. And now in 1977, **Sudeep Studio** was born in Andheri. It was dedicated to non-film work, including radio spots, private label albums (now called indie music), dramas, documentaries, spiritual recordings, and TV serial title songs. In hindsight, Andheri becoming the recording hub of Bombay today might be Nikhil Mehta's doing!

The Growth of Technology and the Industry

The Asiad Games at Delhi in 1982 boosted TV sales, and neighbours would gather at the privileged TV owner's house. TV serials like *Hum Log* began in 1984. And we had just 2 hours of TV broadcast everyday. Around the same time cassette players became affordable and that propelled sale of non-film albums. Radio and TV were already covering film songs. When Mahabharata aired on TV (1988), even metros like Bombay came to a standstill. Recording sessions paused at Sudeep Studio, as musicians watched the episode at our home before resuming work next-door. The 1980s generation fondly remembers *Chayyageet* on Wednesdays, and Sunday film timings on DD even today! Audio and media equipment like radios, cassette players, TVs were highly cherished items in homes. Music consumers also treasured their music albums on cassettes (and later, even CDs).

In the next few years, 4-track recorders evolved into 8-track and then 24-track devices. Electronic drum machines too were making a mark. But were taken as a novelty item initially. My father predicted that increasing track



counts for recording would not only keep musicians busier but will eventually dilute the team spirit of music creation as a "team". He said, "While we studio owners will benefit due to more hours getting booked, the album producers and music labels will have to bear the increase in recording costs." With a handful of studios in Bombay, our own studio was pre-booked for months in advance. With the arrival of DD Metro channel, advertising jobs started increasing faster.

In the 1990s, the advent of 24-hour TV channels like Zee, Sony, etc. led to exponential demand for content producers and therefore more recording studios were born. Hard disk recorders started coming in, to be followed by computer-based recordings. Studios started getting classified as film studio, non-film studio, advertising studio, etc. based on their location. Advertising work primarily happened in Fort, Worli and then Bandra. Juhu and Andheri studios were doing more film and album work. This was mainly because the corporates and ad agencies were based in Nariman Point and Fort area. And film fraternity was living in Bandra, Juhu and Andheri. Another trivia is that only in suburban studios, footwear was to be kept outside the dubbing rooms. There were canteens attached to most of these studios which used to serve tea, snacks and tea.

Why am I sharing these intricate details?

1. Many young readers may not know of such recording practices.
2. There were no institutes except for FTII, Pune, and much later Mumbai University & SFTII Kolkata for audio.
3. The new digital technology era that was setting in has now eradicated several subtle and feel-good factors of music creation, as mentioned above.

The 90s Digital Era

Roja (1992) marked the arrival of **A.R. Rahman's** unique sound and home-recording studio possibilities. While he did use some live instruments in that album, digital production took centre stage. Samplers, synthesizers, and drum machines gradually started replaced 'real' musicians. Large studios shrank in size as technology advanced. Those who failed to adapt were getting left behind. In 2002, we introduced *SwarShala*, followed by *SwarPlug* in 2004, under *SudeepAudio.com*. This software featured 74 Indian instrument samples, developed by French musician Mariano Etchepareborda with samples of several Indian musicians. I helped with the interface design, and ensured its wide-spread distribution by going door to door to studios and homes of musicians in Mumbai, Delhi and Chennai. At the time, we all didn't fully grasp the downsides of digitization, but if we hadn't done it, someone else would have. Selling software in physical boxes presented its own challenges like customs clearances, waiting times, etc. Piracy was (and still is) the biggest hurdle of them all. There was poor internet connectivity right till 2015 and so box-packs existed even in a digital era! However, improved recording digital audio workstations (DAWs) like **Pro Tools**, **Logic**, **Acid Pro**, and **Ableton**, along with virtual instruments like **Omnisphere**, **Stylus RMX**, and **Elastik Player**, turned the computers into production powerhouses on the size of a simple desk!

The State of Studios Today

From smaller sized rooms, recording studios now shrank into personal bedrooms. Reflection filters from companies like **SE Electronics** allow singers to record at home. Plugins from Waves and iZotope enable audio cleanup. Until 2014, Macs dominated audio recording, but Windows PCs gained traction with a stable Windows 7 OS. The number of music creators has moved beyond Mumbai and skyrocketed across India. **FL Studio**, still the top-selling DAW on *SudeepAudio.com* in 2025, reflects this shift.

Large recording studios sit empty, as products like Vienna Symphonic Libraries replace live violin and orchestral sections. As sound engineer **Shantanu Hudlikar** advises, "Know the original instrument sound before using samples."

Pro Tools, once priced Rs. 2 lakh with mandatory hardware costing another Rs. 4-6 lakh, is now available at Rs. 21,000-55,000 yearly subscription, running on affordable audio interfaces from any brand. Software is instantly downloadable from *SudeepAudio.com*, eliminating box-packs and customs issues adding to the instant gratification need we all are getting used to. Studio-sized mixing consoles are replaced by software mixers. Only live drums and Indian instruments still require commercial studios. Many singers now have their own recording spaces, saving time and money, and helping them offer package deals to producers. As sound engineer **Mujeeb Dadarkar** notes, "Studios are now run by accountants. Creativity has taken a back seat."

COVID-19 accelerated remote work. Many OTT shows were dubbed in the actors' homes by themselves using their phone's headsets and mailed to the studios during the lockdown! That gave the confidence that even post-production jobs can be done in small home setups! This also helps cutting commercial rent and commute time for the sound engineers and musicians. Large spaces are being primarily booked only for final screenings. Freelancers offering package deals have also affected the income levels in the industry. Unfortunately, film actors remain India's highest-paid entertainment professionals, while music and audio departments receive minimal compensation, despite being expected to deliver Hollywood-level sound. As Sound Engineer

Baylon Fonseca says, "Even vegetable vendors on the same street don't undercut each other. Why can't we sound engineers unite on the minimum fees front?"

The Changing Landscape

Music consumption is now purely app-driven, heard on mobile phones with bluetooth earbuds primarily. No one buys albums anymore. Music is now being treated as a 'free' commodity, thanks to app-subscriptions inbuilt by mobile networks in their monthly plans. YouTube is the second most used search engine after Google, where music is being consumed - again, for free. Yes, Vinyl records are making a come back in the USA. However, each record costing in the range of Rs. 3000-5000 makes it quite unaffordable in India. On the audio education front, there are free tutorials being offered by several young sound engineers on social media. A lot is changing, and too fast.

A comparison of past and present scenario:

4. New technology has enabled home setups for both music creation and post-production, including modern acoustics.
5. Advertising jobs spike only during live events like IPL.
6. Studios are over-supplied not just in Bombay, but across India.
7. Certain genres, like Indian classical and ghazals, are fading.
8. Computer-based production dominates; the magic of live recording sessions has diminished.
9. Collaboration between musicians and sound engineers is rare; though **PALM Expo** and **IRAA Awards** foster networking.
10. Listeners skip tracks within seconds if they're not engaged.
11. Entertainment overload has reduced attention spans; even three-minute songs now feel too long to listen to!

The Future of Studios

In such a tech-driven scenario, will existing studios survive? Yes - but only the strongest. Many that sprang up hastily post-Covid to ride the content creation wave are already shutting down. It is not that there is no work happening in the industry and that everything is going downhill. But some new, unexpected challenges have indeed come up. For instance, with a sudden and big rise in rental costs in Mumbai for commercial spaces, and an increasing number of freelance engineers working from home, only the most resilient studios will endure. It is also pertinent that Film, OTT, and TV producers start valuing the work that sound engineers bring to the 'desk' - both in music and post-production. They definitely add creativity to the final output, and are not to be treated as just mere technicians. As AI continues to disrupt the industry (e.g. mastering can be now done within Apple Logic DAW), the key lies in embracing this new computing method as a tool, much like other technological advancements that have shaped modern audio production.

A recording studio will always thrive when it again becomes a meeting space for creative minds (re-read the first 2-3 paras of this article). Today, most studios have the best of gear. But it is the "vibe" of a studio - its soul - that helps creativity flow, just like what I've experienced in my own childhood at our studio. Love, laughter, food, and THEN the music recording begins.

Let us all come together and help build a healthier future of music creation; where expertise of real musicians and experienced audio engineers is truly valued along with healthy + timely payments. And that our sound recording industry stands united to help nurture each other and grow together.

Fingers crossed.



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Pioneering the Future of Pro-Audio Innovation with N-Labs

N-Labs, a rising force in the Indian pro-audio manufacturing sector, is built on the principles of innovation, customer-centric service, and strong engineering expertise. In an engaging conversation with the PALM Expo Magazine team, Founder and CEO, Hemal Bhatt shares valuable insights into N-Labs' journey, core philosophy, strategic vision, and ambitious goals for both the Indian and international markets.

Under Bhatt's dynamic leadership, N-Labs has carved a niche for itself by blending years of practical experience in the audio rental business with innovative local manufacturing techniques. This distinctive approach has given the company a deep understanding of the challenges faced by its customers, allowing them to develop solutions that truly meet the evolving needs of the industry. As N-Labs continues to expand its horizons, it remains committed to raising the bar for quality and innovation in the pro-audio space.

How is live sound reinforcement evolving in India, and how is N-Labs preparing for these changes?

In the current landscape, live sound is increasingly shifting towards networked audio and adhering to high-end international quality standards. N-Labs is at the forefront of this transformation, striving to bring these global standards to India while enhancing quality with a distinctly Indian perspective.

Our focus is on developing products specifically tailored for Indian concerts, live sound reinforcement applications, and installations. Although imported products currently dominate the market, we are actively preparing for this shift and will be ready to meet these evolving demands in the near future.

What major shifts do you predict in the Indian pro audio industry over the next decade?

I believe that the pro audio industry is now transitioning towards network audio interfaces. An increasing number of network audio products will be introduced, and they will soon become an essential component for every rental company. As we observe, all the latest digital mixing consoles have already been made available in India, and major rental companies are actively using these advanced systems.

In the immediate future, these technologies will become accessible to lower and mid-sized rental companies, even in Tier 2 and Tier 3 cities. This shift will enable them to incorporate network audio into their daily operations, simplifying system programming and fine-tuning to meet specific requirements.

What impact do you think immersive and spatial audio will have on live events and installations?

Spatial sound, or more commonly known as immersive sound or soundscape, is still in its nascent stages in India. Immersive audio technology, is relatively new and still developing, making it unsuitable for immediate adoption



Hemal Bhatt, Founder and CEO, N-Labs

in the Indian market. Since networked audio is not yet widely adopted in India, it will likely take another five to six years before soundscape and immersive audio experiences become a regular feature in live concerts.

However, when it comes to installations, the adoption of soundscape technology is expected to happen much sooner. Similar to **Dolby Atmos**, soundscapes can be implemented in theatres in the near future and may eventually extend to live sound applications. The initial uptake in installations is likely to pave the way for broader acceptance in live concert settings over time.

How does N-Labs ensure that its products are aligned with the evolving needs of audio professionals in India? How does N-Labs plan to differentiate itself in an increasingly competitive market?

At N-Labs, our focus is on designing solutions that serve as viable alternatives to international brands, offering the same quality but tailored for

the Indian market. These products are not only affordable but also serviceable within India, ensuring that our clients have reliable after-sales support.

We firmly believe that the professional audio requirements of Indian rental companies should be met with products that are made in India and readily available to Indian professionals.

How does N-Labs plan to differentiate itself in an increasingly competitive market?

N-Labs differentiates itself by aligning closely with the specific needs of the Indian market while maintaining international quality standards. Our commitment to innovation and adaptability ensures that we continue to evolve alongside the changing demands of the industry. By offering high-quality, cost-effective, and locally serviceable solutions, we aim to empower Indian rental companies with reliable alternatives to imported products.

As N-Labs, we take pride in being a **Made in India** company, designing and manufacturing products primarily for the Indian market before expanding to other regions. With this vision in mind, we have already aligned ourselves with international standards, developing products that are comparable to those available globally.

When it comes to competition, we believe that N-Labs currently faces no real competition from other Indian manufacturers. This is because no other pro audio brand in India is truly aware of the international standards being followed in markets such as the United States, China, or Europe. Many Indian

brands are still unaware of the next big developments in audio technology and remain focused on importing products from abroad, rebranding them under their own names, and selling them in India.

In contrast, N-Labs is fully invested in developing technology within India, for India. Our vision is forward-thinking, while many others in the industry continue to operate with a mindset that is at least a decade behind. This forward momentum sets us apart as an Indian company genuinely committed to innovation and progress.

We are actively pursuing more strategic partnerships in areas such as digital speaker processing and semiconductor design, specifically tailored for Indian products.

We are determined to bridge the gap between global excellence and local affordability, ensuring that India not only keeps pace with the latest advancements in audio technology but also sets a benchmark for others to follow. This is the vision we are striving towards at N-Labs.

Are there any partnerships or collaborations in the works that will strengthen your presence in the market?

At N-Labs, we are already equipped with the latest advancements in pro audio technology. Our offerings include state-of-the-art filters, advanced equalisation techniques, whether parametric or dynamic network audio platforms that are ready for seamless integration with international network systems available worldwide.

We are proud to be developing a single network system, the first of its kind in India, which can not only communicate with amplifiers but also transmit audio on the same platform without the need for an external controller. This innovation marks a significant milestone for the Indian pro audio industry, and we believe it will revolutionise the way audio systems operate.

What are some of the most exciting advancements in pro audio technology that N-Labs is currently exploring? How does N-Labs approach research and development to stay ahead of technological trends?

At N-Labs, we are continuously exploring cutting-edge advancements in

pro audio technology to stay ahead of the curve. Currently, we are working on some of the most exciting innovations in network audio interfaces, immersive sound, and advanced control systems that will revolutionise the Indian audio landscape.

One of our most remarkable developments is the creation of a single network system that can simultaneously communicate with amplifiers and transmit audio on the same platform without the need for an external controller.

To maintain our technological edge, N-Labs has established offshore R&D centre in multiple countries, not just in India but also in regions where audio technology is advancing at a rapid pace. Our R&D teams work closely with international experts to integrate technologies into our products, ensuring that they align with the specific needs of Indian customers.

Our approach is not just about adopting global technologies but also about making them accessible and easy to use for Indian consumers. Many professionals and users in India may not yet be fully aware of these advanced technologies, and we are committed to simplifying their adoption by incorporating them into user-friendly products that can be used in day-to-day applications.

We are excited to announce that the results of our extensive R&D efforts will be showcased at the **PALM Expo 2025**. This event will mark a significant milestone for N-Labs, as we unveil innovations that have never been seen before in India or across Asia. Our forthcoming products will set a new benchmark in the Indian pro audio industry, offering seamless performance and unprecedented technological integration for Indian consumers.

With a clear vision and a commitment to research-driven innovation, N-Labs is not just keeping pace with the future of pro audio, it is defining it.

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India's music industry continues to evolve, blending its deep-rooted traditions with modern production techniques. From independent hip-hop collectives to mainstream Punjabi pop, the industry is as diverse as ever. While major labels continue to dominate the charts, independent voices are making their presence felt, crafting unique sounds that challenge conventions. In this edition of *Unequal Music*, we take a look at three standout releases, exploring the talent behind the microphones, mixing consoles, and production desks.

Run It Up! by Hanumankind

Kerala-born rapper **Hanumankind** has cemented himself as one of India's most electrifying rap voices. Having shot to global recognition with his single, *Big Dawgs*, he continues decimating the industry with *Run It Up!*, a track that infuses traditional Kerala rhythms with contemporary rap production.

Produced by **Kalmi (Nikhil Kallimireddy)**, the song's highlight is its intense percussive drive, featuring the **chenda**, a traditional Kerala drum that builds in intensity alongside Hanumankind's precise, rhythmic flow. The track was mixed and mastered by **Akash Shravan**, included amongst the top 1% of Muso.AI's Mixing and Mastering Engineers for the year 2024. The electrifying rap track is recorded by **Amrith Raghunathan**, with **Jordan Rugo** assisting as a recording engineer. Hanumankind's genre-defying approach has garnered praise from *Rolling Stone*, *Complex*, *NME*, and *The Guardian*, and his work on *The Game Don't Stop* for the South Korean thriller series *Squid Game Season 2* has only heightened anticipation for what's next.

Released under **Universal Music Group**, *Run It Up!* is an anthem of resilience and reinvention, proving that Indian hip-hop is ready for the global stage. Kalmi and Hanumankind can be credited with putting Indian rap on the map in the last year, something big names like **Yo Yo Honey Singh** and **Baadshah**, though incredibly famous amongst Indian youth, failed to do despite high stream rates and flashy productions. Hanumankind is one of those artists we're proud

to claim as our own.

Dilbar by Dizlaw

Mumbai-based artist **Dishant Kamble**, better known as **Dizlaw**, stuns with *Dilbar*, a track that blends sharp lyricism with hypnotic beats. Dizlaw is recognised for his emotive storytelling and fusion of Hindi lyricism with contemporary music styles. Known for previous hits like *Caramel Tax* and *Kaala Teeka*, Dizlaw continues to push boundaries, Dizlaw carves a niche in the Indian music scene, offering listeners introspective narratives, by dabbling in hip-hop and indie music.

Produced by **Raul Flores Mendoza**, the track boasts an immersive soundscape, which was expertly mixed by **Tanmay Saxena** and mastered by **Aadesh Bankar**. Recorded at **Streetsign Studios**, *Dilbar* finds its home under **Azadi Records**, a label that has been championing politically conscious, forward-thinking music. Celebrating their eighth anniversary

this year, Azadi Records stays true to their ethos, and ensures that artists like Dizlaw have a platform to tell their stories, ones often overlooked by the mainstream.

Gallan Battan by Guru Randhawa

From indie rap to chart-topping Punjabi pop, **Guru Randhawa** continues his hit-making streak with *Gallan Battan (Our Talks)*. Known for soulful tracks like *Lahore*, *Ishare Tere*, *Slowly Slowly*, and *Tere Te*, Randhawa's latest single is a smooth yet energetic addition to his portfolio that blends his signature vocals with sleek production.

Composed by **Honey Dhillon** and **Gurjit Gill**, with production helmed by Dhillon, *Gallan Battan* was recorded at **CFR Studio**, Mumbai. Mixing and mastering duties were handled by **Ashock**, an engineer known for his work on **Karan Aujla's** album *Way Ahead*. He recently teased an upcoming project with **Coke Studio Bharat**—the Indian chapter of the

globally celebrated Coke Studio franchise. Which we will no doubt be keeping an eye out for. The **Dolby Atmos** mix, crafted by **Bassholics x Vaibhav**, enhances the track's depth, making it a standout. Released under **Guru Randhawa Worldwide**, with **Warner Music India** as the label partner, *Gallan Battan* underscores Randhawa's continued evolution as an artist and producer.

The Changing Sound of India's Music Scene

From Mumbai's underground rap circuits to Kerala's hip-hop fusion and Punjab's ever-dominant pop scene, India's music industry is thriving in its diversity. As production standards rise and artists collaborate across genres, the gap between indie and mainstream is steadily narrowing. Whether it's the socially charged ethos of Azadi Records, the genre-pushing Universal Music Group, or the high-production values of Warner Music India, these recent releases showcase the vast spectrum of talent defining contemporary Indian music.

With artists, producers, and engineers pushing creative and technical boundaries, the future of Indian music has never sounded more exciting.

.....
All record labels, independent artists and channels are requested to share new projects with the **PALM Expo Magazine** team if they wish to get featured in the '*Unequal Music*' column as the team explores the voice and talent of budding artists in this recurring feature. To share releases for this column, contact:

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SUN INFONET MARKS 25 YEARS OF LEGACY, INNOVATION AND PERSEVERANCE



The Sun Infonet team enjoys a much deserved celebration on a quarter century of business excellence

*Sun Infonet, a leading professional audio distributor and an AVIXA member, recently reached a significant milestone, 25 years of success. The event also coincided with the **Sun Group's** remarkable 40th anniversary in the industry, spanning professional audio, electrical appliances, and broadcast equipment. Based in the heart of New Delhi's Patel Nagar, Sun Infonet has played a pivotal role in reshaping the professional audio landscape in India. The company proudly represents world-class brands such as **Shure** (celebrating 100 years), **Allen & Heath**, **Meyer Sound**, and **Quest Engineering**, all of which have contributed to advancing the industry with their innovative products and integrated solutions.*

The celebration highlighted the strong relationships that **Sun Infonet** has built over the years with original equipment manufacturers (OEMs), channel partners, and key players in the industry. Key speakers at the event included **Jose Rivas** (Chief Sales Officer at Shure), **Andrea Granta** (Sales Manager at Meyer Sound), **Robin Clark** (Managing Director at Allen & Heath) and **Mark Ladewig**, (Director at Quest Engineering). Each speaker shared valuable insights, emphasizing the role of collaboration and trust in successfully establishing their brands in India through Sun Infonet.

Sunil Malik, the visionary Founder of the Sun Group, took the stage to reflect on his entrepreneurial journey. He spoke about the challenges and triumphs that have shaped the company's growth over the years. His unwavering commitment to making a lasting impact in the industry

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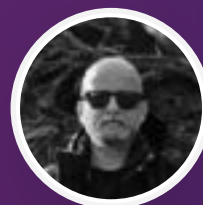
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Director, Soundideaz Academy;
Program Director,
Universal AI university



Emran Khan
Director,
Reset Live



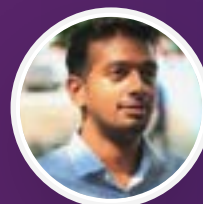
Gethin John
Chief Engineer,
Hafod Mastering



P A Deepak
Grammy® Award-Winning
Mix Engineer



Raghav Roy Kapur
Founder, Livewire Experience
& Vice President, EEMA West



Sachit Subramanian
Co-Founder & Managing Partner,
Circle Pro Audio



Vijay Benegal
Live Sound Engineer and
Co-founder,
Odble Consultants



Sunil Malik, Founder of the Sun Group, delivers a keynote address

has been the driving force behind the group's diverse expansion.

"When I founded Sun Group 40 years ago in 1985, it was the beginning of a vision shaped by challenges and learnings. The journey has always been about persistence, trust and finding right path. Starting with multiple business models, My first success came in the early '90s with Sun Medical Systems as distributors for Philips Medical, Sony Japan's Medical Division, Medtronic USA, and St. Jude USA, but the real breakthrough arrived with my entry into the professional audio and broadcast sectors in 2000 and 2002. In 2015, we celebrated a significant milestone when my sons **Luv Malik** and **Kush Malik** joined me in founding **Luxury Personified, LLP**. Together, they made their mark by introducing and distributing some of the most prestigious luxury brands in India. Our partnership with global brands like Shure, Sony, Marshall GoPro, Sonas, Dyson, Rivalo and so on, is not just about doing business, but also becoming a leader and establishing global trust and bringing innovative technologies and solutions to India. as we approach a turnover of 1000 Crores Indian Rupees in 2025, the journey is far from over., we have always believed in sustainable growth, diversification, and innovation, and we will continue evolving to meet the rapidly changing demands of the technology, luxury and consumer electronics markets."

Neeraj Chandra, Director of Operations at Sun Infonet, also shared his experiences of working alongside Mr. Malik from the company's inception, highlighting the dedication and vision that have been pivotal in the firm's achievements.

"We started with just five team members and now we are at 70 members. We've gradually expanded with offices across the country. We branched out from the pro business, diversifying into retail and e-commerce. But through it all, one thing was made very clear, we are to continue supporting our partners, to remain trustworthy, and to grow together with them."

Vinit Govil, Director and CEO, **Sun Broadcast Pvt. Ltd**, reflects on this milestone: "Covering this journey of 20 years in the Sun Group. I must enumerate the group philosophy, which has driven all of us. Uh, we have aligned with the top leaders in the technology domain in all our companies, and we have maintained transparent and fair business practices which are mutually beneficial to customers, employees.

As well as to the company and its shareholders. We are customer oriented and value driven organization with a specific focus on service and the personnel in the group. This has resulted in long partnerships with OEMs. Due to their satisfaction of performance and higher customer satisfaction ratings that they receive and the love that they receive for their products."

The evening was a tribute to all the valued members of Sun Infonet, whose passion and commitment to excellence have significantly contributed to the company's growth and standing in the professional audio space. The compa-

ny has forged lasting partnerships with industry giants such as Shure, Meyer Sound, Allen & Heath, and Quest Engineering, ensuring that world-class pro audio solutions reach the Indian subcontinent.

Adding an artistic touch to the celebrations, the event featured a stunning live performance by **Hargun Kaur**, a finalist from **India's Got Talent** and brand ambassador for the **Beti Bachao Beti Padhao** campaign in 2022. She was presented with a specially curated microphone by Jose Rivas, Chief Sales Officer, Shure.

The night was not just a milestone, but rather a testament to vision, perseverance, and an unwavering commitment to excellence. These are values that continue to define Sun Infonet and the Sun Group.

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MODULAR OUTBOARD

By Jonathan Burton

As another small-format modular electronics system is launched onto the market this year, I made a mental note of the ones I had bought into and passed on. If you are as old as I am then maybe you are familiar with the SCAMP rack, the Rebis or the dbx 900 modular systems.

The first of these, the SCAMP (Standardised Compatible Audio Modular Package) system was available between 1976 and 1984. This modular audio processing system was manufactured by Audio & Design Recording (ADR) and featured a standard racking frame that could accommodate up to seventeen one-inch modules, all powered by an external power supply. A smaller half-width rack version was also available, which included an integrated power supply and could hold six modules. Some studio colleagues had the smaller version and started to use it for live shows.

It is worth mentioning that this was the late seventies, the world was analogue, and the standard FX rack for a live show was pretty small. Inserting compressors and noise gates into a mix at a concert was still considered a luxury. The SCAMP was reasonably priced and had a compressor, equaliser, noise gates and even an Automatic Double Tracking (short delay) option. The compressor was based on a well-respected ADR design, the Complex, and sounded pretty good. However, the unit was designed, like much of the audio equipment of the time, for studio use. It was based on a tall standard computer mainframe card slot design, and the cards would fall out.

I didn't own a SCAMP, it was way beyond my budget, but I did buy a rival system by British manufacturer Rebis, that offered an even wider range of modules, based on another standard, but smaller-sized, Vero card frame system. This was a more rugged system, and I still have a functioning unit, but it never really caught on.

The concept behind these sys-

tems was to use an easily and cheaply constructed card system, sharing a power supply, in a standard 19-inch rack width. The SCAMP managed 17 cards but was about 6 units tall. The Rebis was 3 units tall and a tidy addition to your FX rack. However, they didn't catch on. Instead, it was a heavy-weight player from the States that launched what I consider to be the first internationally successful modular rack system, dbx.

The dbx 900 series was launched in the early 1980s and was built into

who adopted the format. However, by the 1990s there were about 16 different modules available, including the Aphex Aural Exciter, Dominator and Compellor. These modules are still sought after, especially the dbx902 De-Esser which still sells for around \$300 online. This is partially a testament to the quality of the circuits, but also the ruggedness of the build. I was still touring last year with a two-channel dbx FS900 mini frame with a couple of compressor boards fitted. It was this successful design

configurations.

However, it was in 2006, when API established the VPR Alliance that the system took off. To ensure compatibility across manufacturers the alliance set specific standards including voltage requirements of +/- 16 volts and +48 volts for phantom power, a maximum current draw of 130mA per slot and standardised physical dimensions.

The format experienced a surge in popularity and by 2020, over five hundred different modules were available from various manufacturers including Neve, SSL, Aphex, and dbx.

So, is there room for a new analogue small-format modular electronics system? Well yes and no. The ubiquitous 500 series covers most needs in the analogue realm. However, I was very conscious when touring last year that I was one of only a handful of tours with an analogue console. Those days are pretty much over, and my current touring act is on a digital board. Like many engineers, I still like to have some analogue outboard, but interfacing is an issue. I am not going back to cable looms and patching systems, I want the convenience digital offers.

The adoption of protocols like Dante and AVB has made complex audio routing simple and easy. Any new modular system needed to be able to interface with any host mixing console on those terms. The ability to save and recall settings we now take for granted, computer control should be able to offer that seamless experience even with analogue circuitry. Latency will always be an issue, but latency stability is now improving. What will be needed is what ultimately killed off the 900 series but breathed life into the 500 series, the popular adoption of a well-considered and practical standard by multiple manufacturers, in a way that is accessible to start-up developers. It will be interesting to see what happens over the next few years as beloved modular analogue circuitry moves into the digital realm.

Any new modular system needed to be able to interface with any host mixing console on those terms. The ability to save and recall settings will offer a seamless experience.

a sturdy metal 3u rack. Each rack was powered and held eight modules. Initial modules were simplified versions of its existing range, such as the 903 compressors, based on the popular dbx 160 design. It soon became popular as tours started specifying more and more complex requirements, gates and compressors on multiple channels. With a couple of 900 racks, you could have as many compressors and gates as you could possibly need (or so we thought).

The popularity, particularly in the United States, of dbx meant these racks started finding their way onto many tours as well as clubs and other installs. More importantly, the format was opened up to other companies, although it was only really Aphex

that paved the way for a more successful product, the 500 series rack.

So where did the 500 series come from? It originated in 1967 when Lou Lindauer and Saul Walker began designing modular mixing consoles, co-founding **Automated Processes, Inc. (API)**. Recording engineers started removing modules, including the now legendary 512C preamp, 525 compressor, and 550 equalisers, from API consoles and installing them in homemade mounting systems in the mid-1970s. The first commercial standalone rack was produced in 1978. A significant development came in 1985 when Paul Wolff acquired API and introduced the "Lunchbox" - a portable chassis available in 2-slot, 6-slot, and 10-slot



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PRODUCT FOCUS: STUDIO MONITORS

PUSHING THE BOUNDARIES OF STUDIO MONITORING

Exploring the Latest Innovations from Leading Brands

In the ever-evolving world of pro audio, staying ahead means keeping up with advancements in studio monitoring. Today's top brands are redefining the landscape of main monitoring by incorporating innovative drivers, patented technologies, enhanced power, and on-site fine-tuning to meet the demands of modern studios. These advancements ensure accuracy and control, even in challenging acoustic environments. This edition looks into the latest offerings from industry leaders, showcasing studio monitors that deliver exceptional performance, tailored for critical recording, mixing, and mastering applications.

Adam Audio D3V Studio Monitor

The D3V is a fully active desktop monitoring system that stays true to ADAM Audio's industrial design heritage and features the iconic AMT tweeters. Equipped with a USB-C input and two balanced TRS sockets, D3V offers high-quality digital and analogue connections. Streamlined controls include a multi-function volume knob, intuitive room compensation switches and a multi-colour status indicator.

Main features include:

- Driven by 240 W total system amplification.
- Each pair features 3.5" aluminium woofers and a ferrite magnet system.
- Comes with detachable monitor stands and in-built threaded mic stand mounting points (3/8") for perfect positioning in any environment.

Technical specifications:

- Total Peak Amp. Power: 240 W
- Frequency Response @ -6 dB: 45 Hz – 23.2 kHz
- Max. SPL per speaker at 1 m (Peak): 97 dB SPL
- Power consumption (max, idle, sleep): 60 W, 5 W, 0.3 W
- AC Input Voltage: 100 – 240 V, 50/60 Hz
- Power Rating: 60 W max



Focal Utopia Main 112

The UTOPIA MAIN range inherits over forty years of Focal know-how and twenty years of innovation in the development of studio monitors. Each component has been meticulously thought out to design exceptional main monitors, delivering high accuracy. UTOPIA MAIN 112 is a studio monitor that sets an unmatched standard for recording, mixing and mastering.

Main features include:

- A 13" long-excursion subwoofer offers excellent definition and extension in the sub-bass.
- The cabinet is made from MDF panels reinforced by a bracing network.
- The 'M'-shape concept was introduced to both the all-new 5" midrange with a 'W'-membrane, and the 1.5" Beryllium tweeter, for increased rigidity.

Technical specifications:

- Product type: 3-way monitor
- Loudspeakers: Subwoofer: 13" Membrane W, Woofer: 5" Membrane W en "M", Tweeter: 1.5" Beryllium en "M"
- Frequency response (+/- 3dB): 28 Hz - 40 kHz
- Maximum SPL (peak@1m): 120 dB
- Mid-range and low frequency amplifier: Bass: 500 W RMS Class D / Midrange: 180 W RMS Class H Current Mode



IK Multimedia iLoud MTM MKII

With advanced ARC auto-calibration, MTM MKII guarantees improved acoustic performance in any space in seconds. Connected to a computer, award-winning X-MONITOR software adds deep customization and breathtaking emulations of 20+ top studio monitors and other playback systems to A/B your mixes instantly for the perfect translation.

Main features include:

- Built-in ARC self-calibration adjusts to any space.
- iLoud physics-defying bass down to 36 Hz
- iLoud MTM MKII adds a deeper, more comprehensive ARC auto-calibration derived from IK's flagship iLoud Precision series.
- A rapid, single-point measurement option can be done anywhere without a computer

Technical specifications:

- Massive maximum SPL: 112.5 dB per speaker at 1 meter
- Type: 2-Way/3-speakers bi-amped, digitally controlled studio monitor
- LF drivers: 2 x 3.5" composite cellulose fiber, custom-made mid-woofers
- HF drivers: 1" low distortion, back chambered silk dome tweeter
- Power requirement: 90 to 240 V AC, auto-ranging, 50 or 60 Hz, 120 W max power consumption
- Total power: 100 W RMS
- LF power: 70 W RMS
- HF power: 30 W RMS



Kali Audio SM-5

The SM-Series continues Kali Audio's tradition by incorporating top-tier materials, components, and manufacturing techniques. Designed to meet the demands of critical mixing and mastering environments, these monitors feature onboard processing for room calibration. Each speaker can be customised with delays, trims, and EQ adjustments to ensure accurate sound reproduction tailored to the specific acoustics of user's space.

Main features include:

- Onboard calibration removes the need for a dedicated room calibration processor.
- The SM-5 gives users full control of 8 parametric EQs, delay up to 12ms, and loudspeaker trim.
- User-editable DSP is available using Kali Control Panel software.

Technical specifications:

- Amplifier Power: 225 W
- HF Driver: 1-Inch Metal Alloy Dome Tweeter
- Midrange Driver: 4-Inch Optimized Profile Paper Cone
- LF Driver: 5-Inch Optimized Profile Paper Woofer
- LF-to-Midrange Crossover: 280 Hz
- Midrange-to-HF Crossover: 2800 Hz
- Frequency Response: (-10 dB): 39 Hz-25 kHz
- Frequency Range: (+/-3 dB): 47 Hz - 21 kHz
- Max SPL with peak limiter engaged: 117 dB @ 1m



KRK Rokit Generation Five

KRK ROKIT Generation Five monitors were created to meet the diverse needs of musicians, composers, producers, and sound engineers by providing the tools needed to reproduce every nuance of a production with astonishing clarity. Offered in three sizes, five, seven, and eight-inch, these advanced, active, two-way studio reference monitors feature three new voicing modes, an enhanced tweeter design, and a refreshed LCD.

Main features include:

- Three Voicing Modes – Mix, Focus, and Create – for 3-in-1 monitoring flexibility.
- The onboard DSP provides 25 boundary and EQ combinations.
- Separate custom-designed Class D power amplifiers for the woofer and tweeter deliver better audio integrity.

Technical specifications:

- Configuration: 2-Way Bass Reflex
- System Type: Active Studio Monitor
- Low-Frequency Driver: Woofer, 5-inch, woven Kevlar aramid fiber cone, ferrite magnet
- High-Frequency Driver: Tweeter, 1-inch, Silk Dome, Copper Cap, ferrite magnet
- Frequency Range: (+3/-10 dB) 43 Hz – 40 kHz
- Crossover Frequency: 2.27 kHz
- Amplifier Configuration: Bi-amplified (Class D)
- Total Power: 55 Watts (Rated Amplifier Power Output is measured at 1% THD+N)



M-Audio Forty Sixty

The Forty Series monitors are built to handle deep bass lines and crisp highs so you can keep track of your mix and deliver the smoothest transitions and fat-test double drops with absolute precision. Whether you're practicing your set or making a beat, your mix will sound tight and dynamic, giving you the confidence to push your mix to the max.

Main features include:

- Professional-grade Burr-Brown analogue-to-digital conversion and DSP processing, for detailed mixes.
- Rear Panel trim control and XLR and TRS analogue inputs.
- Custom mode with the M-Audio Forty Series Control App, allowing you to define all sound parameters.

Technical specifications:

- Frequency Response: 39Hz – 22kHz (-10dB)
- Maximum SPL: 113dB-SPL
- Coverage Pattern: 120° x 90°
- Power Amplification: 100W total (60W LF / 40W HF)
- LF Driver: 6.5-inch (165mm) Kevlar Woofer
- HF Driver: 1-inch (25mm) Soft Dome Tweeter
- Weight: 15.8 lbs / 7.2 kg
- Dimensions (HWD): 13.2 x 8.5 x 8.6 in / 335 x 216 x 218 mm
- Converter SNR: >120dB



YAMAHA ELEVATES AUDIO EXPERIENCES WITH LANDMARK PROJECTS

Transforming Ambiance at Laska with Yamaha's Superior Audio Solutions

Laska - Countryside Kitchen & Bar combines rustic charm with farm-to-table cuisine, and has become a favourite among locals and visitors alike. Determined to further elevate its patrons' experience, the management team sought an audio solution that would seamlessly enhance the ambiance while maintaining the venue's unique aesthetic.

After careful consideration, Laska partnered with **Yamaha** and **Raj Enterprises** to design and install a bespoke audio system that met their requirements. The carefully curated system features **Yamaha's CHR10** and **VXS8 speakers**, complemented by **CXS18XLF subwoofers** and **PX series amplifiers**. This combination has transformed the ambiance at Laska, offering patrons an unparalleled auditory experience.

The precision and clarity of the Yamaha system have enhanced every aspect of the dining experience. Whether guests are enjoying a romantic evening or a lively night out with friends, the high-quality sound envelops them, "We are thrilled to have partnered with Yamaha and Raj Enterprises to bring our vision to life, and we are confident that our patrons will appreciate the attention to detail and commitment to excellence that has gone into creating this unique dining experience," explained the management team at Laska.

Enhancing Worship at CSI Home Church with Yamaha and NEXO

Located in Nagercoil, Tamil Nadu, **CSI Home Church** is one of Asia's oldest and largest churches, with a legacy dating back to 1819. Built under the supervision of **Rev. William Tobias Ringeltaube**, the church has stood as a cornerstone of the community for over two centuries. Recognising the need to enhance the audio experience for its congregation, the church leadership undertook a significant upgrade to address long-standing acoustic challenges.

The high tin roof, while architecturally significant, posed an acoustic challenge, causing persistent echo issues.

To mitigate this, the church installed acoustic absorption materials and opted for a state-of-the-art audio system to ensure clarity and consistency.

Following a thorough evaluation, CSI Home Church selected Yamaha and NEXO's audio solutions for their remarkable clarity, reliability, and ability to meet the unique acoustic demands of the church. The newly upgraded system is a symphony of precision and power, comprising:

- **Four ID24 speakers** serving as the front-of-house (FOH) system, delivering crystal-clear sound to the main congregation
- **Eight ID24 delay and outfill speakers**, ensuring consistent audio coverage across the vast space
- **Two additional ID24 speakers**

powered by **NXAMP4X2MK2** for supplementary reinforcement

- **Four IDS210 subwoofers**, driven by **NXAMP4X2MK2**, adding depth and resonance to the worship experience

To provide impeccable monitoring for the choir, pulpit, and altar, **six strategically placed ID24 speakers**, powered by **NXAMP4X1MK2**, ensure every note and word resonates with clarity. At the heart of this sophisticated system is the **TF1 digital mixer**, paired with the **TIO1608D-2 stage rack**.

Deon Solomon Doss and **Deno Nishith Doss** highlighted the church's dedication to en-

hancing the worship experience through technology, stating that this upgrade reaffirms the church's commitment to serving its community.

CSI Home Church's investment in cutting-edge audio technology ensures that the church remains a vibrant and inclusive space for future generations. The successful implementation of Yamaha and NEXO's advanced audio solutions has empowered the church to foster a deeper connection between the congregation and the message being delivered.

By delivering immersive and finely tuned audio experiences, Yamaha and its partners continue to leave an indelible mark on diverse spaces, enriching sensory experiences and fostering deeper connections between people and their environments.



Yamaha in partnership with Raj Enterprises deployed CHR10 VXS8 speakers to enhance patrons' experiences at Laska



Yamaha and NEXO's innovative installs at CSI Home Church included ID24 speakers IDS210 subwoofers among others

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BETA3 OFFERS AUDIO SOLUTIONS AT VATAVARAN

Vatavaran - The Vibe Club, located in Garden Galleria, Noida, is setting new standards for high-energy entertainment with an immersive audio experience. To achieve superior sound clarity and club-thumping bass, the venue has been equipped with a premium **Beta3 audio system**, delivering powerful and balanced sound across the entire space.

The installation features **Beta3's X12i Premium Wood Speaker Series**, ensuring crystal-clear highs and mids. Complementing the FOH system, the **N10 & N10F N Series** speakers provide an exceptional audio experience both indoors and outdoors.

For deep, punchy bass,



With Beta3's X12i Speaker Series, N10 & N10F N Series, and DT Series Class D Amplifiers, Vatavaran's patrons has an exceptional audio experience both indoors and outdoors

the system includes **EJ218 & TW118B subwoofers**, adding the necessary low-end impact to keep the energy high. On stage, the **VX12A Active Stage Monitor** ensures precise sound for performers and DJs.

The entire setup is powered by Beta3's **DT Series Class D Amplifiers**, delivering efficiency and reliability. To optimize sound quality and system performance, an **EC2600 Digital Processor** has been integrated for fine-tuned control.

With this powerful audio solution, Vatavaran - The Vibe Club now delivers an electrifying ambiance, setting the stage for unforgettable nights of music and entertainment.

MUMBAI'S FIRST ELEVATED NATURE TRAIL RELIES UPON SOUNDTUBE

In a first-of-its-kind government infrastructure project, the turnkey contractor was tasked with designing and installing a discreet yet effective public address (PA) system along a 700-metre wooden walkway. This project, which included structural wooden logs and railings, came with a clear brief from the project consultant: all technical fixtures, including loudspeakers and lighting, were to be integrated seamlessly within the walkway's architectural elements, specifically within the railing structure itself.

Meeting these unique spatial constraints required sourcing ultra-compact loudspeakers that could fit into the limited available space without compromising on sound clarity and coverage. The contractor's team, led by **Tarun Shah**, faced significant challenges in identifying suitable components that met both form factor and acoustic performance criteria. Fortunately, the wide-ranging product portfolio of SoundTube offered a viable solution.

Shah was introduced to **SoundTube by Mitul Soni**, Techno-Commercial Lead for India. Upon initial discussions, feasibility tests and a proof of concept (POC) were

carried out to ensure the proposed system would meet the site-specific requirements. Following approvals from the project's technical team, the **RF31-EZ-T loudspeaker** model was finalised for deployment.

The RF31-EZ-T is a compact loudspeaker, designed for reliable performance in applications with restricted space. For this installation,

each unit was mounted within a custom **AVSI-supplied junction box**, housed inside the wooden logs just above the integrated lighting fixtures. The loudspeakers were then sealed appropriately to ensure water resistance, an essential feature given the outdoor setting of the walkway.

In total, **92 RF31-EZ-T loudspeakers** were installed along the entire length

of the structure. These were evenly distributed to ensure consistent coverage throughout the area. The system was powered by two units of **SoundTube's MCA2004t power amplifiers**, while signal routing and source management were handled via a third-party analogue mixer. In addition, the paintable grilles on the loudspeakers enabled the installation team to custom colour-match them with the wooden railings, ensuring visual consistency with the surrounding architecture.

Commenting on the project outcome, Tarun Shah noted: "SoundTube systems are quick to install, saving us time to meet project deadline! Speech intelligibility and overall coverage is as expected."

This timely completion was also facilitated by the ready availability of SoundTube stock, which enabled the team to maintain the construction and installation schedule without delay.

Overall, the project stands as a successful example of technical integration within architectural constraints, with the RF31-EZ-T loudspeakers offering both form and function in a demanding outdoor environment.



SoundTube installs discreet RF31-EZ-T loudspeakers along a 700-metre wooden walkway, delivering seamless PA coverage while blending form with function

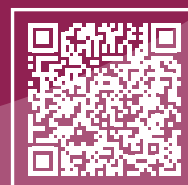


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VMT ELEVATES INDIA'S NIGHTLIFE SCENE WITH PREMIUM AUDIO INSTALLS

Vardhaman Megatech (VMT), the recognised distributor for both **Martin Audio** and **British Acoustics** in India, continues to raise the bar for sound reinforcement across the country's nightlife spaces. With recent installations at **GOYA** in Vagator, Goa, and **Oppheem 2.0** in Bhubaneswar, Odisha, VMT has cemented its role as a key player in delivering high-performance sound systems that meet the demands of discerning venues, DJs, and live performers.

GOYA, Vagator Installs Martin Audio System for Superior Sound Experience

GOYA, one of the leading lounges and club in Vagator, Goa, has selected Martin Audio as its sound partner to enhance its nightlife experience. Renowned for its immersive atmosphere and high-energy entertainment, GOYA required an advanced audio system that could deliver clarity, power, and precision across its venue while catering to both DJs and live performers.

Designed to provide a seamless fusion of music, lighting, and ambiance, GOYA has established itself as a premier nightlife destination. The venue regularly hosts top-tier DJs and live performanc-



Martin Audio's products elevate GOYA to international DJ standards

es, making high-quality sound a critical component of its overall experience. To meet these requirements, the management sought a robust sound system that could balance deep bass, clear mids, and crisp highs, while preventing audio spillover between different sections of the club.

The installation aimed to achieve uniform sound coverage across all areas of the venue, ensuring a powerful yet controlled auditory experience. The solution was centred around Martin Audio's industry-leading loudspeakers and amplification systems, known for their precision and reliability.

The venue's main area was

equipped with the **Martin Audio TORUS T1215**, a 12" passive constant curvature array loudspeaker, chosen for its ability to distribute high-energy sound evenly throughout the space. Supporting this were Martin Audio **CDD15** and **CDD12** coaxial differential dispersion on-wall speakers, ensuring accurate and controlled coverage across the club.

To power the system, the installation included the **Martin Audio iK 42**, a four-channel 20,000W Class D amplifier, delivering the necessary output for a high-impact sound experience. Additionally, the DX 0.6 network system controller was integrated to optimise

sound processing. Complementary subwoofers were also installed to reinforce low-frequency depth, further enhancing the overall sound profile.

With this advanced configuration, GOYA now boasts a sound system tailored to meet the demands of internationally acclaimed DJs and live performers. Every component was meticulously installed and fine-tuned to ensure an immersive and balanced listening experience, aligning with the venue's reputation as a premier nightlife hub in Goa.



Powered by BA, the sound system at Oppheem 2.0 delivers outstanding clarity and power, ensuring an immersive experience for every guest

Industry Perspectives

Jeff Mandot, Director of VMT, commented: "GOYA's sound system delivers an unparalleled audio experience, ensuring every beat is felt with precision and power. The installation sets a new standard for nightlife venues. This project showcases the perfect fusion of technology and expertise."

Mr. **Rajan**, Director of GOYA, shared his thoughts on the impact of the upgrade: "The transformation in our venue's sound is incredible. From the dance floor to the lounge, the clarity and impact are unmatched. The new system has elevated the entire

(Continued on page 78)



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URBAN FOUNDRY ENHANCES AMBIENCE WITH HH AUDIO SYSTEM INSTALLATION

Located in the bustling Kalyani Nagar area of Pune, the **Urban Foundry** all-day bar and eatery has recently upgraded its audio system with a comprehensive solution from **HH Audio**. Supplied and installed by **Generation AV** and local integrator **Audio Groove**, the new system enhances the venue's vibrant atmosphere, complementing its industrial design and eclectic culinary offerings.

Generation AV and Audio Groove collaborated to design a system based around HH Audio's **Tessen Series**, which was deemed best suited to the restaurant's requirements, including budget considerations and spatial constraints.

"The installation was smooth and the system is fantastic," remarked **Kishore Shetty** of Urban Foundry. "HH Audio sound quality has completely transformed the atmosphere of our restaurant, creating the perfect vibe for our guests. It's truly one of the best setups we've ever had, the attention to detail was evident throughout the process."

Specifically, the setup includes **TNi-W12Pro** and **TNi-W8Pro**

2-way, full-range loudspeakers with 12-inch and 8-inch configurations respectively, providing balanced audio coverage. These are supported by **TNA1800** passive subwoofers, which enhance the system's low-frequency performance.

To ensure consistent power delivery and control, the loudspeakers and subwoofers are driven by **M-1500D** and **M-750D** amplifiers from HH Audio.

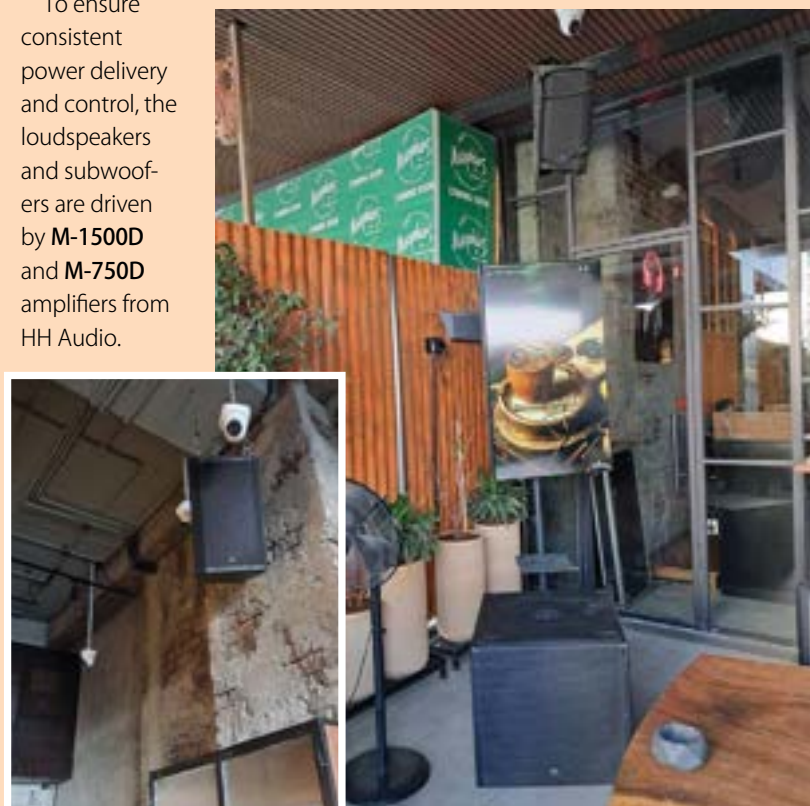
Additionally, an **SP48** digital speaker management system has been incorporated to enable precise control over the system's performance, ensuring a seamless audio experience throughout the venue.

The success of the project can be

attributed to the seamless collaboration between Generation AV and Audio Groove, both of whom provided comprehensive support throughout the installation process.

"The support we received from Generation AV and Audio Groove has been phenomenal," added Shetty. "They were always on hand to answer any questions, offer advice and ensure everything was running perfectly. Their professionalism and commitment to delivering top-tier service from start to finish was impressive. We're incredibly glad we chose HH Audio for this project. Product quality, design and performance made for a perfect audio solution. We couldn't be happier with the outcome."

The Urban Foundry's adoption of HH Audio's Tessen Series has delivered a reliable and high-performance audio solution that aligns with the venue's ethos of delivering quality in every aspect of its operations. As a result, the restaurant now boasts an enhanced sonic environment that perfectly complements its industrial-chic aesthetic and vibrant culinary offerings.



Urban Foundry's adoption of HH Audio's Tessen Series includes the **TNi-W12Pro** and **TNi-W8Pro** speakers as well as **M-1500D** and **M-750D** amplifiers

VMT ELEVATES INDIA'S NIGHTLIFE SCEN...

(Continued from page 76)

club experience, and the response from our guests has been overwhelmingly positive."

With the integration of Martin Audio's state-of-the-art technology, GOYA has reinforced its position as a leading entertainment venue.

Oppheem 2.0 Enhances Nightlife with BA Sound Systems

Oppheem 2.0, a premier nightlife destination in Bhubaneswar, Odisha, has partnered with British Acoustics to deliver an immersive audio experience that complements its upscale ambiance and high-energy atmosphere. Known for its seamless transition from a stylish lounge to a dynamic club, Oppheem 2.0 offers guests a vibrant

space where exceptional music, hospitality, and aesthetics come together. Distributed by Vardhaman Megatech (VMT), British Acoustics provided a system that ensures consistent sound quality across different zones.

Powered by British Acoustics, the sound system at Oppheem 2.0 delivers outstanding clarity and power.

Audio Requirements and System Installation

To meet the venue's demands for crystal-clear highs, rich mids, and deep, powerful bass, the audio system at Oppheem 2.0 features **BA XP 15H** and **BA XP 12H powered speakers**, delivering exceptional clarity and power, making them suitable for both background music and high-energy performanc-

es. To enhance the low-frequency response, the **BA Alpha Club Sub S**, a dual 18-inch horn-loaded subwoofer, provides deep, resonant bass that energises the space.

The setup is powered by the **BA 2 XL**, a high-performance two-channel amplifier that ensures stability and reliability during demanding sessions. Additionally, the **Delta 48 Loudspeaker Processor, Matrix & Controller** was incorporated to maintain optimal sound quality across different sections of the venue.

Joydeep Roy, System Integrator at **Electro Acoustic Infotech Pvt. Ltd.**, highlighted: "At Oppheem 2.0, we focused on ensuring a well-balanced system that delivers power, clarity, and

warmth while maintaining reliability. Every component was chosen to support high-energy performances, whether it's a DJ set or a live act."

VMT: Redefining the Sound of Indian Nightlife

From Goa's vibrant coastlines to Bhubaneswar's urban pulse, VMT continues to lead the charge in professional audio innovation, supporting venues with premium solutions that meet the evolving demands of the nightlife and entertainment sectors. Whether deploying Martin Audio or British Acoustics technologies, VMT ensures every installation strikes the perfect chord, uniting power, precision, and passion.



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HARMAN INTERNATIONAL ANNOUNCES LEADERSHIP TRANSITION

HARMAN International, has announced that **Michael Mauser** will step down as President and Chief Executive Officer, effective 31st March 2025. The Board of Directors have unanimously elected **Christian Sobottka**, currently President of HARMAN's Automotive Division, to succeed Mauser as President and CEO, effective 1st April 2025.

Christian Sobottka brings over 25 years of international automotive industry experience to his new role. Since assuming the position of President of HARMAN's Automotive Division in January 2021, he has led transformational change within the automotive industry, steering HARMAN's business towards a more product- and software-centric model. Under his leadership, the company

has driven innovation in advanced in-cabin experiences and secured significant partnerships within the automotive sector. Prior to joining HARMAN, Sobottka held executive leadership roles at **Robert Bosch**, focusing on key automotive technologies.

"I am honoured to assume the role

of President and CEO of HARMAN," said Sobottka. "Building on our legacy of innovation and excellence, I look forward to working with our talented teams to drive the next phase of growth and continue delivering exceptional value to our customers and partners."

Young Sohn, Chairman of HAR-

MAN's Board of Directors, commented: "We extend our deepest gratitude to Michael for his outstanding leadership and unwavering commitment to HARMAN's success. His strategic vision has positioned the company for continued growth. We are confident that Christian's extensive experience and proven track record make him the ideal leader to guide HARMAN into the future."

In addition to Sobottka's appointment, **Dave Rogers**, President of HARMAN's Lifestyle Division, will join the Board of Directors.

HARMAN remains committed to its mission of delivering cutting-edge connected technologies and solutions that enhance consumer experiences across automotive, consumer, and enterprise markets worldwide.



L to R: Michael Mauser and Christian Sobottka

MARK POSGAY APPOINTED AS VICE PRESIDENT OF GLOBAL SALES AT EASTERN ACOUSTIC WORKS

Eastern Acoustic Works (EAW), one of the leading innovators in professional loudspeaker systems and technologies, has announced the appointment of **Mark Posgay** as Vice President of Global Sales. In this newly established role, Posgay will oversee EAW's global sales channels, lead and expand the organisation's sales teams, cultivate strategic partnerships, and ensure that sales operations are structured for sustained growth.

T.J. Smith, President of Eastern Acoustic Works, expressed confidence in Posgay's ability to drive the company's sales performance. He stated, "Under Mark's leadership, we look forward to growing and strengthening our sales partner network and maintaining healthy and predictable sales performance, the fuel for our business. I am pleased to welcome him to the executive leadership team at EAW."

Posgay brings over 20 years of

experience in the professional audio industry, having held multiple global sales leadership roles. Prior to joining EAW, he served as the Global Sales Vice President for professional audio at **Sennheiser**, where he managed global sales and business development for the company's professional



Mark Posgay, Vice President of Global Sales, EAW

audio business unit. His tenure at Sennheiser saw him overseeing international sales operations and driving business growth in key markets.

In addition to his experience at Sennheiser, Posgay has held sales positions at **HARMAN International**, **Monster Cable**, and **MARS Music**. His background includes extensive expertise in managing sales teams, fostering client relationships, and implementing strategies that drive revenue and market expansion.

In his role at EAW, Posgay is expected to contribute significantly to the company's ongoing expansion efforts. His responsibilities will include aligning sales strategies with EAW's broader business objectives, ensuring that the organisation remains competitive in the evolving professional audio landscape.

Posgay conveyed his enthusiasm about joining EAW, stating, "I look forward to this opportunity to work

with EAW and help the company's overall growth by driving sales. I hope to be an inspirational sales leader as I work with the EAW team to push revenue, meaningful relationships and profitable business decisions for all involved."

EAW has consistently been at the forefront of innovation in professional loudspeaker technology, and the addition of Posgay to the leadership team underscores the company's commitment to strengthening its global presence. His appointment marks a strategic move to enhance sales efficiency and further solidify EAW's position in the professional audio industry.

With Posgay's extensive experience and leadership in global sales, EAW anticipates a period of continued growth and success, reinforcing its dedication to delivering high-quality sound solutions to customers worldwide.

11Q

WITH

Kazuo Matsushita

President, Audio-Technica



PALM Expo Magazine's "11 Questions" series features **Kazuo Matsushita**, President of **Audio-Technica**, as he divulges the brand's evolving role in the professional audio landscape. From its legacy of precision engineering to innovations like the R70xa open-back studio headphones, Matsushita highlights how the company continues to refine its analog-first philosophy to meet modern demands. Take a look at how Audio-Technica balances heritage with modern tech to serve studios and broadcast professionals worldwide.

1. YOU'VE BEEN PART OF AUDIO-TECHNICA'S LEGACY FOR DECADES. COULD YOU SHARE WHAT INSPIRED YOUR CAREER IN PRO AUDIO AND HOW YOUR JOURNEY HAS INFLUENCED THE COMPANY'S GROWTH IN THE GLOBAL MARKET?

My father, **Hideo Matsushita**, founded **Audio-Technica** in 1962 after seeing the emotional connection people had to sound when attending vinyl listening parties. This seemingly simple joy of transforming vibrations into sound inspired him to develop his own cartridges; he always started every project with a transducer, and we still use this approach today.

I believe it is this attention to transducers that has aided our growth in the pro audio market, as people are looking for clean, reliable sound. 1984 was a pivotal year for us, as we launched the **UniPoint** microphones, a series that shaped the commercial microphone market thanks to its discreet design and clear, natural audio performance. We also launched our **ATH-M7 headphones**, which would go on to inspire the acclaimed **ATH-M50x** and **M** series of professional monitoring headphones – our best-selling products

around the world.

When I took over the company in 1993, I wanted to respect the work of my father while also continuing to pursue the purest audio experience possible – a perpetual quest that continues to this day. I believe it is this constant investment in innovation that has enabled us to grow in the pro audio market. For example, the four quad rectangular diaphragms in our **AT5047 microphone** or our **immersive BP3600 immersive audio microphone**.

In addition to innovation, one of our core philosophies is "quality audio for all" and I am very proud that we employ our experience in the broadcast, studio and live sound markets to provide more people with access to quality recording equipment. For example, our series of **AT2020 microphones**, which was one of the first on the market to offer such a reliable performance for an affordable price. We use the skills and innovations we develop with professional partners to enhance the audio experience for all.

2. HOW DOES AUDIO-TECHNICA'S RESEARCH AND DEVELOPMENT (R&D) STRATEGY ENSURE THAT THESE INNOVATIONS MEET THE EVOLVING DEMANDS OF MIXING, MASTERING, AND CONTENT CREATION PROFESSIONALS?

Listening to our audience is very important. We have a trusted network of professionals across studios around the world but we also have our Creator Community, which enables us to reach out directly to people using our products for their feedback and ideas.

In addition, we are lucky enough to develop some of our products with trusted partners. In fact, some of our biggest innovations over the past five years have been in partnership with some of the world's largest broadcasters, who have worked closely with our engineers to develop solutions for their audio needs.

3. WITH IMMERSIVE AUDIO GAINING TRACTION, AUDIO-

TECHNICA'S BP3600 IMMERSIVE AUDIO MICROPHONE SYSTEM STANDS OUT. HOW DO YOU SEE IMMERSIVE AUDIO SHAPING THE FUTURE OF PROFESSIONAL AUDIO PRODUCTION, AND WHERE DOES AUDIO-TECHNICA SEE ITSELF IN THIS SPACE?

Immersive audio surrounds listeners with sound, delivering an unparalleled sense of presence across various fields such as movies, sports broadcasting, live events, gaming, and VR/AR. With advancements in streaming technology, this immersive experience is becoming increasingly accessible, not only in specialised settings but also in everyday content consumption.

In professional audio production, immersive audio goes beyond traditional stereo and surround sound, enabling creators to deliver more profound and engaging experiences. However, achieving accurate spatial positioning and natural sound field reproduction requires sophisticated technology from the recording stage itself.

Audio-Technica aims to establish itself as a leading provider of reliable recording solutions in this growing field. Our **BP3600 Immersive Audio Microphone System** exemplifies this commitment, offering exceptional audio quality, intuitive operation, and portability. It is designed to become a new standard for immersive content creation.

Furthermore, we remain dedicated to developing products in collaboration with industry professionals, ensuring we meet the real-world needs of creators. By delivering innovative audio solutions, Audio-Technica will continue to contribute to the evolution of immersive audio and offer listeners unparalleled sonic experiences. This commitment defines our role in shaping the future of professional audio production.

4. AS AUDIO-TECHNICA CELEBRATES OVER 60 YEARS OF EXCELLENCE, HOW DO YOU ENSURE THAT NEW PRODUCT LINES REFLECT THE COMPANY'S LEGACY WHILE ADAPTING TO THE DEMANDS OF THE MODERN PRO-AUDIO AND RECORDING LANDSCAPE?

"Always analog" is our core philosophy that guides us when developing products for all markets. We always begin every project with a transducer, turning vibrations into sound, so everything starts with this pure, human endeavour. I believe this enables us to create a natural balanced sound that is necessary for professional audio and recording, as we've seen with products such as our **M-series** and 40 and 50 series microphones.

This technique is something we are constantly developing and innovating – it is our perpetual quest for pure audio. Open-back headphones provide low end extension, a better sound stage and a more accurate rendering but they are exposed to the airflow in your room, so rely heavily on the diaphragm characteristics to manage the audio experience delicately with the flow of air. As we begin every project with a transducer, our engineers are experts in diaphragm technology and worked on a new series of critical listening headphones designed for use in the studio – the **R-series**. Launched in January, the series, especially the flagship **ATH-R70xa** has already been praised by many engineers for its unrivalled accuracy in the open-back category.

We're also seeing an increased interest in analog, reel-to-reel recording, as this captures such a warm distinct sound but also aligns with the growth in the vinyl market. We've recently invested in restoring a cutting lathe at **Brewery Studios** in Berlin and we hope we can play a role in preserving analog recording for future generations.

5. HAVING EXPANDED INTO DIVERSE GLOBAL MARKETS, WHAT HAVE BEEN THE KEY TAKEAWAYS THAT HELPED SHAPE AUDIO-TECHNICA'S GLOBAL STRATEGY?

We develop the core of the Audio-Technica brand and product portfolio in Japan, as there is a great respect for the Japanese audio market and manufacturing around the world, but we believe it is also key to listen to the unique demands of each territory. We always stay true to our core beliefs of "always analog" and "audio for all" when developing new products or investing in new markets, as we believe it is important to grow in an authentic way that aligns with the history of our company. For example, we were able to respond to

the growth in demand for content creation products in our western regions by adapting the technology we had developed for professional studios and broadcasters, producing reliable, durable and affordable microphones that are now trusted by millions of creators across the world.

6. WIRELESS TECHNOLOGY CONTINUES TO PLAY A CRITICAL ROLE IN THE PRO AUDIO LANDSCAPE. HOW DOES AUDIO-TECHNICA ENSURE THAT PRODUCTS LIKE THE 3000 SERIES WIRELESS IEM AND 5000 SERIES SYSTEMS STAY AHEAD OF THE CURVE, ESPECIALLY WITH THE GROWING DEMAND FOR RELIABLE, INTERFERENCE-FREE WIRELESS SOLUTIONS?

The frequency band available for pro-audio in the UHF band is narrowing due to the spread of cellular phones and other factors. We believe covering a wide bandwidth with a single product is important to providing users with stable operation in such an environment.

Our product lines, such as the **3000 Series Wireless IEM** and the **5000 Series system**, have been providing users with stable and high-quality performance for many years, allowing for as many channels as possible in a limited frequency bandwidth.

We believe that by using not only the UHF band but also other frequency bands, we can create a more interference-free environment. In the 2.4GHz band, we have a product called **System 10 PRO**, which has been very well received for its stable operation even in environments where Wi-Fi is staying. Last year, we launched its successor model named **System 20 PRO**. While maintaining the radio stability, we managed to double the maximum number of channels by reviewing frequency efficiency.

Again, the frequency range available for pro audio is limited. To address this situation, we will keep a close watch on the evolution of digital wireless communications and continue to provide innovative solutions at the optimum time to stay ahead of the market, while keeping abreast of the new wave of technology.

7. AUDIO-TECHNICA'S HEADPHONES, PARTICULARLY THE M50X SERIES, ARE INDUSTRY BENCHMARKS. CAN WE EXPECT FURTHER INNOVATIONS IN THIS CATEGORY, PARTICULARLY CATERING TO IMMERSIVE AUDIO EXPERIENCES?

We are constantly striving for innovation. At the same time, as a provider of trusted monitor headphones, we are equally focused on maintaining our current models. It is important not to "change" the products in order to offer the same sound signature that has been the reference for many users for many years. So, while we are very cautious, we are always looking for ways to provide additional comfort and innovation.

We also provide a wide range of headphones, from professional headphones to listening headphones. For example, regarding immersive audio, some of our wireless headphones support Sony's 360 Reality Audio, while our gaming headsets offer high-quality surround audio through our Immerse software in collaboration with **EmbodimentVR**.

As you mentioned in another question, since the launch of the BP3600 immersive audio microphone system, we are also working to incorporate some feedback from the market.

As for our latest initiative in monitor headphones, we have just expanded our line of **R-series** open-back headphones. The top-of-the-line **R70x** has long been highly acclaimed as a professional mixing headphone for studio use, and now we have revamped it as the **R70xa**, revamping the manufacturing process to enable even more realistic soundstage expression. We are committed to further innovation in the years to come.

8. INDIA AND ASIA HAVE BEEN KEY GROWTH MARKETS FOR AUDIO-TECHNICA. HOW HAS THE INTRODUCTION OF PRODUCTS AND PARTNERSHIPS WITH DISTRIBUTORS LIKE GREEN SOURCES AND OTHERS IMPACTED YOUR PRESENCE IN THESE REGIONS?

India is a geographically challenging country, with vast distances to cover and unique work cultures in every region. It is challenging to

have a single point of distribution with one-level. Hence our partnership with **Alphatec** as the India Master Distributor for consumer and professional divisions. With their extensive two-level network of sub-distributors across the states feeding retailers, systems integrators as well as certain end users of the product, the channel growth has been phenomenal. Audio-Technica has over 1500 professional retail points, 200 consumer dealers and works with over 400 system integration partners. With this width and depth of distribution we have managed to penetrate the market with our vast range of products and reach out to the end customers to deliver the Audio-Technica promise of quality, reliability, and analog excellence.

9. DIFFERENT REGIONS HAVE DISTINCT AUDIO NEEDS. HOW DOES AUDIO-TECHNICA ADAPT ITS OFFERINGS TO SUIT THE UNIQUE REQUIREMENTS OF THE INDIAN AND ASIAN PRO AUDIO MARKETS? ARE THERE ANY UPCOMING INITIATIVES PLANNED FOR THESE REGIONS?

There are products which are customised to meet the regulatory requirements as well as to address specific customer needs. We launched several products in the wired and wireless microphones category as well as headphones specifically to address customer needs in India. These products have been customised to match the specifications required, but again staying close to our signature sound and performance. India is quite price sensitive as well, so many of our mass market consumer and prosumer products are positioned to be competitive, offering a very good price to performance ratio.

10. HOW DOES AUDIO-TECHNICA STRENGTHEN ITS MARKET POSITION AND ENHANCE LOCAL CUSTOMER EXPERIENCES? AS LIVE SOUND MARKETS REBOUND GLOBALLY, ESPECIALLY IN INDIA, WHAT IS YOUR VISION FOR HOW AUDIO-TECHNICA CAN CONTRIBUTE TO SHAPING THE FUTURE OF LIVE PERFORMANCES AND EVENTS?

Analog is at the core of everything we do and by telling our authentic brand story with products that reflect our analog expertise we can connect with new audiences. For example, in India for the consumer division we have a number of listening sessions at various

record and music stores, showcasing our turntable and cartridge lines as well as our home listening headphones. On the professional side we have a number of demonstrations and experience sessions in retail stores targeting musicians and content creators as well as live, broadcast and recording professionals.

Along with our distribution channels we organise multiple roadshows and training sessions, both online and offline, targeting audio professionals at various levels as well as system integration companies. Audio-Technica Japan supports in such initiatives with equipment as well as qualified technical personnel to deliver training and information sessions.

We also work with Alphatec and we have a separate service network with over 39 centres across the country, offering premium after-sales support to customers. These centres are fully equipped to handle any possible service support scenario with spares as well as tooling to ensure a quick turnaround. It is pertinent to point out that currently the utilization of these centres for in-warranty repair is quite low, since all our products have ultra-low failure rates, highlighting our product durability and quality.

I think collaboration is key for the future of live sound. We are working closely with our broadcasting partners, such as **MotoGP**, to develop new innovative technology to capture more detail and new methods of recording audio for a more immersive experience. For example, one of the reasons we developed the BP3600 microphone to help capture the depth of audio across a MotoGP crowd, making viewers at home feel connected to the live event.

11. WITH DECADES OF LEADERSHIP IN THE PRO AUDIO INDUSTRY, WHAT ADVICE WOULD YOU GIVE TO ASPIRING PROFESSIONALS AND FUTURE LEADERS WHO WANT TO MAKE A MEANINGFUL IMPACT IN THIS SPACE?

Always listen to your audience and, where possible, include them in the product development process. Even with over 60 years of experience in the audio industry, we often receive vital feedback when products are tested by professionals in the "real world". This feedback is essential in ensuring our products are robust enough to meet the practical demands of professionals across the world.

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The Delta Mix 20.8 is a professional 20-frame digital mixing console designed for live performances, studio recordings, and installations. With an intuitive interface, versatile input options, and dual onboard effects, it ensures effortless sound mixing for musicians and engineers alike.

Built for flexibility and durability, its rugged yet compact form is ideal for touring and event use. Featuring USB multi-track playback and optional Dante integration, it connects seamlessly with modern digital setups. Whether in a venue or on the road, the Delta Mix 20.8 delivers high-quality audio with a streamlined workflow—making it the perfect choice for professionals who demand reliability and ease of use.



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Auxiliaries

8 Auxes

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Matrix

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Recording & Playback

16x16 USB Multitrack



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