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USB 5000 500W RMS (700W max)	**USB 10000B** 1000W RMS (1400W max)	**TZ 800+800** 800+800W RMS (1100w max)
	TZA 3000 DP 100+100W RMS (150w max)	**TZ 1000+1000** 1000+1000W RMS (1400w max)

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Lambodara Studios Control Room's Front Baffle wall with the gorgeous Quested Q412Ds and subwoofer Quested QSB 118s.

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> " *I am going to talk about what you should be doing rather than complaining about the systems, the government, and the industry. Right now any time spent on talking about it is futile. It's the time to move on; it's the time to cut of the umbilical cord of the attachment we have to our equipment which is currently a pile of dumb metal.* "

35 Warren D'souza - Founder, Managing Director, & Working Member of Sound.Com

note from Content Anchor *Smita Rai*

HOW AND WHEN?

Recent reports by EEMA indicate that the Indian events industry (including exhibitions) will take a Rs 1 lakh crore hit this quarter. As the Events industry, completely smashed, grapples with the turmoil caused by the novel Coronavirus, nearly all professional sound and lighting brands and rental companies have been directly impacted.

With outdoor as well as indoor entertainment events, including the Wedding Industry (which has multiplied multifold in the past few years to become an approx. $50 billion industry), coming to an absolute standstill, all the inventory has been rendered illiquid.

All large and small events and festivities, in urban as well as rural India have come to an unexpected halt, disrupting the entire ecosystem, with every last consumption of light and sound equipment seized since March this year.

While we can argue for months on end about the economic value and significance of the Events Industry to the GDP of our country, it was the Events Industry to first come under the axe, with the outbreak of the virus. Whether we like it or not, events are major vehicles for transmission of the virus.

Experiences that connect people directly in a very physical and tangible manner is the very core of our sound and light industry, so the overbearing question on everybody's mind is "HOW and WHEN".

Our regular columnist **Viraf Pocha** puts it aptly. "Social distancing is the opposite of what events are designed for. To date online events don't work. We have to reinvent the format. Create the tech to allow group interaction," he says. Read how Pocha inspires young entertainment technicians to find a spark within them on *pg.51.*

Warren D'souza too provides valuable insight on what the industry needs to do to survive rather than complain about the system on *pg.35.*

Many elements will play a part in the "come back to normal". We need the events industry to start again and we can expect this to happen once the malls, cinemas, metros and public transport open full swing. On a timeline, we can probably expect this to happen by November after which we could reevaluate the scene and the status of the industry.

As we see it now, there would be a lot of investment into manufacturing in India, across sectors like never seen before.

Recently, in an effort to boost manufacturing, the government made it clear that importing from China is not acceptable. BIS OF INDIA production is the mantra.

The signals are very clear. The sound and light industry needs to move the needle in Indian manufacturing? The entire ecosystem is poised for a significant change as the government relentlessly pushes to relocate all manufacturing to India. There is zero tech hurdles in India and there is no reason why sound and light production cannot be localized. As with other industries, those who start early will establish their "Brand Names" first.

THE SHOW MUST GO ON

PALM expo's concern to ensure safety from ongoing pandemic mandated cancelation of the 2020 edition of PALM expo. Keeping the PALM flag high is the Indian Recording Arts Academy Awards (IRAA) 2020 which continues into its 14th edition and will once again recognize work of distinction and exceptional achievements in the field of Sound Recording and Engineering.

Winners will be announced across 51 categories by the IRAA Committee and Jury, from the Sound Ideaz Studio in Andheri on **20th September, 2020** at **5:00 PM**. The event will be streamed live on PALM Social media platforms.

Backing the initiative and demonstrating their unflinching support to the sound recording fraternity in India is **HARMAN PROFESSIONAL SOLUTIONS INDIA**.

Aditya Todi, Senior Director of Sales and Marketing at HARMAN said that HARMAN was pleased to support IRAA and recognize the talent of studios and engineers in the country.

Anil Chopra, Founder & Chairman of **Indian Recording Arts Academy (IRAA) Awards** who believes that "THE FINAL MIX IS AN ART" is determined to campaign for Royalty for the final mix. Read all about IRAA and the campaign for Royalty on *pg.49.*

PT spoke to **Vipin Pungalia** - Director, Professional Segment, Sennheiser India, on the milestone occasion of the 75th anniversary of the foundation of Sennheiser. Read all about the company's growth, technology and vision for the Indian market on *pg.40.*

In this **Install Special** issue, we have brought you some interesting projects spanning cruise ships, hospitality, studio facility and house of worship; leaf through the pages for complete details.

Our *Sept-Oct issue* will be **"The Lighting issue"**. I look forward to presenting some more interesting lighting install projects and a rich collection of latest technology and product news, and insights from people who make it work.

Smita Rai

Smita Rai – *Content Anchor*

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DBTECHNOLOGIES' ANNOUNCES APEX SOLUTIONS AS NEW DISTRIBUTION PARTNER FOR INDIA

Italian manufacturer **dBTechnologies** announced that starting May 2020, **APEX Solutions**, a formidable player in the Indian market for Professional Audio and Musical Instruments has been appointed as distributors for the retail market.

Since 2008, APEX has been committed to their clients, offering world-class products and services, and providing top of the line audio-video solutions as well as systems integration for all kinds of projects.

"Apex Solutions have been a front

runner in distributing pro audio products in India," says **Saikiran Shetty**, dBTechnologies Sales Manager for India. "Their reach and understanding of the pro audio market, people and processes can help us realise the potential of our products and improve our foot prints in India".

About this new partnership **Sunil Kumar**, CEO of APEX Solutions commented, "In a bid to improve our brand portfolio, we were looking for a promising brand with a profound legacy. And dBTechnologies' expansion plan in India

came by at the right time to collaborate".

dBTechnologies' APAC Sales Manager **Manuele Poli** comments "We are absolutely happy with this new partnership, and at the same time I am very confident that APEX's work will put dBTechnologies in the best condition for a further growing of the brand's presence in India".

Saikiran Shetty, dBTechnologies Sales Manager

EESA PIONEERS INTO A NATIONAL ORGANIZATION

Event Equipment Services Association (EESA) registered as a society in October 27, 2018, Bengaluru, under Societies Act, XXI of 1960, announced that the assocition had gone national. EESA brings together and represents companies across India who offer equipment and professional services for the event industry. It aims to be an umbrella that is open to everyone who are part of the following Industries:
- Sound
- Stage lighting
- LED & Video Displays
- Truss & Rigging
- Stage, Infrastructure, Decor & Floral
- Generators
- General Lighting
- SFX, Lasers, Pyro & Aerial Rigging

EESA began its journey accepting members from Karnataka. While

the current pandemic COVID-19 has impacted our lives largely, it has also brought us all together and inspired the decision to accept members from outside Karnataka , and consequently EESA morphed into becoming a national association.

Felix Remedios - President of EESA comments, "EESA represents the Event Industry Vendor Community. Bonding together under one umbrella on a national platform, helps bring recognition to the industry on a pan-India level, raise technical and safety standards through education and workshops, and exchange dialogs with various Event Management Associations for a better and more professional working relationship which will help raise the bar on the quality of Events in the country"

Santana Davis - Vice President EESA "Its really sad that we as an Industry in India are not even recognized as a

contributing Industry, So the whole purpose of EESA was planned with a vision to bring together companies offering similar services in the Event Industry, so that we can face common problems and pool our resources for the betterment of the industry. With the Vision of EESA going national we shall now be able to represent ourselves to the Government in more efficient manner for any issue affecting this industry now or in future.

Adding further Santana Davis comments, "We would definitely like to work hand in hand with the Event Management industry where both could be complimentary and contributory to each other. We would also thrive to bring unity among rental Industry with Cross Rental Support amongst members, as well as Improve the working conditions of staff."

EESA is a body which believes in

"together we can achieve more" through networking, collaborations, international outlook, so that we can learn from each other and form standardized processes that will help represent ourselves with customers, international bodies, and government for larger benefit.

We are confident we are going to be much more impactful as a national association and progress to become an international association and we look forward to enjoying this togetherness.

Committee Members of ESSA include:
Dorai Ilangovan - Secretary; **Vinod Bangera** - Joint Secretary; **Anil Kumar Balakrishna** - Treasurer

Executive Members of ESSA include:
Ashok Udupa, Sanjay Mudartha, Sagar Reddy & Lloyd Byford

Felix Remedios - President of EESA

Santana Davis - Vice President EESA addressing the Association Committee Executive Members

SENNHEISER CELEBRATES 75TH ANNIVERSARY

This month marks the 75th anniversary of the foundation of Sennheiser in June 1945. Throughout the years, Sennheiser has been telling stories and creating sound experiences for customers across the globe. It has been 75 years since prof. Dr. Fritz Sennheiser founded the "start-up" in a farmhouse near Hanover, that would become Sennheiser. Today, the company he created is still driven by the same passion for sound and spirit of discovery.

A university lecturer turned entrepreneur by the necessities of postwar reconstruction, Fritz Sennheiser founded a small company known as "Laboratory Wennebostel" to build audio equipment to help reform the destroyed infrastructure and aid communication. After initially making vacuum-tube voltmeter and measuring devices, the company received an order in the summer of 1945 to build microphones. The rest, as they say, is history: Fritz Sennheiser's company would go on to innovate numerous audio products and eventually become the globally successful brand that bears

SENNHEISER

his name still today.

According to **Daniel/Andreas** Sennheiser Co-CEOs, Sennheiser, "Sennheiser is the brand which is built on the vision of shaping the future of audio. With 75 years of rich history of innovation and drive for excellence in the pursuit of the perfect sound, we create products that exceed expectations and benchmarks in the audio industry. Our employees across the world have a zeal of creating the perfect sound for our consumers and will continue to innovate with the same passion and thrill we have witnessed over these years."

According to **Kapil Gulati**, Director, Consumer Segment, Sennheiser India, "I am quite elated to be a part of a brand with a rich culture and heritage- which has been into existence since the past 75 years. Sennheiser has been built on the culture of innovation and a vision to shape the future of the audio industry. We have always strived to provide what our consumers want- which is an unparalleled audio experience. We are overwhelmed with the love that our consumers have continued to provide us over these years. Together, we will keep shaping the future of audio industry in the coming years."

Due to the ongoing pandemic, Sennheiser could not celebrate their 75 years, as planned, however, they are sharing 75 stories to provide a unique insight to the world of Sennheiser: Together they show what has brought Sennheiser this far: it's people who share the same passion for music and always strive for the best possible audio experience.

For celebrating their 75th anniversary, Sennheiser has made a special anniversary website - *www.sennheiser.com/75years* - which includes multimedia collection of stories from employees, customers, friends and fans exemplifies what makes Sennheiser so special: all are united by the same passion.

L-ACOUSTICS RELEASES M1 SUITE OF MEASUREMENT AND MONITORING TOOLS

In tandem with the recent release of **LA Network Manager 3**, **L-Acoustics** takes its industry-leading sound reinforcement system control and monitoring software to a new level with the introduction of the **M1 suite**, a comprehensive set of measurement and monitoring tools. From data acquisition through system tuning to live monitoring, M1 harnesses the power of the manufacturer's Milan-certified P1 processor and amplified controller hardware to deliver a streamlined system calibration process as well as real-time performance monitoring.

The M1 suite is an industry first, pairing system measurement and control software to work natively as one seamless solution. Providing an original, reliable, and more efficient method for calibration, M1 allows users to expand their capabilities and optimize their time.

Ideal tuning of a venue requires both data capture and analysis. For most systems on the market, calibration processes typically involve estimating optimum EQ and alignment settings, measuring these setting via mic placement, then capturing the data. For each setting, mic placement and capture must be performed multiple times to obtain measurements throughout an entire venue. Any adjustments made to EQ or alignment would naturally require the user to repeat the mic placement and capture process.

M1 is a dual-channel FFT measurement platform that automates this process—sequentially muting and unmuting different parts of the system that need to be measured, capturing audio, labeling measurements, and storing data to the proper groups automatically. With M1, mic placement and capture throughout the venue is done only once. Data is acquired and compiled in the software, and measurements can be visualized individually, as spatial averages and sums of elements. If adjustments to EQ are needed, they can be done virtually, and subsequently analyzed and optimized within M1, meaning that the user attains the best calibration for the venue much faster. And once the measurements have been captured, the sound team can even leave the venue and finish the calibration offline, freeing up time and resources for the setup of other production elements.

All data capture in M1 is storable. If the user has a "eureka" moment days or months after calibrating a venue, M1 is ready. Simply adjust calibration settings virtually in the control software and upload it to the venue for automatic improvement from anywhere in the world. Every adjustment ever made is tracked in the software and can be recalled and reanalyzed.

When proper calibration has been attained and a performance begins, M1 provides live system monitoring via a Real Time Analyzer (RTA), evaluating the behavior of the system and keeping it optimized at all times. During a show, atmospheric conditions like humidity and temperature can fluctuate; content can vary from pianissimo to forte; crowds ebb and swell, affecting room excitation. Each of these variables can lead to changes in system performance. To compensate, M1's RTA gives the operator a graphical understanding of the behavior of the system, while LA Network Manager continually analyzes the new atmospheric conditions and proposes corrections accordingly.

The measurement and control tools within M1 are natively integrated; any changes made to one tool are reproduced in the other and automatically optimized.

"M1 with LA Network Manager is really the future of system calibration and monitoring," says L-Acoustics Product and Technology Outreach Manager **Scott Sugden**. "By integrating a comprehensive measurement platform into our amplifier control software, we very effectively help sound professionals save time, decrease error, and concentrate their skills on creating amazing experiences for their artists and audiences."

N-LABS LAUNCHES NEW IP68 RATED LINE ARRAY SERIES

N-Labs, a registered brand of H.V. & Company, are known for their Made in India range of audio products from microphones, cables, connectors, speakers to line array systems. Built in-house, their audio products can be used for varied applications which makes them innovative and the most cost-effective brand in Indian audio systems.

N-Labs recently launched their new range of **XLA Line Array Series** the **XLA102** (10" Dual Line Array), **XLA122** (12" Dual Line Array) and **INFINITY SUB** (Dual 18 Sub). The new Line Array System is reportedly the only IP68 Rated Line Array made in India that are waterproof, scratch proof, dustproof and fire resistant. The line arrays are built to perform in applications where high-quality audio is required, is scalable up to 32 tops per side on a single frame and can flied and stacked.

XLA102 10

The XLA102 is a passive 10" Dual Line Array with high power Neodymium components. The system is a fully self-contained, rela-

tively compact and lightweight (19kg), large-format line array system.

The cabinet geometry delivers a basic 100° wide coverage; however, the coverage can be customized as per user requirement. The XLA102 employs proprietary acoustic design elements like the original N-Labs OEM made waveguide and high strength 302 SS hardware and grille. 8 OHMS nominal impedance with 1110W RMS passive per box, 8 OHMS 1000 RMS for speakers per box and 8 OHMS 110W RMS for HF. Each driver is 500W RMS at 16 OHMS and a frequency response rate from 80Hz to 20kHz.

N-Labs passive platform features 10" Neo speakers with 3" voice coils, and

XLA102 (10" Dual Line Array)

XLA122 (12" Dual Line Array)

high-quality 3" Neo HF compression driver. The XLA102 provides a highest peak SPL of 133DB per box and prefit xover inside to work both passive and Biamp.

The XLA102 is constructed from original Russian birch plywood with a high resistant black color stonetex fireproof, scratchproof, and waterproof coating and 40MM pins for strength.

XLA122 12"

The XLA122 is a passive 12" Dual Line Array IP68 rated cabinet which is compact and weighs 26kg. 4 OHMS nominal impedance with 1800W RMS passive per box and a frequency rate of 60Hz to 20kHz.

Like the XLA102, the XLA122 also delivers 100° wide coverage and can be customized as per user requirement. Unlike the XLA102, the XLA122 features 12" Neo speakers with 3.5" voice coils. The XLA122 provides a highest peak SPL of 129DB per box.

Partnering the XLA102 and XLA122 is the Infinity Sub, deploying neodymium drivers with 4.5" voice coils, 133DB SPL, 3600W RMS passive and weighing 65kg. The subwoofer used W vent technology which gives an enhanced response of +6DB

INFINITY SUB (Dual 18 Sub)

at 55Hz to 80Hz without any filters.

The XLA102, XLA122 and Infinity Sub are ideal for touring, house of worship, theaters, concerts, live sound, conferences, road shows, stadiums, auditoriums and portable applications. Since they are compact in size, these line arrays can be used anywhere, are lightweight which makes them easy to transport.

All hardware used in making the Line Arrays are handmade in India from the highest-grade steel and having dual rigging in which the load is divided between steel and wood making the rigs 100% fail proof.

"In line array systems it is of utmost importance for the end-users that the system is light weight to make it easy to carry. We made sure that the quality and SPL is uncompromised while making these light weight line array systems. With an outdoor rating of IP68, these systems can withstand extreme weather conditions and are highly suitable for long-term use," says **Hemal Bhatt**, Owner, HV & Company.

JBL ANNOUNCES NEW VTX B28 SUBWOOFER

HARMAN Professional Solutions has announced the launch of the new **JBL VTX B28 subwoofer**.

The VTX B28 is JBL Professional's next-generation dual 18-inch subwoofer, designed to complement the company's flagship VTX full-range sound reinforcement systems, and capable of delivering uncompromised low-frequency performance, even for the most demanding shows on the planet. Differential Drive technology endows the drivers with exceptional performance, while patented SlipStream port technology offers improved airflow and reduced audible turbulence at any operating level.

The VTX B28 houses a new, Integrated rigging system that follows in the footsteps of the innovative

and well-received A8 and A12 rigging designs, and allows the B28 to be suspended in omnidirectional or cardioid arrays of up to 16 enclosures. The rigging and a comprehensive collection of tour-tough accessories make the B28 a flexible solution for both mobile and installed sound system applications. The B28 integrates seamlessly with HiQNet Performance Manager™ and Line Array Calculator (LAC) software, and features the same industrial design as A- and B-Series loudspeakers, giving the entire system a cohesive look.

"The VTX B28 is our new premium subwoofer, and a perfect addition to VTX Series line array systems," said HARMAN Professional Product Manager **George Georgallis**. "As with the B18 subwoofer, we started by taking the best aspects of the previous-generation

S28 and G28 and improving performance. Then we optimized the design for a dual 18-inch system, and the result was the B28. We worked very hard to ensure the B28 could meet the most demanding applications, but also focused on configurability, a full suite of accessories, and software applications to make the B28 a solid investment and an outstanding performer for tour sound providers and rental companies."

At the core of the B28 are two JBL Differential Drive 2288H-M 18-inch woofers, engineered for improved linearity, efficiency and extra-long excursion.

With versatile mounting and configuration options, the B28 fits seamlessly into any system. The streamlined, two-point rigging system uses integrated

levers and locks, avoiding traditional quick release pins and retaining cables that can get damaged or lost, or limit the potential configurations. This enables the B28 to be stacked vertically or horizontally, using the independent sets of feet on the bottom and sides, while the spring-loaded design ensures there is no rattling during operation.

YAMAHA EVOLVES RIVAGE PM SERIES

Yamaha Corporation has announced new additions to the professional audio lineup: **RIVAGE PM5 and RIVAGE PM3 Digital Mixing Systems**. The release of two new control surfaces and two new DSP engines gives sound engineers greater choice and flexibility to deliver optimum sound in a wider range of applications.

New Control Surfaces

The core components of the new PM5 and PM3 are the CS-R5 and CS-R3 control surfaces. The CS-R5 has three large touch-panel displays and a condensed selected channel section. The CS-R3 is the most compact RIVAGE

el display and condensed selected channel section that work together to deliver simple, intuitive control that will be familiar to current RIVAGE PM series users, and easy for users coming from CL or QL series consoles. A comprehensive range of physical controllers makes the CS-R3 a great choice for monitor applications too.

New DSP Engines

The new DSP-RX engine provides 120 inputs, 48 mix buses, and 24 matrices, while the DSP-RX-EX engine provides 288 inputs, 72 mix buses, and 36 matrices. A choice of two DSP engines with different mixing capacities, plus a total of five

features, and basic operation remain consistent. The system's Dual Console function makes it possible to use a second control surface as a sidecar. Any control surface can be used for FOH one day, as a monitor console the next, and then as a sidecar as the need arises. All models feature the same basic fader configuration with up to three bays of 12 faders, so that the same fader layout can be maintained when using different control surfaces on different days of a tour, for example.

Like the RIVAGE PM10 and PM7, the PM5 and PM3 offer direct compatibility with two audio networks: the Yamaha

Firmware Version 4.0

Firmware version 4.0 for the entire RIVAGE PM series will be released simultaneously with the RIVAGE PM5 and PM3 hardware. Firmware version 4.0 provides a number of important user interface and function updates, including the addition of the premium SP2016 reverb plugin from Eventide. In addition to a large selection of top-quality presets, the SP2016 allows detailed editing for engineers who want to customize their sound.

Ray Maxwell, Eventide's Vice President of Sales and Marketing comments: "The lush and distinct reverbs of the original Eventide SP2016 have been used in countless hit records for nearly 40 years. The original reverb can be heard on albums by Adele, Mariah Carey, Eminem, and more. Eventide is honored to partner with Yamaha to bring the signature reverbs from the SP2016 (Room, Stereo Room and Hi-Density Plate) to the RIVAGE PM10 console with V4.0 software. Users will have a faithful recreation of the original rack processor using state of the art analog component modeling to capture the unique sound of this widely acclaimed reverb."

With this update the RIVAGE PM series is now capable of controlling L-ISA systems from L-Acoustics. For every mono or stereo input channel, a direct control of L-ISA Objects or Groups will be available on the RIVAGE PM console control surface.

Yamaha Rivage PM 5 & PM3

PM series console with one large touch-panel display and a condensed selected channel section for smooth, simple operation.

To maximize the advantages of the three large touch-panel screens on the CS-R5, the depth of the control surface has been reduced to bring the screens and controls within easy reach for comfortable, stress-free operation while simultaneously contributing to improved sight lines. At just 42 kilograms the CS-R5 control surface is also remarkably lightweight, and can be easily carried and maneuvered by just two people.

The CS-R3 has a single touch-pan-

control surfaces including the two new models, gives engineers ample flexibility to create systems ideally tailored to a wide range of applications. The new DSP engines also allow DSP mirroring: two DSP-RX engines or two DSP-RX-EX engines can be used in mirrored configuration in situations where failsafe redundancy is required. If a problem occurs in one DSP engine, the second DSP engine takes over so the show can go on.

The RIVAGE PM Ecosystem

All RIVAGE PM systems use the same DSP engines, the same I/O racks, and the same firmware. That means whichever control surface is used, sound,

TWINLANe network that can simultaneously carry up to 400 audio channels with extremely low latency, and the Dante audio network from Audinate that is standard in CL and QL series digital consoles and a range of other Yamaha pro audio products.

CHRIS D'BAIS APPOINTED AS MEYER SOUND SALES MANAGER FOR INDIA

Expanding his role as Sales Manager, Oceania & Southeast Asia, Chris D'bais has been appointed as Meyer Sound's Sales Manager for India and the Indian subcontinent. In this new position, D'bais will strengthen Meyer Sound's relationships and direct sales efforts in the region, as well as support their network, including Meyer Sound's exclusive Indian distributor Sun Infonet Pvt. Ltd. in New Delhi, dealers Audire and Image Engineering, and LEO Collaborator Bestt Sound System. "I am very excited to build upon our success across Asia and I look forward to taking on this challenge. Along with our local distributor Sun Infonet and their entire team, we are ready to support the continued growth of Meyer Sound in the Indian market with large-scale installs and more," D'bais said.

Chris D'bais, Meyer Sound Sales Manager for India

GETSHOW POSTPONED TO 2021

The Guangzhou Entertainment Technology Show (GETshow), has announced that GETshow 2021 will take place from 8-11 May, at the Poly World Trade Center Expo, Guangzhou.

The organizers announced that the 2020 GETshow was post-

poned due to force majeure. After consultation with the Poly World Trade Centre Expo and passed by the council of Industry association of South China Entertainment Equipment, the new dates were announced after being indefinitely postponed from its original scheduled dates in February 2020.

ADAM HALL GROUP APPOINTS STAGEMIX TECHNOLOGIES FOR EXCLUSIVE DISTRIBUTION IN INDIA

The **Adam Hall Group** is continuing to expand its international sales network. By partnering with the Mumbai-based company StageMix Technologies, the event technology provider based in Neu-Anspach, Hesse, Germany, is gaining an experienced sales team for India. The exclusive partnership includes the LD Systems, Cameo, Gravity, Palmer, and Adam Hall 19 " Parts brands.

"We're happy to have found StageMix Technologies as our new sales partner in India," explains **Markus Jahnel**, COO of the Adam Hall Group. "The event technology market is growing steadily in India and plays a key role in our international endeavors. As an experienced distributor, StageMix

Technologies has a wide network of regional dealers and will enable us to react swiftly to the many different challenges that come with such a large country. As such we will be able to work together to continue expanding our local presence – both in the event and installation market."

StageMix's designated partner **Karan Balkishin Nagpal** adds: "We're very pleased to be associated with the Adam Hall Group. It fits perfectly with our company roadmap to enter with a complete solution for all install avenues, as well as middle scale production companies to use LD, Gravity and Cameo products. We see the basket of brands positioned very aggressively against its competition and we're looking to exciting times ahead."

L–R: StageMix's Eshdeep Bhasin and Karan Nagpal with Adam Hall's Markus Jahnel

JBL PROFESSIONAL DEBUTS CINEMA EXPANSION SERIES

HARMAN Professional Solutions has introduced **JBL Professional Cinema Expansion Series** sound systems for small to medium-size commercial theaters.

The line, which includes **JBL 3153** and **4253 3-way screen-channel loudspeakers, 3181F** and **4281F subwoofers** and **8102 surrounds,** delivers the highest SPLs in its class and covers rooms up to 85 feet (26 m) deep and up to 40 feet (12 m) wide. HARMAN also debuted the 2-channel, 1,300-watt **Crown XLC 21300 amplifier**, which supports Cinema

Series speakers in a range of system configurations.

"When we created the Cinema Expansion Series, we wanted to offer flexible solutions for cost-conscious theater owners looking to provide a premium audio experience in every seat while maximizing their investment," said **Sunil Karanjikar**, Cinema Product Manager, HARMAN Professional Solutions. "Now, whether a theater offers traditional 5.1 or more complex multichannel sound, it can offer the fidelity and performance

synonymous with the JBL name at a competitive price. By combining Cinema Expansion Series speakers and subs with the JBL CPi2000 cinema processor and our new Crown XLC21300 amplifier, theater owners and integrators can build fully integrated HARMAN cinema sound solutions. But above all, it's that legendary JBL sound that will thrill theatergoers and keep them coming back."

JBL 3153 and 4253 screen speakers provide full-range, symmetrical 90 x 50-degree coverage. Speakers operate in passive or biamp mode and incorporate built-in crossover networks and transducer protection circuitry. Two sizes are available: The single 15-inch, 460W-rated JBL 3153 delivers 134 dB peak SPL and covers rooms up to 45 feet deep; while the

dual 15-inch, 800W-rated 4253 delivers 138 dB peak SPL and covers rooms up to 85 feet deep. Both models operate at 4Ω impedance, allowing them to be powered by Crown XLC amplifiers, and feature enclosure-top binding-post connectors to simplify wiring and save space behind the screen.

The 10-inch, 2-way, 260W-rated 8102 surround speaker provides full-range, 110 x 90-degree coverage, with a peak SPL of 125 dB and a throw capability of 40 feet (12 m). It operates at 8Ω impedance, allowing multiple surround speakers to be wired to a single amplifier channel. The 8102's wide coverage and high SPL output means fewer surrounds are needed in an array.

3181F and 4281F subwoofers work seamlessly with JBL Cinema Expansion Series screen speakers and surrounds to provide powerful, punchy low-end coverage in the 30–500 Hz range.

The **Crown XLC 21300**, the newest, most powerful model in Crown's XLC Series of high-output, competitively-priced professional cinema amplifiers, delivers clean, reliable power in a versatile package; combine the XLC 21300 with JBL Cinema Expansion Series speakers to build a complete, fully integrated JBL cinema sound solution.

Three-way screen speakers, surrounds, subwoofers and companion Crown amplifier provide premium sound for small- to midsize theaters

DBTECHNOLOGIES PRESENTS VIO L1610 LINE ARRAY SYSTEM

Italian pro audio manufacturer **dBTechnologies** is launching the new member of VIO family: a compact 3-way active line array system equipped with 2x10" woofers and 1 coaxial MF/LF compression driver. A compact PA system able to deliver astonishing power and impressive SPL alongside with the most harmonious and consistent audio performance.

State-of-the-art 3-Way Symmetric Acoustic Design

VIO L1610 is a three-way active line-array system, entirely equipped with neodymium components:

2x10" woofers (2.5" v.c.), providing an extended LF reproduction, interact with a coaxial neodymium component (4" v.c MF plus a 2,5" v.c. HF compression driver) mounted on an exclusively designed waveguide.

This unique coaxial symmetric acoustic design results into the most accurate transient reproduction, which enables VIO L1610 to deliver the most detailed and homogeneous audio performance. The coaxial component not only allows an extended low-end reproduction of the MF, but guarantees a perfect off-axis coherence alongside with all the benefits coming from woofer's direct radiation.

Utmost Amp Technology

Each VIO L1610 acoustic engine is driven by a Digipro G4 Class-D amplifier module featuring 1600 W RMS along with the utmost acquisitions in dBT's amp technology.

In fact, the system takes advantage of a one-of-a-kind low latency processing resulting from its powerful DSP featuring linear phase FIR filters.

Digipro G4 amp comes with a modular slot for expansion cards: as a default, VIO L1610 is equipped with dBTechnologies RD-Net card for real time remote control via Aurora Net software. The system can be upgraded with Audinate Dante protocol for digital audio stream as well as well as real time control purposes.

As a support for networking purposes, each VIO L1610 cabinet is equipped with Near Field Communication (NFC) system and a frontal LED used to recognize each single module within the remote-control software Aurora Net. On-board controls (2 rotary encoders) allows DSP presets for Speaker Coupling and High Frequencies compensation.

The amp's power supply is equipped with PFC (Power Factor Corrector) technology, a feature allowing a very stable and consistent performance of the system, regardless of the quality of the mains and power fluctuations. The PSU is 380V resistant, so the final amplifiers will be switched off in case of undesired strike of 380V current.

Exclusive technology of Digipro G4 amplifier is IPOS (Intelligent Power-On Sequence), a circuit that controls the sequence in which the main power supplies of all units within an array ramp up. As a result, each module is switched on in a different time frame, keeping the overall system's inrush current low, even in very big PA system deployments.

The amp also allows users to run a test on electronics and transducers before, during and after use.

VIO'S Rigging System

VIO L1610 comes with VIO series' peculiar 3-point rigging system allowing a smooth and fast set up of the system. The 2 front links easily connect the

modules. The back central rigging strand is equipped with a ring type link allowing user to set the relative splay angles ranging from 1° to 10° thanks to 1 single pin. Splay angles can be set directly in the dedicated transport cart DT-VIOL210L which houses 4 modules. While lifting up the array, the rigging strand will automatically block the preset angles with no heavy lifting required.

The flying frame DRK-210 allows smooth flying operations and system lifting.

VIO Compatibility

VIO L1610 has been designed keeping in mind compatibility among VIO systems. Both its acoustic and mechanical design makes it the perfect downfill for large VIO L212 systems. TF-VIO2 adaptor allows to easily rig VIO L1610 modules under a VIO L212 array.

Cabinet Design

Each VIO L1610's wooden cabinet is coated with a black polyurea anti-scratch finish. The amp module is protected by a magnetic rubber raincover (included) designed to provide weatherproofing even when mounted in steep angle as downfill.

An impressive power/size ratio keeps the cabinet to a 31.3 kg (69 lbs) overall weight. Side and rear handles (2 per side) have been designed to furtherly ease transport, set up and dismantling operations.

APG AND ACTIVE AUDIO ANNOUNCE NEW CORPORATE ENTITY: ARBANE GROUPE

Active Audio, a specialist in public address systems, and manufacturer of professional loudspeakers APG, today announced the creation of **Arbane Groupe,** thus completing their strategic alliance initiated in 2016.

Régis Cazin, CEO of Arbane Groupe, said: "For the past four years, APG and Active Audio have been able to leverage a number of technological and organisational synergies, supported by strategic recruitment and exceptional results. We've seen many successful innovations come directly from our strategic alliance, including APG's Uniline Compact and Active Audio's Ray On."

He added: "The creation of Arbane Groupe is the natural outcome of our strategy of bringing together and per-

petuating the two brands."

Arbane is the name of a grape variety used in the production of Champagne, which shares many similarities with the two French manufacturers, as Cazin

explained: "This name perfectly illustrates the philosophy and the common approach of our brands. Robust and singular, it is chosen by some Champagne

winemakers in order to stand out from other more standardised and mass productions. It may not be the best known grape variety, but it is distinguished by the excellence of its results."

Arbane Groupe's mission is to offer unique solutions with a particular focus on directivity, and improve the intelligibility and fidelity across all points of a particular venue. The group's values reflect those of the two manufacturers, with the desire to put the environmental agenda and acoustic performance at the forefront.

The Active Audio and APG brands will continue to offer audio solutions that meet distinct needs, building on their existing international network of distributors. At the same time, the two

manufacturers will be able to draw on common synergies, particularly in terms of the production line located at the Nantes headquarters, as well as marketing.

With Active Audio and APG, the Arbane Groupe enjoys a unique position in the professional audio market; offering a range of solutions, from public address to professional loudspeakers for events and fixed installations, while providing its customers with the flexibility of a company on a human scale.

APG and Active Audio were awarded 'Best Small Company' at ISE 2020, a recognition from the market of the successful strategy that both companies managed to implement over the last four years.

D&B AUDIOTECHNIK ANNOUNCE PRODUCT WARRANTY EXTENSION PROGRAM TO SUPPORT CUSTOMERS

German audio technology and solution company **d&b audiotechnik** today announced a Product Warranty Extension Program to support customers into the future. The product warranty Extension Program is only one part of d&b's overall Covid -19 response to alleviate customer anxieties and reemphasize d&b's long-term commitment to the market.

"While the entire live entertainment market is dealing with the effects of lockdowns and is facing uncertainty, our aim is to alleviate one of the concerns of our partners and customers who are suffering the effects of the pandemic," said **Amnon Harman**, CEO, d&b audiotechnik. "This is one example of the measures d&b has introduced to support customers during this time including

hosting an extensive program of daily educational webinars. d&b customers and users can be assured that our products are of the greatest possible quality, and we stand behind that promise."

The six month warranty extension applies to all d&b products in the mobile and installation product portfolio currently covered by the standard d&b Product Warranty – which already has a reassuring long term of five years, purchased and delivered in the period from 1 March 2015 to 31 August 2020. The warranty covers failure at the component level — meaning any component or manufacturing issue will be covered. This extension applies worldwide and extends the warranty of all systems.

"We felt that extending the warranties for only those customers whose expire during Covid-19 was not enough,"

said Harman. "We are striving to help our customers maintain their d&b systems in the best possible condition
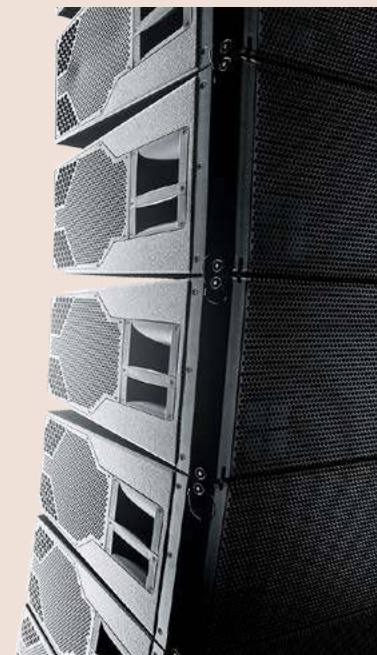
and we look forward to the day when they can all enjoy delivering beautiful sounding concerts and events again."

AMERICAN AUDIO INTRODUCES APX12 GO BT - FLEXIBLE AUDIO ON THE GO

American Audio's APX12 GO BT, a self-contained portable audio system designed for playing music and making announcements absolutely anywhere. Combining a 12" speaker cabinet, class D amplifier, internal battery, on board media player with Bluetooth and wireless mic receiver, it offers a complete audio system in one easy to transport package.

It is ideal for making announcements and playing pre-game music at sports

events, to impromptu pop-up musical performances.

With a sleek molded plastic design and matte black finish, the speaker enclosure is fitted with a tough protective metal grille on its front. It features a 12" woofer with a 1.5" voice coil paired with a 1" high frequency driver. An internal Class D module provides 65 Watts RMS of amplification for a peak power output of 200 Watts. The system has a frequency response of 40Hz-18KHz and

a sensitivity of 93 +/- 2 dB.

The APX12 GO BT's internal 700mA 12V battery allows up to 8 hours of use from a single charge, while a handy 4-segment LED battery life indicator provides a snap shot of the amount of charge remaining. An IEC power input socket can be used both for charging and running the system from a wall socket instead of the battery.

An internal media player allows direct playback of mp3 audio files stored on either a USB stick or SD memory card. This player also features an FM radio tuner as well as a Bluetooth receiver that allows easy connection of a smartphone or tablet. A large backlit LCD display screen on the rear of the cabinet, alongside dedicated Mode, Play/Pause, Stop, Repeat and Track Skip buttons, provide simple and intuitive control of the media player.

Both XLR and 1/4-inch jack sockets are provided

for external Mic input, while the Line input offers XLR and RCA options alongside a dedicated 1/8-inch Aux connection for direct connection of a smartphone or tablet. A Line Out XLR socket is also provided for passing the audio signal through to a second APX12 GO BT or other active speaker. The mixer features independent level controls for the Mic and Line inputs, as well as the on-board media player, and also offers a master volume control.

"The APX12 GO BT is an all-in-one portable audio system that is ideal for everyone from yoga instructors running classes in the park to DJs playing poolside sets; street vendors selling their wares to buskers performing in subway stations," comments **Alfred Gonzales**, ADJ Group Sales Manager. "At the moment, as social distancing continues to be important, it's also a perfect choice for all kinds of restaurants, bars and retailers who are offering curbside pickup and want to entertain their customers while they wait. On top of all that, it's also priced competitively, making it an attractive choice for private use too."

www.palmtechnology.in

Studio B Mix Room installed with Focal Trio 11be Main Monitors and Adam S2V Near Field monitors

Bay Owl Studios –
Not just Music by the Bay

Bay Owl Studios is a state-of-the-art recording and audio post-production studio located in Mumbai dedicated to providing a space for bands, musicians and indie artists. PT got in touch with Varun Parikh to find out about the design of the studio and the equipment used.

Launched in February 2020, **Bay Owl Studios** was founded by **Varun Parikh** who is an audio engineer and had no significant musical influence while growing up. His first exposure to music came when he was in high school. "I started listening to a lot of western contemporary music," says Varun. Post high school, he started to develop his skills as a musician as he learnt the guitar and drums, albeit only considering these as hobbies. After a brief stint studying to become a chartered accountant during college, he ventured into the world of filmmaking and took up a course in the basics of photography, animation, visual effects and editing. "This journey led to my interest in sound and eventually to me completing a sound engineering diploma towards the end of 2012," he says. While doing the course, Varun also found himself doing various project-based internships across Mumbai some of them being the 2012 NH7 music festival in Pune, and an album recording at Yashraj Studios as part of a class field trip. All these projects and experiences led him to find his passion as an audio engineer.

Varun Parikh - Founder & Engineer, Bay Owl Studios

"There were several different contractors, but I had the final say in most things," Varun said. "We wanted the studio to have as much natural light as possible; there is also a fresh air vent that connects to the indoor hvac units of every room so that long sessions don't become a drag with a constant influx of fresh air in both studios," he added.

Due to the shape of the premises, for Varun, the challenge was incorporating columns within the layout because of which he had to redesign the studios to incorporate the structural features behind the bass traps.

There are two studios each with its own attached live room. Both rooms can handle a full workload and most kinds of recording. The only difference is that the Mix & Live Rooms of Studio A are a little larger with a full size drum kit able to fit comfortably in Studio A.

Apart from these two studios, Bay Owl also has a Jam Room that doubles up as a client presentation room that can comfortably seat 30-50 people. The final construction of this was put on hold due to the Covid-19 lockdown, but will definitely resume once the situation eases out.

Each Room has a set of 2.1 midfield monitors and 2.0 nearfield monitors. Studio A has the flagship **Adam S5H series** as midfields along with **Focal Shape 65** as nearfields and

Studio B has the flagship **Focal Trio 11be** as midfields and the **Adam S2Vs** as nearfields.

The Acoustics

The acoustic consultant was Aural Exchange and the brief provided to them by Varun was simple, to have natural light and fresh air in every room and the acoustics of each room had

Studio Inventory

Studio A	Studio B	Rehearsal Space
API The Box Analog Console	API The Box Analog Console	Drumkit -Pearl Male Hybrid*
Adam S5H Main Monitors Focal Shape 65 Near Field monitors	Focal Trio 11be Main Monitors Adam S2V Near Field monitors	Vault Cymbal Set*
Adam Audio Subwoofer	Focal Subwoofer	Presonus Studi-oLive 32SX Digital Mixer*
Manley VoxBox Channelstrip	Universal Audio LA610MKII Channelstrip	JBL PA System*
Audient ASP 880 8 Channel Pre	Avid HD IO 16x16 Analog	Guitar & Bass Amps*
ART Pro VLA II Compressor	Pro Co Sound Switch Witch	
Avid HD IO 16x16 Analog	Pro Tools Ultimate	
Pro Co Sound Switch Witch	Logic Pro	
Pro Tools Ultimate	4x48 Patchbays	
Logic Pro		
4x48 TRS Patchbays		

*** Delivery on hold due to Covid-19**

Once he became an audio engineer, Varun always knew he wanted to eventually open his own studio. Bay Owl Studios was conceptualized while he was working as a freelance audio engineer. After several months of envisioning and financial planning, the dream of having his own recording studio was finally realized. The idea, he says, was always to have two recording facilities in the same premises. "The vision was to make it a chilled space that people would love to come and work at," he adds.

During the conceptualization stage, the name chosen for the studio was Night Owl. However, a few months into construction, it was found that Night Owl was already granted a word mark. To avoid any complications, Varun started looking for alternatives and came up with the name Bay Owl. "Having grown up and lived my entire life in this city, we instantly thought of Bay Owl, as a play on Bombay, and thus the name 'Bay Owl Studios' came to be."

The Location

Bay Owl Studios opened its door to the recording and music world on the 2nd of February 2020. The studio is located in Khar, Mumbai within close proximity to the railway station. The reason for choosing this particular location, Varun says, being close to the station makes the studio easily accessible and since most of the work they do is in advertising and post-production, it was only sensible to choose a location that was centrally located to the industry.

The Design

The design, layout and interiors of Bay Owl Studios were designed by Varun and his wife, **Friyana Pardiwalla**.

Gear List

Condenser Microphones	Dynamic	Amps	Guitars
Telefunken Elektroakustic TF-51	Telefunken Elektroakustic M82	Line 6	Kramer Striker 211 Vintage Series Electric
Telefunken Elektroakustic TF-47	Telefunken Elektroakustic M80-SH	Roland Cube	Granada Acoustic
Neumann TLM-103	Telefunken Elektroakustic M81-SH x3	Samwick 15W	Baby Taylor Semi Acoustic*
Telefunken Elektroakustic M-60 Pencil Condenser x2	Dr. Alien Smith Subkick	Laney Ironheart*	Ibanez Maple Series Electric
Dr. Alien Smith Dirt Mic	Shure SM7B	Orange Head*	
	Shure SM57 x2	Marshall JCM 900*	
	Shure SM58 x2	Markbass Little Mark Tube*	

*** Delivery on hold due to Covid-19**

Studio A Mix Room - The API Box Analog Console

Studio A Live Room - Prepping for a drum session

kind of project, so the lead times were much longer depending on the different kind of gears.

Once the construction was completed, the walls, all the soundproofing and all the beautification was done aesthetically, the gear was laid out by Bajaao.com. Some of the gear procured by Varun are **API The Box Analog Console,**

Before the COVID-19 lockdown the studio had only just been opened for a month and half. During that time Bay Owl did several projects for leading agencies and production houses such as Leo Burnett and Publicis. They also had leading artists such as Milind Gunaji, Sanjeev Kapoor, Vivian Fernandes (aka Divine), MC Altaf, Aavrutti, Gully Gang

to focus on the sweet spot on the mix engineer's chair.

The rooms have been carefully treated to minimize reflections making sure the transition to any listening position within the room is as seamless as possible.

The Gear

All of the inventory was decided by Varun himself. "Most of the gear selected is from past experiences of using said gear, and some gear such as the flagship Adam monitoring, is to stand out from the crowd of studios using similar monitoring systems," he said.

After initially speaking to a number of individual distributors, Varun was advised to approach Bajaao.com by **Ashutosh Pandey**, owner of Aural Exchange and Co-founder of Bajaao.com. The team at Bajaao.com headed by the **Shawn Pereira** (Head of Sales) collated all of Varun's requirements and got in touch with the individual distributors to procure all the gear.

"It made my life a breeze because not only did they give me cheaper quotations by directly getting in touch with manufactures abroad, but also had

everything shipped to Bajaao.com's warehouse, which meant that it all delivered to the studio together, and I didn't have to worry about different lead times," says Varun.

Shawn recalls Varun being one of the best clients as he knew his stuff and was well-versed with the products he wanted to buy. "He had done his research well in advance of the gear he wanted, we just had to figure out the best options of the products and brands that could offer the kind of service that he wanted," he adds. He further added that Varun knew he wanted to go Analog and have the API mixers for his studio and the box tools. Though there was some back and forth that went on for the monitor selection, they finally selected for the four monitors he currently has in his studio.

For the team of Bajaao.com and Shawn it took them a good three months to procure all the gear as some of the products were made to order while some had to shipped from the UK. Shawn added that this was a very high-end

Studio A Live Room - Drums in the live room

Focal Trio 11be Main Monitors, Adam S5H Main Monitors, Pro Tools Ultimate, Avid HD IO 16x16 Analog, Manley VoxBox Channelstrip and many more *(you can see the complete list of equipment and gear at Bay Owl in the box).*

Conclusion

The majority of work that comes through Bay Owl is from advertising projects (70%), and the remaining 30% is from bands, musicians and indie artists.

Entertainment and Bhuvan Bam do their projects at our studio.

It took Varun over a year and a half to set up the facility including the time from conceptualization, to pitching to investors, to finding the right place, and to eventually setting it up. "To see your sweat and hard work transform into something you can take pride in, is the most satisfying feeling in one's professional life. It has been a long process, but so absolutely worth it," concludes Varun.

HARMAN all the WAY

India's First Domestic Hotel Chain – the Luxurious MAYFAIR Lake Resort – hires Qubix Technologies to provide state-of-the-art, end-to-end Integration with HARMAN Professional Solutions. PT reports

Banquet equipped with RUSH CS1200 Graze linear wash fixtures and JBL two-way powered line array loudspeakers

Providing travelers an unforgettable stay, the **MAYFAIR Lake Resort** enhanced its immaculate facilities by hiring Qubix Technologies to design and install a complete, state-of-the-art **HARMAN Professional AVLC** (audio, video, lighting and control) solution.

Opened in 2019 and located amid lush greenery that overlooks the Jhangh Lake, the luxurious MAYFAIR Lake Resort offers lavish accommodations, great banqueting and event space, world-class facilities and some of the best restuarants in Raipur. In addition to being a renowned travel destination, the resort is also a popular wedding and event location, as it features more than 124 rooms and suites, the MAYFAIR Spa,

salon, fitness center, swimming pool and Kids Play area.

End-to-End with Harman

Adding stunning lighting displays, pristine sound and high-tech control systems and signal distribution that match the hotel's luxurious facilities, Qubix Technologies outfitted MAYFAIR Lake Resort with premium solutions from HARMAN Professional, including a wide range of Martin lighting fixtures and JBL Professional loudspeakers.

"MAYFAIR needed a multi-aspect, cross-category solution for their new property in Raipur. From audio and video over IP signal distribution, to lighting, microphones, mixers and speakers, we sourced products from

HARMAN because of their complete solutions," said **Rhythm Arora** of Qubix Technologies.

Dazzling Lights Illuminate Mayfair

Illuminating MAYFAIR Lake Resort's amenities with dazzling lighting, Qubix Technologies deployed an aresenal of Martin fixtures. With their powerful output, compact size, energy-efficient LED and rugged, IP66-rated housing, Qubix Technologies installed **40 Martin Exterior Wash 200, 32 Exterior Wash 100** and **six Exterior Wash 210 fixtures**. While the Exterior Wash lights provide reliable performance and durabality to withstand weather demands, Qubix Technologies lit up the indoor spaces

with two **RUSH MH5 Profile compact moving heads and 96 RUSH CS1200 Graze linear wash fixtures**, which offer the resort ultimate flexibility to choose the exact look they need for certain areas. The lighting system also includes eight **Martin DMX 5.3 Splitters** to ensure peak operation and maintain proper DMX signal throughout the hotel.

Pristine and Clear Sound for the Indoors

Beyond the lighting displays, Qubix Technologies also equipped MAYFAIR Lake Resort with world-class sound. Twelve **JBL VRX932LAP two-way powered line array loudspeakers** provide pristine audio and crystal-clear speech

Bar Lounge equipped with compact moving heads from Martin and AC115S high power subwoofer system and AC18/95 compact full- range loudspeaker system from JBL

Inventory List

Exterior Wash 100, 7°, EU, aluminum	Martin
Exterior Wash 100 Series, medium diffuser kit	Martin
Exterior Wash 210, 10°, EU, aluminum	Martin
Exterior Wash 200 Series, wide diffuser kit	Martin
Exterior Wash 200, 7°, EU, aluminum	Martin
RUSH MH 5 Profile™ in cardboard box	Martin
RUSH® CS1200 Graze, 18°x 65° (4 ft., RGB)	Martin
FGN1122-SA	AMX
FGN1222-SA	AMX
NX-2200	AMX
BSSBLU101M-EU	BSS
BSSEC4BV-WHT-M	BSS
GCDI2X300-U-IN	CROWN
GCDI2X600-U-IN	CROWN
GCDI4X300-U-IN	CROWN
NCDI2X12-U-IN	CROWN
AC115S	JBL Professional
AC18/95	JBL Professional
AC599	JBL Professional
AWC15LF	JBL Professional
AWC82	JBL Professional
CONTROL 47HC	JBL Professional
Control 85M	JBL Professional
Control CRV	JBL Professional
EON 208P	JBL Professional
EON 612M	JBL Professional
EON ONE/230	JBL Professional
SRX828S	JBL Professional
VRX918SP	JBL Professional
VRX932LAP	JBL Professional
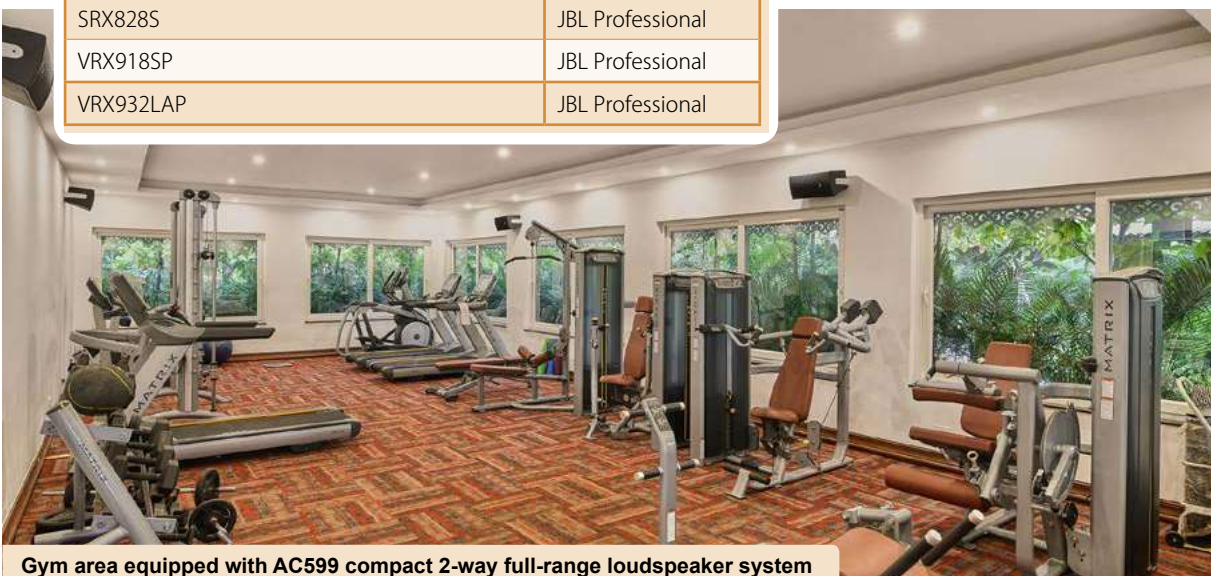
Gym area equipped with AC599 compact 2-way full-range loudspeaker system

paging horns as well as six **AKG DST99 S dynamic paging microphones**.

Delivering Optimum Sound Quality

Though JBL speakers provide the audio, Crown amplifiers power the complex solution while an assortment of AMX, BSS, dbx and Soundcraft products guarantee the system delivers optimum sound quality. Qubix Technologies chose **Crown CDi Series amps** because of their power handling capabilities and extreme durability, while **AMX N1000 Series Encoders and Decoders** provide MAYFAIR Lake Resort with a local AV over IP switching solution that packetizes video into a minimally compressed IP format. BSS signal processors, dbx direct boxes and Soundcraft mixers, including **Si Impact, Signature 16** and **Notepad-5**

intelligibility, while four **VRX918SP powered flying subwoofers** with patented Differential Drive® 18" woofers offer impressive, accurate low-frequency response. Throughout the rest of the resort's indoor spaces, Qubix Technologies installed an array of J**BL Control 10 Series, Control Contractor 20 Series, Control 40 Series, 8100 Series** and **Control CRV Architectural speakers**, including **50 CRV White speakers, 64 JBL 8124, 56 Control 47HC, 50 Control 12C/T** and **30 Control 24CT ceiling loudspeakers** as well as eight **Control 23-1**, four **Control 28-1** and two **Control 25-1 two-way speakers**.

Completing the indoor sound systems, Qubix Technologies deployed four **AC599** and **AC18/95 two-way loudspeakers,** one **AC115S 15" high-powered subwoofer**, four **SRX828S subwoofers** as well as many more JBL speakers.

Complete and Immersive Sound for the Outdoors

Delivering excellent audio outdoors and providing guests a complete, immersive sound experience, MAYFAIR Lake Resort features 50 **Control 85M landscape speaker**s, **14 AWC82 all-weather loudspeakers** and one **AWC15LF all-weather low-frequency speaker**. For public address applications that offer guests with crystal-clear announcments throughout the property, Qubix Technologies installed eight **JBL CSS-H30**

consoles, ensure the system provides pristine fidelity throughout the hotel.

"We are pleased with the output at MAYFAIR Lake Resort, and what a difference the products have made to the property. We were able to engineer the appropriate solutions using HARMAN Professional products because they're adaptable, reliable and produce great results" Arora said.

"It's an honor for our products to highlight such an iconic hotel," said **Aditya Todi,** Senior Director of Sales and Marketing, HARMAN Professional Solutions, India and SAARC. "MAYFAIR Hotels & Resorts offer some of the best luxury hotels in India and provide today's travellers with authentic hospitality, thoughtful service and world-class facilities. We're happy to have provided them with HARMAN Professional's top-of-the-line solutions in the audio and lighting categories."

ASTON ELEMENT REVEALED DURING SECOND ROUND OF VOTING

As round two of Project Element opened for voting in the UK on June 1. **Aston Microphones** have released the first ever photo of the beautiful Aston Element.

Known as the 'People's Microphone', Element is the first ever mic to have its final voicing decided by a public vote, through a series of blind listening tests of its prototypes alongside competitors' offerings.

Aston has finalised the 'look' of this stunning mic, which will ship in September 2020, but the most important part of Element, its sound, is being decided by those who matter!

More than 2000 musicians, engineers and producers out there have already had their say in Project Element, providing more than 36,000 data-points for the Aston design team to use in development

and more are joining each day. Round two of voting opened on June 1, with musicians, engineers and producers making their opinions count as the project homed-in on deciding the final sound of the world's first mic ever to be voiced by public vote.

The Aston team painstakingly analysed the voters' round 1 preferences and tailored round 2 of the voting process to make sure it would be another significant step towards creating something really special. The Element prototypes have been re-voiced in line with the voting. Out went the worst performing mics from round 1 but some of the best of the competitors' mics remained, alongside the Element. Again, voters did not know which mic was which as Aston continued to remove any possible bias from the process, and the entire process was being

peer reviewed by several key music technology publications.

Those who missed round 1 of the voting process could join in for round 2 and get a chance to own the mic. The Voter's Edition Element will be the first ever production run, which will ONLY be available to registered voters, at a 25% discount from regular price! Limited to 2500 mics, ach will be supplied with an official Aston Family Developer certificate, a letter of thanks from Aston CEO James Young, a special badge and a custom sticker.

Inspiration for the world's first 'customer-designed' mic came from the Aston 33, a panel, now of more than 600 top audio practitioners and artists who have been involved in similar blind-listening tests on all Aston's microphones to date, including the 2020 TEC Award-winning Stealth.

WAVES AUDIO ADDS MOTU SUPPORT TO ITS BR1 AVB-TO-SOUNDGRID BRIDGE, ENABLING WAVES' REAL-TIME PLUGIN PROCESSING IN MOTU-BASED AVB NETWORKS

Waves Audio, a leading developer of professional audio signal processing technologies and leading maker of audio plugins for mixing, music production, mastering, sound design, broadcast, post-production and live sound, announced the addition of

MOTU support to its Waves SoundGrid BR1, a device bridging AVB and Waves SoundGrid networks. This now enables Waves real-time plugin processing on any MOTU-based AVB network with MOTU's AVB-enabled audio interfaces.

The Waves SoundGrid BR1 is an AVB-to-SoundGrid bridge that adds real-time audio processing capabilities to AVB networks and improved sound quality in AVB setups. Until now, the Waves SoundGrid BR1 was compatible with PreSonus AVB networks only. Now, BR1

is compatible with MOTU AVB systems.

Waves SoundGrid BR1 allows to integrate the power of Waves' plugins into the AVB network. This rack-mountable unit enables streaming up to 64 audio channels between Waves SoundGrid

and AVB protocols. It provides improved synchronization, audio processing at ultra-low latency, and reliability for switched Ethernet networks.

Suited for studio or live use, SoundGrid is an audio protocol for real-time audio processing and networking at near-zero latency. It gives you access to an impressive catalog of audio plugins that will enhance your sound production. From solving audio issues to adding vibe and character, introducing Waves plugins to your network will give your sound clarity, color and impact.

Waves SoundGrid BR1 features:
- Up to 64 SoundGrid audio channels
- Up to 64 AVB channels
- Supported sample rates: 44.1-96 kHz (MOTU)
- Clock source: SoundGrid/AVB
- 1U half-rack (rack ears included)
- Now supports MOTU and PreSonus AVB networks

Jim Cooper, MOTU Director of

Marketing, comments, "As we did with Thunderbolt and other connectivity standards over the years, MOTU spearheaded the widespread adoption of AVB networking technology in the pro audio industry with a complete line of groundbreaking AVB-equipped audio interfaces, such as our popular 16A, 828es and 8pre-es models. We are thrilled that Waves has brought their renowned processing to MOTU's high-performance, extremely low-latency AVB ecosystem."

Mick Olesh, Waves EVP of Sales and Marketing, adds, "Waves is delighted to collaborate with MOTU, extending our SoundGrid technology for real-time audio processing and networking to now accommodate MOTU's line of AVB audio interfaces. This cooperation continues Waves' mission to improve sound quality in any environment, and our commitment to empower users with smooth operational single networks, for easy and stable networking via audio-over-Ethernet."

AMS NEVE LAUNCHES 8424 CONSOLES FOR HYBRID STUDIOS

MS Neve has unveiled the new **Neve 8424** – a small format console with a large format sound delivering Neve 80 series voltage mixing sound plus four mono groups and, of course, 24 channel faders.

The 8424 console is designed to fit the needs of the modern hybrid studio where the speed of in-the-box workflow is enhanced with the ultimate sound quality of analogue outboard gear. Designed to be straightforward and accessible to all, this versatile and powerful desk provides a centralised platform with unparalleled connectivity, facilitating an ergonomic link between the linear analogue processing world of outboard gear, analogue synths and instruments, to the digital world of DAW workflow, software plugins and session recall.

The 8424's dual-input channel strip allows for seamless switching between recording and mixing inputs without additional patching. Input connectivity is provided via 24 line-level inputs, dual 1073 preamps, and dual Instrument DI channels. Performers can record directly from the control room, taking advantage of the 8424's dual cue mix system with talkback/return talkback capability and dual headphone amplifiers.

The analogue mixing platform has 24 DAW returns across 24 channel faders or, for larger DAW sessions, a 48-Mix mode that allows a total of 48 mono inputs with individual level and pan controls to be mixed through the 8424's Marinair transformer-coupled stereo mix bus. The 8424's mono and stereo aux busses can connect to an outboard FX units and routed back into the console's two dedicated stereo reverb returns. Four mono groups with 2-band shelving EQ, Inserts, and Direct Outs are ideal for stem mixing. The 8424 stereo mix bus gives true voltage mixing into Marinair transformers, while additional features such as Stereo Insert, 2-band shelving EQ and Stereo Width control give engineers, artists and producers all of the tools they need to create polished, professional recordings.

Each Channel, Group and Stereo Mix bus has its own switchable insert point, giving a level of connectivity to analogue outboard units only found on large-format consoles. Dual on-board 500 series slots allow engineers to customize their signal chain and build a modular hybrid recording system by connecting through the 8424 console.

The 8424 has an on-board Console Store system allows to save, load, and recall all settings, faders and pot positions on a session by session basis.

"Modern small studio hybrid setups often lack analogue metering, signal routing, talkback and accurate control room monitoring options, key features that only large format studio consoles deliver," says **David Walton**, AMS Neve Distribution Manager. "Our engineers wanted to put these features back into the heart of the 8424 console, giving artists, producers and engineers the professional tools required to work faster, smarter and more effectively."

Walton adds, "In any configuration, the 8424 console offers an excellent studio control surface with comprehensive monitoring and signal routing capabilities. This eliminates the typical collection of awkwardly interfaced devices and puts a proper Neve console back in the heart of the studio."

DPA UNVEILS 4097 MICRO SHOTGUN MICROPHONE AND INTERVIEW KIT

New solution gives Journalists a miking option that adheres to social distancing protocols

DPA Microphones introduces the latest addition to its microphone lineup, the **4097 CORE Micro Shotgun Microphone**. Featuring the same sonic qualities as the brand's supercardioid Choir Microphone, the 4097 CORE Micro Shotgun has been optimized to pick up speech from a distance. Incorporated into the company's new 4097 CORE Interview Kit, the mic has been designed for use with a lightweight boom and windjammer. This kit is particularly useful for journalists in today's socially distanced world as it allows users to conduct interviews from up to two meters (6.5 feet) away. It is a plug and play solution that allows users to get started quickly and employ their existing workflows.

The kit features one each of DPA's new 4099 Cold Shoe Mount, which incorporates a one-quarter-inch thread; DPA MicroDot cable; transmitter plate; lightweight telescopic boom pole, to further ensure social distance protocols; and windjammer, to provide ideal conditions for outdoor productions. Terminating in a MicroDot connection, the 4097 CORE Micro Shotgun can attach directly to a transmitter or be used with the company's 4099 series mounts, clamps and clips, for easy mounting on any surface. The mic can also be used as a plant mic solution for film and TV production environments.

transmitter-plate-w-velcro

"The 4097 CORE Micro Shotgun was designed as a solution to help complement broadcasters' toolboxes," says **René Mørch**, Product Manager, DPA Microphones. "Prior to social distancing protocols, a typical interview incorporated standard handheld or lavalier mics. The 4097 CORE Micro Shotgun provides professional sound in a lightweight package, which is perfect for current production needs. Additionally, at just 330 grams (12 oz) without the transmitter, the Interview Kit is a much lighter, more flexible solution than traditional boom mic solutions, enabling reporters, videographers and sound experts alike to capture sound from anywhere."

The mic can also be used to capture voice-overs from reporters, which are typically completed following an interview. As news voice-overs are often recorded in rooms or vehicles with less optimal acoustics, the mic's directional char-

4097 CORE Micro shotgun-mic-10cm-4 in-4097-DC-G-B00-010-interview-kit

JBL PROFESSIONAL LAUNCHES BLUETOOTH-ENABLED ONE SERIES 104-BT DESKTOP REFERENCE MONITORS IN INDIA

JBL 104-BT and 104-BTW combine legendary sound quality with Bluetooth connectivity, class-leading performance and unprecedented flexibility

HARMAN Professional Solutions, the global leader in audio, video, lighting and control systems, today announced the launch of new **JBL Professional One Series 104-BT** and **104-BTW** desktop reference monitors with Bluetooth in India. The speakers are also perfect companion to desktops and laptops providing the iconic JBL Professional sound for an exceptional audio experience every day.

JBL One Series 104-BT reference monitors enable content creators and audio professionals to stream accurate, studio-quality audio via Bluetooth or play back audio using a standard wired

connection. Drawing from more than seven decades of JBL Professional engineering, JBL One Series 104-BT monitors deliver clear, detailed sound while mixing and editing. With an array of easily accessible input options, smart features and a sleek, compact design, JBL 104-BT monitors provide great sound in every listening scenario, with the added flexibility of wireless streaming. Black (104-BT) and white (104-BTW) finish options are available.

"We are excited to bring studio quality audio to budding artists and established professionals in the comfort and safety of their homes. Music production

has evolved beyond the recording studio, and today's creative professionals and music lovers need reference monitors that deliver neutral, accurate sound to create mixes that translate well in a variety of listening environments," said **Aditya Todi**, Senior Director, Professional Solutions, India and SAARC, HARMAN. "While ideal for musicians, producers, podcasters and audio engineers, JBL 104-BT monitors will fulfill any audio enthusiast's need for an accurate, reliable sonic reference and a truly enjoyable listening experience."

The JBL 104-BT reference monitor features a cutting-edge coaxial driver that pairs a contoured low-frequency woofer with a soft-dome tweeter, for accurate frequency response, superior imaging, crisp detail, and a wide sweet spot. The cabinet's low-frequency port works with the driver to deliver impressive low frequency performance down to 60Hz. A powerful 60-watt Class D power amplifier distributes 30 watts per speaker for clear, undistorted, loudest-in-class output. And One Series' innovative acoustic design, optimized for desktop use ensures accuracy without the need for additional EQ.

High-bandwidth Bluetooth 5.0 streaming, beyond offering the convenience of audio playback from mobile devices, provides audio professionals the ability to reference mixes over Bluetooth using a professional monitor,

rather than a consumer portable device. This ensures that your audio will sound its best, no matter what the playback environment.

JBL 104-BT reference monitors integrate smoothly into any production workspace, thanks to smart features like a front-panel input control that selects Bluetooth, Aux, RCA, TRS or combines all inputs. Front-panel volume control allows convenient level adjustments without straying from the sweet spot, and a front-panel headphone jack conveniently mutes the speakers when you switch to headphones. Dual 1/4-inch balanced, dual RCA and single 1/8-inch inputs, along with Bluetooth accommodate a wide range of signal sources.

Created with the modern production lifestyle in mind, the JBL One Series boast of a sleek, elegant look and a compact form factor. An optional protective carrying case will also be available for production on the go. Both the black 104-BT and white 104-BTW make stunning statements in any studio.

Availability and pricing

The JBL Professional One Series 104-BT and 104-BTW will be available starting today, exclusively on Flipkart for a special launch price of INR 11,499. Additionally, 10% prepaid discount will be offered on all card transactions along with no cost EMI. Both products are now available here: *JBL Professional 104-BT*.

DPA UNVEILS 4097 MICRO SHOTGUN MICROPHONE AND INTERVIEW KIT   *(Continued from page 19)*

acteristics enable it to dramatically reduce background noise compared to a standard omnidirectional lavalier microphone. When used in conjunction with DPA's lightweight MMA-A Digital Audio Interface, the 4097 CORE Micro Shotgun becomes a complete remote recording package. The interface is a high-quality, two-channel microphone preamp and A/D converter offering mono, dual and stereo capabilities. Compatible with iOS devices, Mac or PC computer, the MMA-A provides

crystal clear audio to, and from, anywhere in the world.

Like all DPA solutions, the supercardioid 4097 CORE Micro Shotgun offers a highly directional pickup pattern as well as low self-noise, with DPA's famous flat off-axis frequency response. With speech intelligibility at the top of DPA's development requirements, the 4097 CORE Micro Shotgun features 16 mV sensitivity and is capable of handling high SPLs. As a result, it is one of the most natural-sounding location sound microphones available, capable of capturing

crystal-clear audio from any position, even when users speak loudly or yell.

With integrated 'CORE by DPA' amplifier technology, the microphone has low distortion and a wide dynamic range. As with all CORE by DPA microphones, the 4097 CORE Micro Shotgun is IP58 certified for protection against water and dust. This durability is achieved through a water-repellent nano-coating of the cover and housing, hermetic sealing of the sensitive amplifier at the core of the mic and dual gold plating of the diaphragm.

Configured with a MicroDot connector, one of DPA's many adapters can be used for either wired or wireless applications, making the 4097 CORE Micro Shotgun a truly flexible solution. The mic also includes an integrated shock mount similar to the one found in the DPA 4099 mics. With its linear response, low distortion and extremely large dynamic range, the 4097 CORE Micro Shotgun sounds great in any environment, no matter how challenging.

HEADROOM STUDIO ACQUIRES THE FIRST AVID MTRX STUDIO IN INDIA

Headroom Studios in Mumbai owned by Father-Son duo, **Aslam Khan** and **Aftab Khan** upgrade their music studio with world class audio conversion using **Avid MTRX Studio**. *PT* gets the insights from **Leslie Lean**, MD, **Ansata Computer Systems** and Aslam and Aftab Khan regarding the purchase and installation amid the lockdown.

Headroom Studio based in Mumbai specializes in recording, mixing, and mastering songs, scores and other audio related

recorded their music at Headroom Studios.

Recently Headroom Studio acquired India's first Avid MTRX Studio. The whole process of purchase, payment, delivery and installation happened in between pandemic lockdown situations. "Once we purchased the Avid MTRX Studio, it was a waiting game thereafter, for the lockdown to be relaxed so that we could go back to the studio and complete the setup," informed Aslam Khan, Owner, Headroom Studio.

With the DANTE capabilities of the device, they can now use the same converter with a separate device running other DAWs like Logic or Cubase and experience the same uber-fidelity while working on music composition and arrangement projects along with their musician friends and clients easily.

With the Monitoring and Room correction features of MTRX, there is no need for an external third-party device, which may change the sonic signature of the content and affect the decision making while mixing.

The Set Up

Dipanshu Mitra from Ansata Computer Systems Pvt. Ltd., provided needed support for the initial installation and configuration through remote sessions. Phone based communication was the key in providing the Owners and Engineers with the guidance on how to make connections with their current ProTools HDX system. Along with Dipanshu from Ansata, **Sreejesh Nair**, Sound Specialist, Avid, also assisted in the set-up of the AVID MTRX Studio at Headroom Studio.

"The entire installation and set-up was done over the phone and internet via remote sessions with Dipanshu and Sreejesh taking control of our workstation and helping us to set up the entire system", informed Aslam. "We are very happy with the kind of professionalism and dedication shown by Ansata and we have already started planning on working with them in getting more gear

Aftab Khan of Headroom Studio with the Avid MTRX Studio

projects from the film industry and the independent music scene. The studio was created in 2015 by Aftab Khan and has been designed by veteran sound engineer Aslam Khan.

Over the years Headroom Studios has collaborated with leading producers and composers from the industry such as Salim-Sulaiman, Sonu Nigam, Pankaj Udhas, Asha Bhosale, Rajesh Roshan, Pritam, Guru Randhawa, Sachet Parampara, Abhijit Vaghani, Julius Packiam, John Stewart, Darshan Umang to name a few. Movies such as Kabir Singh, Tanhaji, Dhadak, Newton, Shubh Mangal Saavdhan, Housefull 3 and many other movies have

After the delivery of the unit, it stayed in storage for a month. But when the government relaxed the restrictions and allowed businesses to start working, the Father-Son duo got back to the studio to sanitize and to start working with their brand new Avid MTRX Studio.

Avid MTRX Studio - Overview

Designed as a collaboration between 2 of the biggest names in digital audio converter manufacturers Avid Technology and Digital Audio Denmark (NTP Technologies), this is an all-in-one device with a lot of inputs and outputs, integrated monitoring control path, speaker/room correction capabilities and impeccable audio quality - It is a class leading product with industry first specifications.

When asked how is Ansata promoting and pushing the product in the market which has a price range of $4,999 MSRP, Leslie Lean, MD, Ansata Computer Systems said, "We are promoting this product to all users who want to get into the OTT / Streaming media space. Now with Dolby Atmos for music there are more reasons for independent creators and commercial studios to get into this space. Given the features and the audio quality that this product offers, the price is well justified. This 1U unit provides for the needs of this segment of creators at a fraction of the cost of the full-fledged Avid MTRX interface without compromising on the audio performance offered by the larger sibling".

and upgrading our studio", he further added.

Upon completion of the installation, the Father-Son duo Aslam Khan & Aftab Khan were thrilled to hear all the details and nuances in the signal at any listening volume, which they had not experienced before while using a flagship converter from another brand. This speaks much about the quality of the device. "We are absolutely thrilled with the Avid MTRX Studio. The sound is very transparent and this is something we have never experienced with any other brand before", says Aftab Khan. He further added, "We would like to thank Ansata for the support they provided us especially since all this was done during the lockdown."

The studio is also planning for an expansion into a Dolby Atmos capable speaker layout in the upcoming weeks.

Avid Pro Tools MTRX Studio

ANGRIYA cruises the seas with BOSE

*Latest cruise ships are teaming with audiovisual technology designed to keep passengers awed and coming back for more. In this feature **PT** reports on the audio installation of one such cruise ship - **The Angriya Luxury Cruise Liner** installed with **Bose Audio Systems**.*

Bought in December 2016, Bose began the audio installation in July 2017and by December 2017 had completed the installation. Angriya set sail on its maiden voyage in Oct 2018 and ever since is giving its patrons an enhanced experience for corporate events, live performances and much more on this majestic vessel.

Angriya is India's first domestic cruise liner that takes you from Mumbai to Goa and back with the most mesmerising views of the Konkan coast. This majestic ship gets its name from the first Admiral of the Maratha Navy, Sarkhel Kanhoji Angre, who was popularly known as the Shivaji of the Indian Sea.

At the helm of this luxury cruise liner is **Captain Nitin Dhond**, a veteran Indian merchant navy with over four decades of being at sea and 25 years of being in command.

This luxurious ship was built in Japan and was decommissioned there when Captain Dhond decided to buy it in December 2016. The Angriya is a 131-meter long, 7-deck, the first Class 4 RSPV (River Sea Passenger Vessel) with very straight lines and is outward-facing.

also looking to install a system that would look elegant, yet small with an exceptional size to power ratio. Since a cruise ship has a limited space to work, the system they chose had to be versatile to handle anything from soft ambient music to Live bands.

"The blueprint eased the work for our designers to a certain extent. After going through the required security protocols, we were onboard the ship and got a clear picture of what was required. We learned of the different challenges mounting constraints, power limitations, rigging rules on a ship, etc. We stayed onboard the ship for a few days to understand the dynamics which helped us design the system," says Kevin. "The client wanted a system that could not spoil the original aesthetics of the place and at the same time deliver outstanding performance," he added further.

Audio Technik hence decided to chose the Bose systems. "We have worked with Bose products before and are ourselves convinced about its performance," says Rajesh. From the briefing given to them by the client, Audio

to install **LT 9702 WRs**, which would handle the live bands, a Bose Control-Space SP-24 sound processor was also used for the main system. There are two **Bose FreeSpace DS 100SE** and two **FreeSpace 360P speakers** for BGM, powered by a **Bose PowerShare PS604 amp**, while a single **Bose FreeSpace DS 40F flush-mount speaker** provides BGM for the Sea Breeze bar deck located above the pool deck.

The cargo hold of the ship was converted into a nightclub/lounge called the Fathom which is also used for conferences and presentations. Here the team installed 6 units of **RMU208's** with 4 units of **F1 Subs**. There are an additional 6 units of **RMU105's** with 2 units of F1 subs to fill the balcony of the Sea Horse Bar above the lounge distributing the sound equally across the entire floor. For conferences, this same setup is pre-set to work as an L-R setup.

There are two restaurants on the vessel Ancora and Coral Reef where the team have installed **FreeSpace DS 16SEs** with **IZA 190Hz amps**.

It took about two months for the team to complete the entire process.

Inventor List

The different zones on the cruise with the systems designed as per the zones:	
Pool Deck	LT 9702 WRs with a Bose ControlSpace SP-24
Sea Breeze Deck	Bose FreeSpace DS 100SE 2 X FreeSpace 360P speakers for BGM Bose PowerShare PS604 amp
Fathom Lounge	6 units of RMU208's with 4 units of F1 Subs
Sea Horse Bar	6 units of RMU105's with 2units of F1
Ancora Restaurant	FreeSpace DS 16SEs with IZA 190Hz amps
Coral Reef Restaurant	FreeSpace DS 16SEs with IZA 190Hz amps
Monkey Deck	Bose F1 Set for potable use

After a few months of being decked in Goa where most of the extensive metalwork had taken place, the ship was moved to Mumbai during the monsoons. During its time docked in Goa, the cruise liner already had constructed three passenger decks, several cafes and restaurants and a former storage refrigerator was turned into a night club. Once Angriya reached the Mumbai docks, its fit-out period started again.

For the setting up of the AV, Angriya hired the experience hands of AV systems integrators **Audio Technik**, who are the elite partner's of **Bose** in India. Bose was the obvious choice for the directors of Angriya as one of the directors **Mr. Sarvesh** was already working on another project with Bose and they were well aware of the system's performance, the company support, and the after-sales that Bose provides.

The project was headed by **Rajesh Patil**, founder of Audio Technik along with two other directors **Kevin Pillai** and **Peeyush Singh**. "Once we received the blueprint of the ship, we began our initial stage of system design," explained Kevin.

Design

Due to his strong marine background, the Captain wanted the raw surfaces of the vessel to remain untouched and undisturbed. They were

Technik knew that along with the aesthetics and performance of the system, the entire system had to be rugged and reliable. "We are talking about a system that would be exposed to moisture, salt and a limited time window for service in case something went wrong," Rajesh added further. Bose became the obvious choice as their range of products had everything that this cruise liner and the Captain demanded. "It was elegant, powerful, and rugged. Also, the support from Bose after sales and for spares has been extraordinary always," said Rajesh.

Set-Up

The ship has different zones that had to be designed as per the applications of that particular region. The pool deck which converts into a performance arena, required a system for BGM and at the same time for live band performances. Rajesh and his team decided

Vibhor Khanna, Country Manager – India & SAARC, Bose Professional, commented, "Evolving consumer preferences, emerging ship sizes and new entertainment programmes onboard featuring state-of-the-art audio, video and lighting have changed the cruise ship industry considerably. There is a lot of extra thought and attention that goes into the sound system design of a cruise ship and selecting the right products is crucial. Audio Technik came up with up with an ideal Bose sound system solution which is not only rugged and robust but also has sound quality which matches the aesthetics and demands of the cruise. The LT 9702 WRs, ControlSpace and FreeSpace solutions from Bose correspond perfectly with the demanding requirements of the Angriya, while greatly enhancing the guests' Showtime experience. We are proud of this project and we thank

Audio Technik for a speedy and trouble-free installation."

Challenges

The AV installation of the Angriya came with its own set of challenges, some of which the Audio Technik team have never faced before. The cruise liner used to be docked at the Yellow Gate at Mazgaon docks and getting in and out became a real hassle for Rajesh and his team. "The biggest challenge we faced was getting the goods inside

Vibhor Khanna – Country Manager SAARC, Bose Professional

due to the long security procedures. Sometimes it would take us about 4-5 hours waiting at the gate to get the permissions passed," informed Kevin. This changed when the ship began to dock at the Purple Gate which now

called the White Gate. The change in docking created a new challenge for the team, as the liner was anchored away from the jetty. The only way for the team to board the ship was to travel by ferry from the jetty. The gear and equipment had to loaded on to smaller boats owned by the client and then lifted up to the vessel by crane. This did not deter the Audio Technik team who took this entire experience as an experience and adventure like never before.

The next big challenge for the AV team was the constraints on rigging points. Most of the brackets had to welded on the steel walls as bolting or suspending with steel ropes was not an option. "The rigging or for that matter, the system setup on a ship is completely different from other installations projects we do on land. Every speaker had to be secured with extra safety due to the constant motion of the vessel," informs Kevin. The team also faced certain power constraints in certain parts of the ship.

Conclusion

The entire installation was completed in record time. "The Captain was euphoric when the system was first fired on. The entire setup sounded glorious. We have seen a lot of happy clients but the reaction by the Captain and his crew is something that we will always treasure. This was a heart-winning point for us," said **Tejas Desai**, Segment Manager, Bose Professionals.

For Audio Technik, this was the team's very first cruise project. "Since

The ship has different zones that had to be designed as per the applications of that particular region. The pool deck which converts into a performance arena, required a system for BGM and live band performances. Rajesh Patil and his team at Audio Technik decided to install LT 9702 WRs, which would handle the live band. A Bose ControlSpace SP-24 sound processor was also used for the main system.

Angriya is India's first domestic cruise liner, it was an honor for us to be considered for this project. Even though it was quite challenging, it was an experience that my team and I can never forget," informed Rajesh. Rajesh further stated that during the course of the installation the Captain and the crew were extremely impressed with the

professionalism brought on by Audio Technik and were ecstatic with the work done by the team.

For Captain Dhond it was a childhood dream to run an Indian domestic cruise and he is the visionary and soul behind Angriya, a ship that has been shaped with an all Indian team of sea farers, technicians, and hospitality professionals.

14ᵗʰ edition

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VIRTUAL EVENT

Exciting news! IRAA 2020 is moving online!
September 20ᵗʰ, we will be announcing winners across 51 categories.

IRAA 2020 will once again celebrate and honour incredible sound recording and music production talent from across the country. Winners will be announced by **IRAA Committee** and **Jury** from **Sound Ideaz Studio** in Andheri. The event will be streamed live on **PALM** social media platforms.

All are invited to register and tune in via the link provided on the IRAA and PALM Expo website

http://iraa.in/IRAA_Virtual_Event_Registration.aspxl

Here's a look at the categories!

STAY TUNED

Audio Engineering
• Song Recording & Mixing – Independent / Film or Web Release / Web Series • Classical & Instrumental Recording & Mixing • Sound mixing for Advertisement

Audio Post Production
• Sound Designer • Dialogue Editor / ADR Engineer • Sound Editor Effects & Ambience • Foley Artist & Foley Engineer • Film / Documentaries / Short Films / Web Series / Broadcast Mixing • Sync Sound Recording

Music Production
• Music Producer – Hindi / Regional / Non-Film / Web Series

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BOSE PROFESSIONAL DELIVERS THE ES1 IN-CEILING AUDIO SOLUTION, CERTIFIED FOR MICROSOFT TEAMS

Bose Professional has announced that the **Bose ES1 Ceiling Audio Solution**, a powerful in-ceiling conferencing solution optimized for unified communication platforms is now Certified for Microsoft Teams. This means Microsoft customers have the added assurance that the Bose ES1 audio solution provides the high-quality experience and compatibility they require. The ES1 system ensures a transparent technology experience, meaning no audio devices are located on the walls or tabletops, while ensuring everyone can hear and be heard regardless of where they are in the room. Consisting of three Bose products: the **ControlSpace EX-440C** Dante-enabled conferencing signal processor, the **Edge-Max EM180** in-ceiling loudspeaker,

the **PowerSpace P2600A** amplifier; and the **Sennheiser TeamConnect Ceiling 2** (TCC2) microphone, the solution creates a reliable, modern-looking meeting room of nearly any size.

Conferencing is about successful collaboration empowered by the best of what technology brings. It's about enabling people to seamlessly connect and collaborate without the worry of whether the technology will work. The ES1 brings together two leading brands who are passionate about audio — Bose and Sennheiser — to provide an in-ceiling UC-certified solution that delivers the quality audio and performance needed every day.

"We're thrilled to deliver a reliable, transparent audio solution that's Certified for Microsoft Teams," stated **Martin Bodley**, director and global head, Bose

Work at Bose. "Today, collaboration is about leveraging technology to support the way we work, where we work.

The ES1 system delivers a superior in-room audio experience, so you can focus on what's important."

Bose ESI Ceiling Audio Solution

CALREC'S DAVE SAMPSON MOVES INTO NEW IP ROLE AS NETWORK SPECIALIST

Calrec has created a new position to further cement its reputation as a market leader in IP technology. **Dave Sampson** has taken on the role of Network Specialist to provide in-house expertise that strengthens Calrec's ability to support customers in the move to IP.

A Calrec team member for seven years, Sampson previously held the role of Product Test Engineer where he was responsible for compliance testing of Calrec's AoIP products to industry standards including ST2110, AES67, NMOS and more.

"As IP connectivity becomes increasingly widespread and more accessible to all sectors of our indus-

Dave Sampson, Network Specialist, Calrec

try, it's vital that Calrec continues to invest in supporting its development. The transition to IP affects pre-sales, integration and post-sales projects, and this new role helps us to support our customers move into an IP environment with confidence," said **Dave Letson**, VP of Sales.

He added, "Given Dave's extensive experience both of AoIP and Calrec's product range he will be a significant addition to the team that will strengthen Calrec's reputation as a trusted advisor in IP networking."

Sampson will provide technical support and consultancy for the design, development and delivery

of IP-based networking solutions for Calrec customers, as well as create and deliver training and knowledge-based documentation.

Sampson commented, "I'm delighted to be moving into a new role with Calrec where I can help to keep the company ahead of the curve with audio over IP. This industry is changing so quickly and being up to date with front line technology, and sharing that knowledge with customers, is one of the attributes that makes Calrec such a forward-thinking organisation."

Alongside DiGiCo, Allen & Heath and SSL, Calrec is part of the Audiotonix group of British console companies.

TELEVIC CONFERENCE APPOINTS ALPHATEC AS EXCLUSIVE DISTRIBUTOR FOR INDIA

Televic Conference has announced the appointment of **Alphatec** as their exclusive distributor for INDIA.

Alphatec has been serving the Indian AV market since 2015. It continuously excels on three core fronts: as a full-range AV distributor, by having professional in-house technical support, and by offering extensive after-sales. The company's approach is to look for solutions that are geared towards spe-

cific customer needs in comprehensive and varied AV fields. It is committed to delivering true mission-critical systems. As a result, it is no surprise that Televic Conference has decided to grant the Alphatec team exclusive distribution rights of its products in India. By joining forces, both parties believe they have secured a strong foothold in a rapidly evolving market.

Mr. Barkataki, Managing Director

of Alphatec notes: "Televic always offers truly innovative products. We believe that our cooperation will help us provide the best solutions to our customers. Moreover, both Televic and Alphatec share a commitment to a sustainable approach, which we feel is at the heart of a successful cooperation between both partners and clients."

With this agreement, Televic Confer-

ence strengthens its position in India, one of the fastest-growing markets in Asia", adds **Koen Van de Perre**, Televic Conference's Business Development Manager for Asia Pacific.

ATLASIED EXPANDS PRESENCE IN INDIA WITH ADDITION OF NEW DISTRIBUTOR

AtlasIED, global electronics manufacturer providing comprehensive audio, communications, and security solutions for commercial markets, announces the addition of **Alphatec Audio Video Pvt. Ltd.** as distributor for its broad range of commercial audio and mass communication products. Effective immediately, Alphatec will handle sales and distribution exclusively of AtlasIED solutions to dealers in India. As well-established, reputable trade suppliers of audio prod-

ucts and communications solutions, Alphatec will help AtlasIED reach new customers and territories, further broadening its position as a leading global provider of audio, mass communication, and security systems to a wide range of industries, including healthcare, corporate, education, hospitality, and retail.

"We will be able to continue to broaden our reach to dealers throughout the world thanks to the backing and support of distributors like Alphatec that have outstanding expertise and knowledge of audio technology," said **Dean Standing**, International Sales Man-

ager at AtlasIED,

"Alphatec Audio Video is very excited to be a part of the AtlasIED team to exclusively offer their world-class solutions in India. As a leading manufacturer of PA/VA, sound masking, and **AV over IP systems**, AtlasIED will add immense value to our offerings in India and help scale our business to the next level. Alphatec will be heard loud and clear with robust AtlasIED product lines along with our other audio-visual offerings," said **Mayank Gaurav**, Director – Installed Sales at Alphatec..

NEXO REVEALS THE SMALLEST LOUDSPEAKER

NEXO has unveiled a new point source speaker -- the **ID14** and its companion **S108 subwoofer**. The smallest loudspeaker design in the company's 40-year history, the new ID14, and its S108 partner subbass, are the latest additions to the acclaimed ID Series of high-power compact cabinets. Like the larger ID24, the ID14 is lightweight, versatile and weather-resistant.

The ID14 is a tiny 5"-cubed Polyurethane enclosure containing a high-powered point source, capable of 116dB (peak) with a frequency response of 120Hz – 20kHz. Measuring 130mm x 130mm x 120mm, and weighing in at 1.7kg, the dual concentric design features a coaxial 4" LF driver with 1.3" voice coil, and a 1.4" diaphragm for the HF. ID14 is offered with two directivity options: a 100°x100° horn as standard, with an asymmetric alternative offering 90°x140° dispersion.

This compact speaker provides an extremely powerful point source that can

be used standalone or in a distributed system, for front fill, infill or delays. Available in black, white or any RAL colour, ID14 will be of especial interest to the installation sector. It is a creative tool for those solving architectural challenges in historic buildings, and those with a need for unobtrusive high-power performance, such as houses of worship, airports, hotels and the hospitality industry. The ID14 is also expected to prove popular for surround sound and FX applications, and is the perfect tool for creating thrilling and immersive audio in even the most complex environments.

There are **two versions of the ID14,** which share the same acoustic components. The **Installation version** features an acoustic fabric fitted front grille, and there is a cable gland with 2-core cable for audio input, offering IP55 protection. The **Touring version** of the ID14 uses a Magnelisâ steel grille, and the back plate holds two Speakonâ

NEXO ID14 and S108 Subwoofer

connectors.

The ID S108 is the purpose-designed companion subbass cabinet for the ID14, and together they create an extremely compact high-power 3-way system, ideal for small clubs and bars. Using a high efficiency bass-reflex design, the ID S108 features a long excursion 8" Neodymium driver precisely tuned to match the frequency response

of the ID14. Like the ID14, the ID S108 is available in touring or installation versions, in black, white or custom colors on request.

The ID14 has a dedicated U bracket, but it can also be installed on a microphone stand. On the rear of the speaker, two M6 inserts (73mm pitch) are ready for the NEXO accessories for wall-mount applications.

AUDAC LAUNCHES TOUCHLINK TECHNOLOGY

AUDAC's, new **AMP203 Dante** mini stereo amplifier will now come equipped with a brand new innovation called **TouchLink**.

TouchLink is an ingenious system that can be used for creating virtual zones by linking multiple TouchLink compatible devices with each other. In AUDAC Touch 2 you can select multiple devices or amplifier channels that should react to the user as one zone.

A typical application example is a large open area where multiple (com-

patible) amplifiers are used. When they are virtually linked, all devices or amplifier channels with the same TouchLink assigned zone will be following each other's settings (including volume, input, muting).

It means, if they are all installed throughout the same area, they all will be simultaneously operated by one single control (e.g. volume fader) from the AUDAC Touch 2 app. Additionally, a wall panel which is physically connected to one of the linked devices will automati-

cally control all the linked devices.

A number shall be assigned as a TouchLink zone (e.g. 1, 2, 3, etc.) and all

AUDAC AMP 203 Dante with TouchLink

devices with the identical TouchLink ID will virtually work as one zone.

BARCO INTRODUCES NEW SERIES OF ADVANCED VIDEO PROCESSING AND PRESENTATION CONTROL SYSTEMS

Barco India, a global leader in visualization and collaboration technology introduced the **PDS-4K** presentation switcher, developed to meet audience requirements for high-quality image processing and fast seamless switching. The PDS-4K brings Barco's expertise from the rental and events industry into the workplace, for the first time. It is an ideal fit for mid-sized live shows, corporate presentations in larger meeting spaces, multi-purpose auditoriums and boardrooms.

With 4K becoming the standard audience experience across mar-

kets, the industry requires a switcher that manages both the legacy HD sources and the newest 4K devices. Barco's latest generation PDS includes eight 4K inputs and two 4K fully seamless mixing program outputs, designed to deliver all content as intended. The modular and scalable architecture supports a wide variety of show configurations.

The new generation PDS relies on the power of the tried and trusted Event Master processing product line. The PDS-4K incorporates the AthenaTM scaling technology for stress-free scaling and seamless mixing performance.

It is built with a flexible principle, ensuring expandability and future-proof upgradability. The new presentation switcher is seen filling the dark hole of 4K processing for smaller rooms and will be a game changer for the corporate and live event industries.

Commenting on the launch, **Rajiv Bhalla**, Managing Director, Barco India said, "It is essential that enterprises invest in innovative solutions that increase the productivity and engagement of their workforce. Barco has a leadership position in the workplace collaboration and live events space, and with PDS-4K, we are offering enterprises, as well as live show platforms, a seamless solution for high-end switching between the legacy HD sources and the newest 4K devices, with premium video capabilities."

Guaranteeing unsurpassed performances and outstanding visual experience, PDS-4K offers users simplicity, intuitive ease-of-use, and complete convenience. The switcher is compatible with all Barco visualization

- Barco multi-format Presentation Switcher PDS-4K combines state-of-the-art, seamless integration and switching with visual experiences, allowing users to engage critical audiences
- Specifically designed for Live Events and Corporate Meeting Spaces
- PDS-4K switcher enables full-screen presentation switch, easy content management, advanced screen mapping, and integrated multi-screen control for professional video effects and presentations

and collaboration solutions like LED, LCD, projection, and ClickShare, and enables smooth integration without compromising on video quality. PDS-4K can also be combined with the Event Master Toolset, Barco Overture, or other third- party control panels.

"The PDS-4K brings the outstand-

Barco PDS-4K

POWERSOFT AMPLIFICATION NOW AVAILABLE FOR SPECIFICATION WITHIN D-TOOLS

Manufacturer of professional power amplifiers, **Powersoft**, has announced that its full line of cutting-edge amplifiers will be available for specification within the popular D-Tools software for systems integrators. D-Tools' System Integrator software and D-Tools Cloud platform make it easier than ever for integrators to specify Powersoft amplification, thanks to a purpose-built workflow

that serves integrators small and large. In celebration of this announcement, Powersoft dealers will be eligible for an exclusive free 45-day trial of D-Tools Cloud.

"It is our pleasure to bring the full breadth of Powersoft amplification to the D-Tools platform," says **Francesco Fanicchi**, brand communication and trade marketing manager, Powersoft.

"Our diverse lineup of industry-leading amplifiers presents compelling possibilities for installations of all sizes, and we are happy to now make them available to integrators through this powerful and efficient software tool."

"We are excited to add Powersoft to our amplification offerings within D-Tools' software solutions," says **Barrie McCorkle**, director of supplier programs, D-Tools. "Powersoft amplification's unique capabilities and diverse configurations help broaden our users' selection of amplification solutions, empowering them to design and build systems that best meet their clients' needs."

D-Tools' award-winning on-premises software, System Integrator (SI), and cloud-based platform, D-Tools Cloud, streamline project workflows for system integrators including sales, comprehensive system, design, project documentation, procurement, installation, back office management, and service, through a data-driven process that leverages an extensive and integrated product library. The D-Tools product library will now include detailed product

information and dealer-specific pricing for Powersoft's full line of amplifiers, including the installation-focussed Due-canali, Quattrocanali, and Ottocanali rack amplifiers, with and without DSP, as well as the new half-rack Mezzo series of DSP-enabled amplifiers.

Users will be able to design and quote detailed systems featuring Powersoft amplification, then easily create cohesive presentations for their clients with accurate estimates. All Powersoft amplifiers feature crystal-clear sound, remarkable efficiency, and a compact integrator-friendly rack footprint. Powersoft's feature-rich ArmoníaPlus software allows deep control over and monitoring of its DSP-enabled amplifiers via a connected computer or laptop. Users can access and manipulate everything from source and output assignment to equalization and limiting to failover settings and more for each amplifier within their network.

An exclusive 45-day trial of D-Tools Cloud is available to all Powersoft users at the following link: *https://d-tools.com/hosted-free-trial-signup/*

AVKRAFT HONOURED TO INSTALL NEW SOUND SYSTEM AT SACRED HEART CHURCH, THIRUVAMPADY

Sacred Heart Forane Church is a Syro-Malabar Roman Catholic church situated in Thiruvambady, Thamarassery - Southwest India. The church was established in the year 1944 and is designed with gothic style architecture and caters to around 750 people on average. After more than six decades, the church was recently subjected to an altar renovation that offers a better experience for the congregation as well as the installation of a new audio system.

AVkraft a North Kerala (India) based AVL Technical consultant and System integrator were hired for the project. The company has been

QSC Active Speakers installed in the Chapel

Top: Yamaha MG24XU Digital Mixer, Middle : QSC Speaker System & Bottom : Studiomaster SPS-8 Channel Power Sequencerw

AVkraft install New Sound System at Sacred Heart Church, Thiruvampady

designing and building audiovisual systems for auditorium, schools, mosques, churches and many other related businesses all around North Kerala.

Parish Priest **Fr. Jose Oliakkatil** approached AVkraft with a project brief that specified the need for a solution that would complement sermons to be heard throughout the sanctuary, and especially for products capable of delivering clear, understandable speech no matter where attendees chose to sit.

"The biggest challenge for us was, overcoming the problems posed by two lines of pillars which are a huge obstruction in reaching a steady sound. To provide consistent

coverage to all in the congregation, we designed the solution and divided the chapel into 8 specific zones, two as FOH and three on the left and on the right, with a speaker dedicated to each zone," said **Mathew George**, Technical Consultant -AVkraft. Each of the 8 zones has a **QSC CP12** and **QSC K12.2** active speakers promising superior experience. "QSC CP12 and QSC K12.2 were the clear choices because it delivers remarkable audio performance, providing outstanding fidelity and high-energy output for worshippers," he added further.

In addition to the QSC K12.2 and QSC CP12, one **QSC CP8** was angled inwards and used as an onstage monitor for the Priests on altar. The audio system also

included the Church's repurposed **Yamaha MG24XU digital mixer** along with **AKGD5s**, and **Sennheiser E845 microphones**.

The enhanced experience achieved by the audio solution implemented at the Sacred Heart Forane Church was well appreciated and a couple of months after the installation work AVkraft have now been asked to design and supply a PA system for St Joseph's Church, Pullorampara.

Concluding the new experience Fr. Jose Oliakkatil says, "Our new Sound System is fantastic. Every word could be heard clearly, even from the very edge by the west door as well!"

BARCO INTRODUCES NEW SERIES OF ADVANCED VIDEO... *(Continued from page 28)*

ing quality and standard routinely expected in professionally organised events to the workplace and the boardroom. The ease with which corporate presenters can now switch between sources and

platforms will wow the audiences both live and virtual. It is going to redefine corporate events and presentations as organisations focus on events with pre-qualified audiences in the region," con-

cluded **Ta Loong Gan**, Sales Director ProAV, Barco APAC.

The presentation switcher can also be combined with Barco ClickShare devices, installed in over 750,000 meeting and boardrooms worldwide, for flawless

presentations. The easy-to-operate full-screen presentation switcher brings the best visual experiences for boardrooms, lobby, and auditorium, sure to impress and have a lasting impact.

SHURE PROVIDES COMPLETE CONFERENCING AUDIO ECOSYSTEM FOR COLLABORATION SPACES

As video conferencing becomes even more important in today's world, **Shure** has announced a new selection of products to provide systems integrators and AV professionals with a complete conferencing audio ecosystem.

The expanded range of **Microflex Advance** products -- with complementary software for design, management, and control -- offers expanded possibilities for systems integrators to deploy Shure's premium audio capabilities into more types of meeting and collaboration environments than ever before. These products are all natively designed to work seamlessly with each other, and provide the market with a fast and efficient means to deploy premium audio, with IntelliMix audio signal processing in either device-based or software formats.

With the introduction of the **Microflex MXN5-C Networked Loudspeaker**, along with products like the new **MXA710, MXA310, MXA910, Networked Mute Button, Designer, SystemOn, P300**, and **In-**

Microflex MXN5-C Networked Loudspeaker

MXA710

telliMix Room, Shure can now provide the complete audio signal chain, from input to output.

Shure's conferencing audio ecosystem comprises:
- **Microphones:** Ceiling Array Microphones, Table Array Microphones, and Linear Array Microphones
- **Loudspeaker:** Networked Ceiling Loudspeaker
- **DSP:** Audio Conferencing Processor and Audio Processing Software
- **Software:** System Configuration Software and Remote Management Software
- **Accessories:** Network Mute Button and Audio Network Interfaces

"Premium audio is essential for business," said **Chad Wiggins**, Senior

Director, Networked Systems, at Shure. "Shure is the market-leading provider of a comprehensive, premium audio hardware and software ecosystem for conferencing. We feature innovative and scalable solutions of networked microphones, DSPs, and loudspeakers for small meeting rooms to large boardrooms and everything in between."

The Shure audio conference ecosystem is flexible across audio system architectures in all room types and ensures end users experience high-quality AV conference experience across an enterprise -- regardless of location.

As the market is looking at increasing adoption of AV technologies geared around simple deployment, intuitive operation, and seamless compatibility

with leading collaboration platforms, Shure is offering a complete solution in one place. Ecosystem advantages include:

Collaboration Platform Ready: Shure works with leading third-party software and hardware conferencing platforms, including Zoom, Microsoft Teams, Cisco, and others to secure certifications and ensure compatibility.

Streamlined Configuration and Deployment: With a Shure ecosystem, more rooms can be deployed in less time, using Shure Designer software as "one pane of glass" for system-wide integration. AV techs have visibility to everything on network with SystemOn for easy monitoring/troubleshooting.

Pre-Packaged "Soft Bundle" Solutions: Shure offers availability of product bundles for specific room size requirements so rooms are more consistent-sounding from room to room, providing a turnkey audio solution.

Easier Maintenance: One manufacturer provides a single point of contact for sales, service, support, training, updates and more. Less gear overall (no amplifiers for loudspeakers, outboard DSP, etc.) and a lower learning curve for intuitive audio system operation are additional advantages for AV techs.

"Shure's portfolio now includes the complete audio signal chain from microphone to DSP to loudspeaker, providing audio solutions for environments of all types with unmatched ease of deployment, less complexity, and remote management," said Wiggins.

AUDIX ANNOUNCES STEVE JOHNSON AS VICE PRESIDENT OF SALES AND MARKETING

Audix, a leading US manufacturer of microphones for the professional audio markets and installed sound industry, is pleased to announce that **Steve Johnson** has joined the Audix team as Vice President of Sales and Marketing.

Johnson has served over 30 years in the pro audio and communications industries, with a background in engineering, marketing and senior management roles. Johnson was most recently the CEO of Community Professional Loudspeakers with previous leadership positions with Bosch Communications Systems, Harman Music Group and Shure microphones.

"Audix is an outstanding brand with

a legacy of quality and innovation," says Johnson. "There are many exciting things on the horizon and in the works at Audix. I look forward to helping expand their reach and shaping a strong long-term vision that drives success for years to come."

Johnson's leadership and experience in the pro audio world is a welcome addition to Audix, as it grows into its 36th year of manufacturing innovative, high quality products.

"Audix has been seeking an industry leader with the skill set to take Audix to the next level," says **Cindy Bigeh,** CFO of Audix. "We welcome the strong business acumen Steve brings to the

Steve Johnson, Vice President, Sales & Marketing, Audix

Audix sales and marketing teams. We are anticipating much success with Steve at the helm."

DYNATECH AND JTS CREATE AN ANGELIC AUDIO ATMOSPHERE AT PRESBYTERIAN CHURCH IN LAWIPU

Music Home, based in Aizawl is one of the most renowned pro-audio companies in the state of Mizoram. They recently completed an audio solutions installation at Presbyterian Church in Lawipu with a comprehensive line-up of products from market leader brands **Dynatech** and **JTS**. Dynatech's newest compact mixer - the UFX-24, and the famed CS Series power amplifiers (CS-8001, CS-6001) along with JTS' GM-5212 and GM-5218 gooseneck microphones have been used in this installation.

Lalrin Fela from Music Home who was part of the installation process shares, "The management at Presbyterian Church in Lawipu were seeking an efficient audio revamp for the premises. Keeping in mind their requirements for space, ease of use, performance, and economic viability, we suggested the Dynatech UFX-24 analog mixer with the CS-Series power amplifiers. The UFX-24 is

JTS Gooseneck microphone

Dynatech UFX Series Analogue Mixer

Dynatech CS 8001 and CS6001 amplifiers

a compact mixer that doesn't take up unnecessary space and is built tough for a trouble-free performance with minimal upkeep, whereas the CS-6001 & CS-8001 amps provide clean efficient power in an appealing design. As for

the JTS microphones, the GM-5212 & GM-5218 gooseneck mics facilitate clear audio pick-up, which translates

beautifully through the system. All in all, the clients are extremely happy, and so are we!"

HK AUDIO LAUNCHES THE NEW PREMIUM PR:O D2 FAMILY

The PREMIUM PR:O D2 series consists of five DSP-controlled full-range and multifunctional speakers - **PR:O 110 XD2, PR:O 112 FD2, PR:O 112 XD2, PR:O 115 FD2** and **PR:O 115 XD2**, as well as the **PR:O 210 Sub D2** and **PR:O 118 Sub D2** subwoofers.

In line with the modular principle, the speakers can be combined flexibly

for the most varied of requirements, from standalone, 2.1 and monitor setups to full-stack applications. These combination options make PREMIUM PR:O D2 suitable for a wide range of installations where speech intelligibility and transparent reproduction is required. All PR:O D2 speakers can be used together with PREMIUM PR:O

legacy speakers.

The PREMIUM PR:O D2 lineup has been given a design overhaul.

The PR:O 110 XD2, PR:O 112 XD2 and PR:O 115 XD2 are genuine all-rounders that can be used as satellites, compact full-range speakers or low-profile stage monitors. Their well-balanced frequency response ensures low feedback and means they can be adapted to various applications using the Music/Speech controller. With 1,200 watts of power and powerful DSP, these are powerful and flexible pro audio tools.

Rüdiger Forse, HK Audio's Senior Product Manager, said: "PREMIUM PR:O has been the German audio standard for decades now, with over 200,000 speakers sold – and now D2 takes the family to a whole new level! With improved performance, features and looks, the D2 series is the perfect reliable road partner for musicians and audio engineers everywhere."

PREMIUM PR:O D2 is in stores in summer 2020. For more information, and for full technical specifications on each of the individual speakers, visit hkaudio.com

HK Audio PREMIUM PR:O D2: key facts & features:

- 1,200-watt Class D bi-amping
- Powerful DSP electronics with intuitive Plug 'n' Play operation via preset selector
- Tone controller for quick adjustment of the sound characteristics (music/speech)
- FIR crossover with a slope of 48 dB per octave for better vertical dispersion
- Custom-designed speaker
- 90° x 55° CD horn for wide dispersion and optimal sound
- HK Audio MultiGrips, significantly improved handling in any position
- New rigging option for the PR:O 112 FD2, 115 FD2 and 115 XD2 tops by fitting the TB-45N/TB-45NQ tilt brackets
- Sturdy metal front grille with black acoustic foam backing
- Low-resonance wooden cabinet for powerful bass reproduction and a maximum sound pressure of up to 132 dB
- 5-year warranty (after registration)

SHURE INTRODUCES SLX-D DIGITAL WIRELESS SYSTEM

The Company's latest offering in Wireless Technology provides reliable RF and Excellent Sound

Whether it's a high-school theater production, corporate meeting, or a Sunday service, live events need to deliver flawless audio and require products that are straightforward to setup and use. Wireless microphones face additional challenges in today's increasingly crowded RF environment. To help address these needs, the **SLX-D Digital Wireless System** is the newest addition to the Shure digital wireless portfolio. The new offering is the digital replacement of the Company's popular SLX system, complete with new mechanical designs, exceptional audio quality, more reliable RF performance, streamlined setup, and more.

The multi-faceted SLX-D Digital Wireless System provides end users with greater channel count than SLX, smart rechargeable options, and simplified ease-of-use for moments that matter most – in the classroom, Houses of Worship, corporate facilities, the hospitality sector, local governments, and more. The new system is offered in single and dual channel options. Transmitters run on standard AA batteries or an optional lithium-ion rechargeable battery solution with a dual-docking charging station. SLX-D is a state-of-the-art system with several notable features and user-friendly benefits, including:

- **Reliable RF**—SLX-D lets users navigate crowded environments with high spectral efficiency and dependable RF. The system enables operation of up to 32 channels per frequency band without worrying about dropouts or signal fades.
- **Excellent Audio Quality**—ensures every performance, lecture, and speech is delivered flawlessly, SLX-D delivers crystal clear sound. With a wide dynamic range, it can handle a variety of inputs while preventing distortion – ultimately enabling clean, natural instrument and vocal sound.
- **Ease of Use**—knowing that personnel in various institutions and facilities need a simple and straightforward solution, SLX-D is equipped with Guided Frequency Setup and a Group Scan feature that lets users set up multiple channels more efficiently by assigning frequencies to all receivers automatically via ethernet connections. Even for a 30+ channel system, the entire Group Scan can be completed within a few seconds.

"As we support customers in education, Houses of Worship, corporate facilities and theaters, we recognize the need for an easy-to-use digital wireless system with rock-solid RF performance that can scale as the needs of the venue or spectrum environment change," said **Nick Wood**, Senior Wireless Category Director at Shure. "With SLX-D, we can offer a solution that is both state-of-the-art and a great value."

Shure introduces SLX-D Digital Wireless System

PUNQTUM JOINS RAVENNA PARTNERSHIP

punQtum B.V., specialist providers of digital communication tools for the live event and professional audio industry, has today become the latest company to form part of the RAVENNA community. The move underlines punQtum's commitment to supporting open technology standards and embracing the ongoing transition to digital IP solutions in pro audio applications.

Established in 2019, punQtum recently launched its first product: the Q110 Beltpack is the first element of a larger networked intercom system that offers up to 32 partylines via standard IP networks and infrastructures. Providing ultimate scalability, the Q110 suits systems of any size, ranging from small events requiring just two beltpacks to as many are required for large, complex systems.

Using AES67 as a solid technology cornerstone, the punQtum Intercom system integrates seamlessly with AES67-compliant networks such as RAVENNA and Dante. "Using network technology for digital communication makes total sense," says punQtum CEO, **Arie van den Broek**. "Ethernet is available in many places already, so the ability to plug into a network instantly broadens and facilitates your scope of operation. Technologies such as RAVENNA - which offers high performance and interoperability - are an integral part of the IP landscape and are instrumental in driving progress, so it also makes complete sense that we should be part of that community."

RAVENNA evangelist, **Andreas Hildebrand** of ALC NetworX is pleased to welcome punQtum on board. "We've already seen the importance of digital IP-based intercom in the broadcast sector where it is already pretty well established with RAVENNA/AES67 as the principal transport technology. The extension of RAVENNA-based AoIP transport into the operational side of live events is the next logical step. punQtum has debuted a range of products that offer easy-to-use, scalable and fully AES67-compatible solutions in this market, so we're delighted to welcome them to the RAVENNA community."

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www.palmtechnology.in

JBL PROFESSIONAL DEBUTS BRX300 SERIES MODULAR LINE ARRAY SYSTEMS FOR THE APAC AND INDIA MARKETS

HARMAN Professional Solutions, introduced the **JBL Professional BRX300 Series** of modular line array systems for small- to mid-size applications in the APAC, India and China markets, only.

The series, which includes the BRX308-LA Line Array Element, BRX-325SP Powered Subwoofer with DSP, BRX308-ACC Transport Kit, BRX308-AF Array Frame and BRX308-PM Pole Mount and Adapter Kit, provides versatile sound reinforcement solutions for bands, DJs, A/V rental firms, houses of worship and anyone who requires pro-grade fidelity, class-leading output and seamless front-to-back coverage in a simple, scalable sound system.

"Every day, the world's leading concert venues and touring productions rely on the power and clarity of JBL Professional line array technology," said **Sunil Karanjikar**, Cinema Product Manager, HARMAN Professional Solutions. "With the BRX300 Series, we're bringing that legendary sonic performance to small- and mid-size productions.

"The BRX300 series takes the guesswork out of system setup and operation, thanks to its built-in corrective processing, smart transport system and simple rigging hardware. No matter your configuration, you'll be able to set up quickly and safely and get right back to focusing on your show. And, because systems are self powered and self contained, there's no dealing with amp racks, crossover calibration or long cable runs—just add input cables and a mixer and you're ready to go."

The BRX300 Series can be configured to accommodate a range of live music events, receptions and corporate functions. Systems are available in minimum one-subwoofer/two-top or one-subwoofer/four-top configurations and can be stacked, pole mounted or hung to provide seamless coverage in every scenario. Deploy in minutes and experience optimal sound out of the box with components engineered for superior sonics and ease of use:

The BRX308-LA Line Array Element features dual 8-inch LF drivers and a 3-inch titanium compression driver, providing full-spectrum coverage, class-leading 136 dB output and ultra-wide 110° horizontal dispersion, with variable interbox angles for fine-tuning vertical coverage.

The BRX325SP dual 15-inch Powered Subwoofer extends low-frequency energy to 32 Hz, with built-in 1,000-watt, 6-channel amplification providing 136 dB output and powering up to four BRX308-LA Line Array Elements; sophisticated internal DSP handles EQ, filters, driver-protection circuitry and crossover management. Built-in casters simplify transport.

The JBL BRX300 series has been available since July 2020 in the APAC, China and India markets.

BISHOPSOUND LAUNCHES DELTA DUAL TWIN 12" ACTIVE SUBWOOFER

Compact punchy powered subwoofers are in high demand for mobile and installation applications. Even home cinema fans are demanding deeper and more powerful subwoofers that accurately reproduce the pounding low frequencies that Dolby Atmos motion picture soundtracks deliver.

BishopSound's brand new compact 18mm Birch Plywood 1,000-Watt RMS active **Delta Dual BD212AS twin 12" subwoofer** meets all these audio needs and more. Professional, tough, roadie proof, the Delta dual twin 12" offers sound quality from a compact format.

With active onboard digital amplification delivering 1000w RMS down to 30Hz and with a maximum SPL of 131 dB this durable 18mm birch plywood clad subwoofer offers more than enough sound for live gigs, pubs and clubs or a large home cinema and at a very affordable price.

In common with all BishopSound's active subwoofers, the Delta Dual twin 12" features a host of professional features including a genuine Neutrik Powercon IN/OUT power feed. All too often mains IEC power leads are kicked out or fall out in the middle of a gig. Locking mains cables for ground-level BishopSound active professional subwoofers are essential.

Andrew Bishop stated "The move to active subwoofers has come from the need for a fast fix in places where tiny install speakers have been fitted for aesthetics and customers and owners have asked for a deeper richer tone. For touring a big bass sound needs to come from the most compact durable box. Either way the joy of "plug and play" with no additional processing equipment makes life easy".

Two simple, uncomplicated potentiometers on the rear panel control

Delta Dual BD212AS Twin 12" Subwoofer

the volume and low pass filter while Channel A and Channel B can be fed by XLR or 1/4" jack combi socket and a link out allows users to feed the original signal to multiple active subwoofers or mid/top range active cabinets.

Other features include a 1.2mm thick powder coated grille, rubber insulation feet, a 20mm screw-in inverted telescopic pole mount, a countersunk extra thick "ding proof" grille to prevent grille damage when on tour and the use of acoustic foam behind the grille to prevent moisture and dust ingression. Completing the Delta dual 12's professional specifications, the 18mm birch ply housing is treated to four coats of textured, tough acrylic PU polymer paint and comes with chunky, tactile steel handles.

In 2016 BishopSound Ltd launched with an innovative range of affordable PA products delivering the 'British Sound'. Since then, the award-winning Yorkshire-based company has introduced a range of successful PA products with more on the way. BishopSound products now sell in 23 countries and ship around the world.

BARCO BOOSTS INDIAN DISTRIBUTION NETWORK; PARTNERS WITH TRUSTECH FOR WIRELESS COLLABORATION SEGMENT

Global leader in professional visualization and networking technology - **Barco**, today announced its partnership with **Trustech Audio Visual Solution LLP**, a major distributor in the Indian Unified Communications space, to expand its reach across tier-2 and tier-3 cities in the country. With the renewed product and distribution strategy, Barco is targeting an enhanced outreach in more than 30 cities, by 2021.

Barco is known for its end-consumer targeted partnerships, and Trustech, with its over 400 partners, will play an important role in Barco's channel expansion and product strategy enablement. In a phased expansion, Barco is focusing on targeting 15 cities in this year, and 15 more cities by next year. While Barco shares partnerships with AV and IT distributors over the last few years, it is entering into the Unified Communication and Collaboration space with the launch of the innovative solution ClickShare Conference.

Following this partnership, Barco will now have two UC distributors in India, Trustech, and Ceeco Technologies, boosting its pan-India presence and providing the channel partners greater accessibility and flexibility. The entire ClickShare range will be available through Trustech.

According to **Faiz Rehman**, National Business Head – India & SAARC, Collaboration, Barco, "Bringing Trustech on board as our national distributor will help Barco strengthen its channel network, especially in UC & AV domains. In current times, with a major focus on conferencing solutions, with Clickshare Conference, Barco will now aim to be a key player in the UC&C space and, through Trustech, we expect to expand our footprints beyond major cities and boost our presence in tier-2 and tier-3 cities. Post the Covid-19 pandemic phase, we expect these cities to drive a good portion of our growth."

"The new partnership reflects our concerted efforts and focus on reinforcing the channel partners' ecosystem and our ability to distribute products, across multiple touchpoints in the country. We intend to enable as many organizations as possible, across India, to optimize their meeting room productivity and ensure a smooth, seamless collaborative experience for better business outcomes," he said.

Through the partnership, Trustech will also distribute some of Barco's ProAV segment products, including projectors and video walls. According to **Hardik Shah**, Director, Trustech, "Barco is a renowned global brand and we are pleased to enter into this national distribution partnership. As a niche distributor, we are intensely focused on the AV and UC space, and we believe that the association will benefit both parties tremendously."

Bhavesh Rabadia, Director, Trustech said, "We look forward to a long and fruitful association between Barco and Trustech, and hope to take Barco's innovative solutions to enterprises across the Indian market."

Additionally, expanding its outreach in the APAC region, Barco has also partnered with Gestetner of Ceylon PLC, for Sri Lanka and Maldives. Gestetner is one of the leading business groups of Sri Lanka and has been associated with many leading brands. Adding Gestetner as a national distributor for ClickShare and ClickShare Conference will enhance Barco's business in the APAC region, cementing its vision and mission of improving meeting room experience and productivity beyond geographical boundaries.

ALCONS AUDIO INTRODUCES THE QB242 ARRAYABLE SUBWOOFER

The **QB242** is a modular bass element for use in both permanent and (limited) portable applications. It is designed as a fully-scalable low-frequency extension (LFE) system to the QR24 line-source column system, or as arrayable LFE system with any Alcons pro-ribbon system.

The QB242 can be stacked or flown in multiples, making it an ideal building block to form bass arrays, for obtaining low frequency projection and throw control in acoustically challenging spaces or over longer distances.

The controlled (cylindrical) projection of the QR24 can thus be extended down to the lower frequencies by enlarging the LFE array length through adding extra QB242 modules. The lowest usable frequency of one single element is 35Hz.

The Q-systems are the perfect tool in applications where a high directivity and/or a very long throw is required, combined with HiFi output and concert SPL's, like theatres, churches, Houses of Worship, mobile outdoor sound system and "acoustically challenging rooms", a.o.

The two direct-radiating 12" Neodymium woofers are mounted in a vented chamber, with large bass reflex ports for excellent breathing capacity, increasing overall output while minimizing port-compression. The tight driver arrangement caters for optimal array coupling. The 8 ohms system impedance, makes for a very efficient amplifier channel loading, when assembling arrays of multiple units.

The QB242 is powered and controlled by the ALC amplified loudspeaker controller; Through the integrated processing and feedback, the ALC offers QB242-specific drive processing.

WAVES ANNOUNCES NEW COMMERCIAL AUDIO PRODUCT LINE

Waves Audio has announced the first products of its new Waves Commercial Audio line: the **Waves CA1000** and **CA2000 Commercial Audio DSP Engines**.

Waves processors, with professionally pre-configured, integrator-ready audio processing presets are suitable for corporate, commercial, government, educational, entertainment, sports and house-of-worship installations.

The Waves CA1000 and CA2000 Professional DSP Engine units can integrate easily into new or existing A/V installations using Dante audio networking. Waves CA1000 and CA2000 include 19 professionally curated audio processing presets that solve challenges with playback quality, speech intelligibility via a wide array of microphones and amplification systems, feedback elimination, voice processing without loss of tonality, and more. These presets are based on low-latency Waves premium plugins, which can be further customized and stored by the integrator based on their unique room or zone requirements.

They are designed to tame and control common problems that can occur at installations with media playback, wireless mics, meeting room/table mics, lectern/pulpit mics and broadcast/streaming.

Each of the presets can be customized and locked-in by the installer for individual channels, groups or zones, to deliver optimal results based on the IO, PA and room.

Waves CA1000

A/V installers and integrators can configure the CA1000 to process up to 16x16 bidirectional audio channels, and the CA2000 can be configured to process up to 64x64 bidirectional audio channels over the Dante network.

STAGE sound & tech

WHERE DO WE GO NOW?

Warren D'souza

Our industry faces the biggest crisis ever in the history of entertainment and there is no point talking about what is already doing the rounds. What's important is that we begin starting to do something about this

You have probably thought of every possible way to stay afloat, you have been worried sick about all the insurmountable issues that are cropping up, financially, socially, mentally and even physically give the fact that your movement is restricted

I am going to talk about what you should be doing rather than complaining about the systems, the government, and the industry. Right now any time spent on talking about it is futile. It's the time to move on; it's the time to cut of the umbilical cord of the attachment we have to our equipment which is currently a pile of dumb metal.

Although its difficult, we have to reshape ourselves and remould ourselves into fresh ideas for business or business opportunities so how do we begin. If you're an equipment owner or a sound engineer, the first thing I would urge you to do is write down what your good at besides your core work and are you capable of making any of those skills an enterprise for example as simple as if you're a good cook or baker, can you start making comfort food and digitalise your ability to reach out to many to start a home delivery of your passionate second option that was dormant over these decades then you have a chance to survive

Covid-19's associated problems. This is just one such example! The problem is people remember their old earning capabilities. For me I always say that making a profit of 10K in these times are like making a 100K and you should relish and savour that profitability. It's that small money that people are not willing to push themselves to put themselves out there.

Everyone is talking about re-skilling or improving your skills and I am just wondering how does spending so much time on skilling is going to make a big impact to an already dormant industry,

what's important is that you learn new skills and not re-skills, you should have probably known all those core skills on systems, mixing & RF even before lockdown and whilst manufacturers were putting stuff out there you should be only learning advanced skills or absolutely new skills. Now this is also fallen out of fashion and manufacturers have also exhausted their training resources for free and those who make a living out of training have fewer subscribers.

I do not have a crystal ball and I cannot predict the future, Your guess will be as good as mine, but if you are living

in the delirium that a vaccine is around the corner and things will be fine after the vaccine, you are heading down the wrong road and you need to start working towards a future whether there is a vaccine on not. A vaccine does not guarantee your industry from restarting neither does it guarantee a humans complete immunity otherwise we would have been free from all diseases & germs. What will really help you is to build physical and

mental immunity. The medical industry is still, getting a grip of the new respiratory disease and its all too new to come to any conclusion.

But its not all gloom and this is a time that the industry has come together and **EESA** (Event Equipment Services Association) has gone national and I urge everyone in our industry that owns rental equipment & services to the professional event industry to join EESA. The benefits are immense and EESA is working on a lot of matters that will benefit our community by representation at FICCI & Indian Chamber of

Commerce to represent our point of view. Finally we will also have an association to take up matters/problems related into GST, E-Way Billing by having a body to represent us. Our representatives of the association will also be able to communicate with other associations or industries to improve working conditions - for example to be able to talk to the hotels and ask them to allow our staff to bring in food and to be able to get a small area to have meals etc. And to talk to Event Companies and insist that proper breaks are given for food timings etc. The benefits are immense! Do visit the website *www.eesa.in* or DM me at *warren.dsouza@gmail.com* and I will put you onto the appropriate contacts.

In the meantime, stay safe, stay connected with the world and learn to take whatever comes your way no matter who you are, giants have fallen in these times so there is no need to be hard on yourself. Keep the faith and we shall sooner than later be gigging in venues. Better times definitely ahead!!

> I am going to talk about what you should be doing rather than complaining about the systems, the government, and the industry. Right now any time spent on talking about it is futile. It's the time to move on; it's the time to cut of the umbilical cord of the attachment we have to our equipment which is currently a pile of dumb metal.

Warren D'souza - Founder, Managing Director, & Working Member of Sound.Com

Instagram @warrendsouza
#AudioEvangelist
#SoundGuyForLife

EESA
EVENT EQUIPMENT SERVICES ASSOCIATION

REFORM | STANDARDISE | REVOLUTIONISE

House of Worship Speakers

Nexo GEO M6

Powerful and flexible, NEXO GEO M6 delivers uncompromised full-range sound in a wide variety of fixed installations and mobile applications. The GEO M6 comprises of two identically-sized cabinets – the GEO M620 main and GEO M6B bass extension.

Main Features include:
- Integral Rigging - The 3-point rigging system is hidden inside the cabinet, reducing visual impact.
- Custom RAL Colors - Lightweight polyurethane composite cabinets, fabric grilles and accessories can be specified in any RAL color.
- Systems can be flown, ground stacked or pole-mounted on subs.
- GEO M6 utilizes NEXO's patented Hyperbolic Reflective Wavesource (HRW) to control acoustic energy by creating a virtual wavesource.
- System flexibility can be increased by add-

ing flanges to the HF waveguide exit.

Technical Specification: (GEO M620)
- Frequency Response: 80Hz – 19kHz ±3dB
- Usable Range @-6Db: 75Hz – 20kHz
- Sensitivity 1W @ 1m: 95dB SPL Nominal
- Nominal Peak SPL @ 1m: 127dB
- HF Dispersion: 80˚or 120˚Horizontal (CCD)
- Crossover Frequencies: LF-HF: 2kHz Passive
- Nominal Impedance: 8Ω
- Recommended Amplifiers: 450W per box (3 boxes max in parallel on one channel amplifier)

Product Features
- Components: LF: 1 x 6.5" 8Ω long excursion driver; HF: 1 x 1" throat driver on a BEA/FEA optimized HR Wavesource
- Height x Width x Depth: 191mm x 373mm x 260mm
- Weight: Net 9.7kg
- Connectors: 2 x NL4 Speakon 4 poles
- Construction: Lightweight Polyurethane composite

System Operation
- Speaker Cabling: 2+/2- L

QSC CP12

The QSC CP12 is a compact design with a rugged appearance. CP is equipped with a highly efficient, 1000-watt power amplifier, matching transducers and advanced DSP, delivering performance beyond expectations for a loudspeaker of this size. Because of its compact size, CP is remarkably lightweight, making it easy to load, carry, lift and deploy in a wide range of portable and installed applications.

Main Features include:
- Compact and powerful performance
- 1000 Watt peak power Class-D amplifier module
- Easily selected contours for commonly-used applications
- Advanced DSP with Intrinsic Correction for superior sound quality and speaker protection
- Directivity Matched Transition (DMT) for consistent frequency response across the entire coverage area
- Light weight and highly portable
- Professional appearance looks great in any application
- Use for main PA, stage monitor, or instrument amplifier
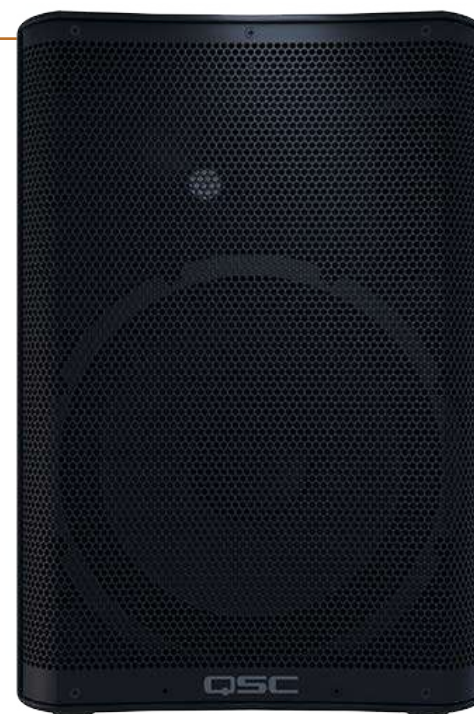
- 35 mm pole socket
- Optional yoke, tote, and outdoor cover accessories
- Complete EASE and CAD information available online
- 6-Year Warranty C

Technical Specification:
- LF Transducer: 305 mm (12 in), cone
- HF Transducer: 35.6 mm (1.4 in) compression driver
- Frequency Response (-6 dB): 49 - 20 kHz
- Frequency Range (-10 dB): 47 - 20 kHz
- Nominal Coverage Angle: 75° Axisymetric
- Maximum Rated SPL[1]:   126 dB
- Amplifier: Class D
- Peak: 800 W (LF), 200 W (HF)
- Controls: Power, 2 × Gain; Mic Boost Push Switch; 6-way Contour Selection Switch
- Indicators: Power LED; 2 × Input Signal LED; Input B MIC selected LED; Limiter active LED
- Connectors: 2 × locking XLR/F ¼" combo (Line Input and Mic/Line input); 1 × 3.5 mm TRS (Stereo Input); 1 × XLR/M (Mix Output); 1 × IEC power connector
- AC Power Input: Universal power supply 100 – 240 VAC, 50 – 60 Hz
- AC Power Consumption (1/8th Power): 100 VAC, 0.75A - 240VAC 0.31A
- Enclosure Material: Polypropylene
- Attachment Points: M8 threaded insert
- Color: Black (RAL 9011)
- Grille: 18 Gauge powder-coated steel
- Speaker Dimensions (H×W×D): 516 × 350 × 323 mm; 20.3 × 13.8 × 12.7 in
- Net Weight: 13.7 kg / 30.3 lb

*For any **House of Worship**, it is not only important that the congregation is able to hear the words spoken by the priest but also understand the message being delivered. A good and professional sound system can allow the congregation to be more focused and help the service run smoothly.*
Here are some of the popular speakers to enhance the sound in any House of Worship.

d&b audiotechnik xC series

The 2-way passive xC-Series column loudspeakers are elegantly engineered to provide effective, discreet solutions for acoustically challenging environments. The series are the 16C, 24C and 24C-E Column loudspeakers and are available in black and white colors.

Main Features include:
- remarkable directivity control
- even off/axis frequency response
- full bandwidth cardioid dispersion pattern
- 4" drivers radiate through waveguide elements
- cardioid dispersion pattern minimizes interference caused by wall reflections in the low and mid frequencies
- Two continuous rails at the rear enable the loudspeakers to be fitted close and parallel to the wall

Technical Specifications (24C-E):
  System data
- Frequency response (-5 dB standard: 110 Hz - 17 kHz
- Frequency response (-5 dB CUT mode): 150 Hz - 17 kHz
- Max. sound pressure[1] : 128 dB (in combination with 24C)
- Cabinets per amplifier channel: 1

  Loudspeaker data
- Configuration: Installation specific cardioid column extender
- Power handling capacity (RMS/peak 10 ms): 250/1200 W
- Vertical downtilt of low-mid beam: 5°
- Vertical adjustment of HF section: 0° – -14°
- Nominal dispersion angle (h x v): 90° x 20°
- Components: 24C-E: 6 x 4" driver with neodymium magnet; 24C + 24C-E:; 12 x 4" driver with neodymium magnet; 6 x 1.1" dome tweeter mounted in vertical; horn array
- Connections: fixed cable gland with 2-pole Mate-N-Lok mini through 24C

  Dimensions / Weight
- Dimensions (H x W x D): 701 x 124.5 x 124 mm; 27.6 x 4.9 x 4.88"
- Weight: 7 kg / 15.4 lb L

JBL CBT Series

The JBL CBT Series line array columns with Constant Beamwidth Technology are designed for venues that would typically use larger point-and-shoot speakers. The CBT models: CBT 50LA-1, CBT 50LA-LS, CBT 100LA-1, CBT 100LA-LS, CBT 70J-1, CBT 70J-1 + 70JE-1 System, CBT 200LA-1, CBT 1000, and CBT 1000 + CBT 1000E System incorporate technical advancements that allow them to vastly outperform competitive systems, virtually eliminating the challenges of delivering great sound.

Main Features include:
- Asymmetrical vertical coverage to send more sound toward far area of room to make sound levels consistent.
- Constant Beamwidth Technology provides constant directivity up to the highest frequencies and reduces out of coverage lobing.
- Patent-pending Tapered Horizontal Waveguide provides a continuously varying horizontal dispersion delivering superior.
- Single-speaker room coverage at high SPL, with little over-splash and strong bass response down to below 40 Hz.
- Switchable voicing provides flat response in music mode or mid-range presence peak in speech mode.
- Swivel (pan)/tilt wall bracket included.

Technical Specifications (CBT 1000):
- Drivers: 6 X 165 mm (6.5 in) LF drivers 24 X 25 mm (1 in) HF drivers
- Frequency Response (-10dB): 45 Hz – 20 kHz
- Sensitivity (1W, 1m): 102 dB (at highest sensitivity setting); 95 dB (at lowest sensitivity setting)
- Impedance: 4 ohms (4 ohms above 1 kHz; 8 ohms below 800 Hz)
- Power Rating: 1500 W (6000 W peak), 2 hrs; 1000 W (4000 W peak), 100 hrs
- Maximum Input Voltage: 65.0 Volts RMS (2 hrs), 130.0 Volts Peak
- Maximum SPL (1m): Highest directivity setting: with "Speech" voicing: 131 ; dB continuous average pink noise, 134 dB continuous; program, 137 dB Peak
- Recommended High-Pass; 35Hz, 24 dB/oct or greater
- High Frequency Drivers: 24 pcs, 25 mm (1 in) drivers, neodymium, encased magnet and coated diaphragm for moisture, UV, and salt resistance.
- Enclosure: Fiberglass reinforced ABS cabinet, powder coated 1050 aluminum grille
- Outdoor Capability: IP-55 rated, per IEC529, when installed with optional ; MTC-PC2 cover.
- ASTM G85 for acid-air/salt-spray (200 hrs.).
- Color: Black (RAL9004) or White (-WH) (RAL9016)
- Dimensions (H x W x D): 1020 mm x 250 mm x 345 mm (40.2 x 9.9 x 13.6 in)

L-Acoustics ARCS Series

The ARCS WIDE and ARCS FOCUS systems are based on two constant curvature enclosures ensuring distinct directivity pattern and SPL capabilities. Intended for medium-throw applications in rental productions and fixed installations, these line sources deliver remarkable acoustic properties and unmatched versatility for applications including FOH L/R systems, central clusters, side-fill monitors, distributed systems and complementary fills.

Main Features include:
- Optimized for medium-throw rental and installation applications
- Plug-and-play package, quick set-up and easy flying
- Scalable directivity from 30° x 90° to 360° x 90° by 30° increments
- Fills, distributed systems, FOH, central clusters
- Innate LF resources, possible extension with SB18m subwoofers
- LA4X/LA8 drive and protection, same preset for Wide and Focus
- IP 55 protection rating

Technical Specifications (ARCS WIDE):
- Usable bandwidth (-10 dB) : 55 Hz - 20 kHz ([ARCS_WIFO] preset)
- Maximum SPL[1]: 137 dB ([ARCS_WIFO] preset)
- Coverage angle (-6 dB): 30° x 90°
- Transducers: LF: 1 x 12", weather-resistant, bass-reflex; HF: 1 x 3", diaphragm compression ; driver, DOSC waveguide
- Nominal impedance: 8 Ω
- RMS power handling: 450 W
- Connectors: IN: 1 x 4-point SpeakOn; LINK: 1 x 4-point SpeakOn
- Rigging components; Rigging rails and WIFORIG coupling bars

Physical data
- W x H/h x D: 365/140 x 759 x 444 mm ; 14.4/5.5 x 29.9 x 17.5 in
- Weight (net): 36 kg 79 lb
- Cabinet: Baltic birch plywood.
- Finish: Dark grey brown PANTONE 426C; Pure white RAL 9010; Custom RAL code on special order
- Front: Steel grill with anti-corrosion coating, Airnet fabric
- Protection Rating: IP55
- Rigging components: High strength steel with anti-corrosion coating

Bose Panaray MSA12X

The Bose Professional Panaray MSA12X is a self-powered digital beam-steering loudspeaker that enables improved room aesthetics, with outstanding vocal intelligibility and tonal consistency. It can be used for House of Worships, Auditoriums, conference rooms, lecture halls, and transportation facilities.

Main Features include:
- Digital beam-steering line array column loudspeaker with onboard DSP and 600 watts (12 x 50 W) of amplification
- Family sound profile with the Panaray MA12EX Loudspeaker
- Twelve (12) x 2.25-inch full-range transducers with 58 Hz – 18 kHz frequency range
- Dante digital audio network interface and line-level analog input
- Articulated Array configuration allows wide, 160° horizontal coverage
- Modular design allows building vertical arrays using 1-3 units
- Multiple algorithms for beam steering control – designers can optimize consistency of coverage, tonal balance, and maximum SPL per job
- Supports independent level and EQ control of 2 separate beams per array
- Integrated mounting bracket allows up 90° of horizontal yaw adjustment
- Advanced steering and acoustic coverage prediction using Bose Modeler software
- System setup, control and monitoring with Bose ControlSpace Designer software
- Available in black or white finish

Technical Specification:
- Frequency Range (-10 dB): 58 Hz – 18 kHz
- Horizontal Dispersion: 160° H
- Vertical Opening Angles: Software Adjustable: 1 module: up ; to 30°, 2-3 modules: up to 40°
- Vertical Beam Steering Angles: + / - 20°
- Driver Compliment: Twelve (12) x 2.25-inch full-range transducers
- Amplifier Power Handling: 600 W (12 x 50 W)
- Maximum SPL @ 1 m: 112 dB SPL (118 dB SPL peak)
- Inputs: Dante digital audio network interface and line-level analog input

RCF HDL20

The careful acoustic design, no compromise transducers and a unique, composite cabinet, design make the HDL 20-A the preferred tool of many professionals. The system is powered from a 1400-Watt Peak Power 2-way digital amplifier, sound is processed from a powerful DSP.

Main Features include:
- 1400-Watt Peak power - 700 Watt RMS
- 135 dB max SPL
- 55 Hz 20 kHz frequency response
- 2 x 10" Woofers
- 1 x 3" Compression Driver
- DSP controlled Input section with selectable presets
- Tour grade safe and solid variable mechanics
- Composite PP enclosure structurally wooden reinforcedo

Technical Specification:
Acoustical specifications
- Frequency Response: 55 Hz ÷ 20000 Hz
- Max SPL @ 1M: 135 dB
- Horizontal Coverage Angle: 100°
- Vertical Coverage Angle: 15°

Transducers
- Compression Driver: 1 x 2.0", 3.0" v.c
- Woofer: 2 x 10", 2.5" v.c
- Input/Output section
- Input Signal: bal/unbal
- Input Connectors: XLR
- Output Connectors: XLR
- Input Sensitivity: -2 dBu/+4 dBu

Processor section
- Crossover Frequencies: 800 Hz
- Protections: Thermal, RMS
- Limiter: Soft Limiter
- Controls: Cluster, HF, High curving, Indoor

Power section
- Total Power: 1400 W Peak, 700 W RMS
- High Frequencies: 400 W Peak, 200 W RMS
- Low Frequencies: 1000 W Peak, 500 W RMS
- Cooling: Convection
- Connections: Powercon IN/OUT
- Physical specifications
- Cabinet/Case Material: PP Composite
- Hardware: Rigging flyware
- Handles: 2 side, 2 back
- Grille: Steel
- Color: Black

Size
- Height: 294 mm / 11.57 inches
- Width: 705 mm / 27.76 inches
- Depth: 445 mm / 17.52 inches
- Weight: 30.2 kg / 66.58 lbs

Audio Focus ARES8a HQ

ARES8a HQ is a dual 8″ enclosure line array with and 1.4″HF driver and a 3″ voice coil. Its B&C driver coupled to a waveguide provides a true cylindrical dispersion. It features a dedicated class D Powersoft amplifier and AUDIOFOCUS OEM DSP treatment (96kHz-40 bits floating point) with 24 presets, one cabinet can reach a peak level of 143 dB SPL (preset 64m).

Main Features include:
- Multi-functional FOH system
- For audiences of 200-5000 people
- True cylindrical dedicated wavefront
- Sidefill/Outfill for large stages
- Scalable up to 24 elements
- Active/Dante/Bi-amp versions

Technical Specification:
- Drivers: 2 x 8″″ LF/MF & 1 x 1,4″″ Neo driver - 1 x 3″″ HF voice coil & Titanium diaphragm
- Frequency range: 70 Hz - 19,5 kHz
- Power capacity (Wrms) Peak power: Wrms: 550 W (LF) / 120 W (HF)Peak power: 900 W (LF) / 800 W (HF)

- Impedance: 4Ω LF - 8Ω HF (bi-amped)
- Dispersion (h x v): 110° x 7,5°(average)
- Sensitivity 1W / 1m (bi-amp): 98 dB (low) - 110 dB (high)
- SPL max / 1m (measured): Bi-amped: 132 dB
- Active: 142 dB(1)
- Connectors: Analog/AES RJ45 audio signal (AES embedded RJ45 IN/OUT)
- Rigging Angles: Linear & Logarithmic
- Qty of angles: 20 x 0,5°steps
- Dimensions (h x w x d): 250 x 645 x 400 mm (including pins)
- Weight: Bi-amped: 29 kg
- Active: 30 kg
- Finish: High resistant Polyurea coating
- Material: First grade birch plywood 15 & 24 mm
- Compatible: AF Network Manager, Dante optional

Meyer Sound Ultra-X40

The ULTRA-X40 brings new versatility to system design and deployment. It's at home in any portable or installed application requiring predictable, controllable wide coverage, from concert halls and clubs to houses of worship, theatrical sound reinforcement, theme parks, stadiums, concert halls, and nightclubs. It's perfect for frontfill and under balcony use and in portable A/V systems and small voice-reinforcement systems.

Main Features include:
- Exceptional fidelity and surprising power capability delivered in a compact, light enclosure
- Extraordinarily flat amplitude and phase response ensures tonal accuracy and precise imaging
- Wide pattern
- Rotatable horn provides installation flexibility
- Integral stand mount and QuickFly mounting options facilitate riggings

Technical Specification:

Acoustical
- Operating Frequency Range: 55 Hz – 19.5 kHz
- Frequency Response: 56 Hz – 19 kHz ± 4 dB
- Phase Response: 90 Hz – 19.5 kHz ±45°
- Linear Peak SPL: 132.5 dB with 18 dB crest factor (M-noise), 130 dB (Pink Noise), 131 dB (B-noise)
- Coverage: Rotatable horn: 110° x 50°

Transducers
- Low Frequency: Two 8-inch cone drivers; 4 Ω nominal impedance
- High Frequency: One 3-inch diaphragm compression driver connected to a rotatable horn; 8 Ω nominal impedance

Audio Input
- Type: Differential, electronically balanced
- Maximum Common Mode Range: ±15 V
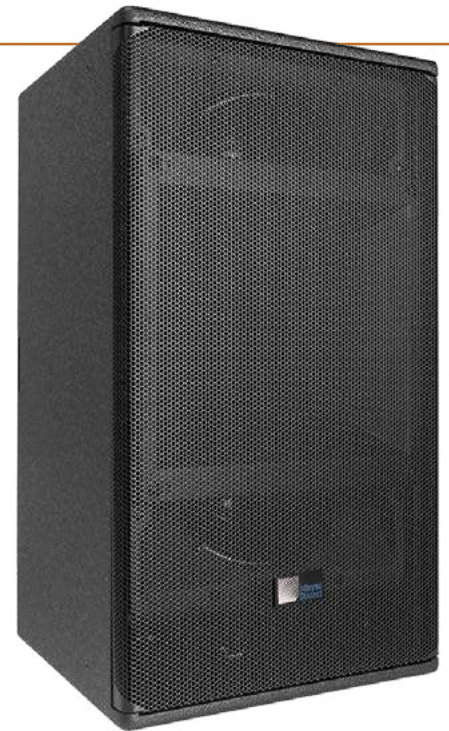
DC, clamped to earth for voltage transient protection
- Connectors: XLR 3-pin female input with male loop output; optional XLR 5-pin connector to accommodate both balanced audio and RMS signals.
- Input Impedance: 10 kΩ differential between pins 2 and 3
- Nominal Input Sensitivity: 0 dBV (1.0 V rms) continuous is typically the onset of limiting for noise and music
- Input Level: Audio source must be capable of producing of +20 dBV (10 V rms) into 600 Ω to produce the maximum peak SPL over the operating bandwidth of the loudspeaker.

Amplifier
- Type: 3-channel, Class-D
- Total Output Power: 1950 W peak THD, IM,
- TIM: <0.02%
- Cooling: Convection

AC Power
- Connector: powerCON 20 input with loop output
- Automatic Voltage Selection: 90–265 V AC, 50–60 Hz
- Safety Rated Voltage Range: 100–240 V AC, 50–60 Hz
- Turn-on and Turn-off Points: 90 V AC turn-on, no turn-off; internal fuse protection above 265 V AC

Physical
- Dimensions: W: 12.51 in (318 mm) x H: 22.31 in (567 mm) x D: 14 in (356 mm); D with handles: 15.38 in (391 mm)
- Weight: 52 lb (23.6 kg)
- Enclosure: Premium multi-ply birch with slightly textured black finish
- Protective Grille: Powder-coated, round-perforated steel
- Rigging: 11 integrated M8 threaded points; 35 mm Pole Mount with M20 thread

Sennheiser
75-year Milestone

Vipin Pungalia, Director, Professional Segment, Sennheiser India

*June 2020 marked the 75th anniversary of the foundation of Sennheiser, one of the world's leading manufacturers of headphones, loudspeakers, microphones and wireless transmission systems. Through these 75 years, Sennheiser has been telling stories and creating sound experiences for customers across the globe. On this milestone occasion, PT spoke to **Vipin Pungalia** - Director, Professional Segment, Sennheiser India to understand the company's growth, technology and vision for the Indian market.*

Firstly, congratulations to Sennheiser group on completing 75 years. What kind of anniversary promotions or special deals has Sennheiser lined up for the Indian market, your distributors, and channel partners?

This year marks the 75th year of Sennheiser in the industry. This year is quite special for us- we had planned a special celebration with all our partners- but it couldn't go as planned due to the on-going pandemic.

For the Professional Segment at Sennheiser, we have a very strong network of distributors and channel partners business segment-wise PAN India. Our distributors and channel partners play an extremely crucial role for us in catering to needs of our diverse customers across the country. We focus a lot on consistently educating and sharing knowledge with our stakeholders on products and technology through workshops, trainings round-the-year.

As a way to show gratitude to our customers, distributors, channel partners, and thank them for being associated with Sennheiser journey in India, we are running 75th Anniversary Promo offer on selected range of professional headphones and microphones starting July 2020.

These offers are being promoted across all platforms viz. Traditional distribution network and online.

Which year did Sennheiser enter the Indian market? Moreover, do you think it was an experiment at that time or a conscious and planned move by the German based company?

Sennheiser entered the Indian market in the year 2007 which was a conscious and a planned move by the company and India has been one of the key markets ever since. The brand is here to stay and grow.

We have been providing support to Live performing artists and bands remains at Sennheiser's core and we clearly see a rising growth and demand in this vertical. Sennheiser has developed a line-up to deliver the emotional power and the bulletproof reliability. Whether it is a stage concert or an intimate session or a jazz club, we have the right accessories for budding artists as well as for the professional performers. Now, with the growth of Digital Content creators, YouTubers and video-bloggers, Audio for Video has also increased in importance and popularity alike.

We have witnessed big potential and growth in the Business Communication segment. There is a need for right audio solutions to conduct effective virtual meetings, conferences, etc. We had launched a clutter-breaking conferencing solution – the TeamConnect Ceiling, now in its second generation and we have received a very encouraging response in India and rest of the world alike.

For Sennheiser, opportunity lies in education sector as well. Technology has found its way into the classrooms with several audio and visual aides to teach students for better understanding.

How has the growth been for Sennheiser in an emerging market like India since its entry here?

Since Sennheiser's entry into the Indian market, the Professional Segment has been witnessing a double-digit growth year-on-year.

While our customers were discovering the magic of sound through our products, audiophiles swore by the brand due to which Sennheiser was ranked among the top brands by artists.

Sennheiser provides world class Professional audio solutions. Live Performance and Music, Business Communication and Audio for Video continue to be the major growth drivers. 2019 was a successful year for us where we launched multiple clutter-breaking audio solutions across segments in the audio industry. Our plan is to continue growing while consistently introducing the best offerings. At Sennheiser, our aim has always been to understand the needs of our customers and cater to those needs by providing them with the efficient solutions.

Sennheiser India has played a significant role in making Pro-audio industry in India what it is today. We have kept setting benchmarks by introducing various innovations such as the evolution of Wireless G3 system in the year 2009 and the evolution of Wireless G4 System launch in 2018. As a brand, we believe in supporting professional community through various initiatives like organizing live mixing workshop, Sennheiser top 50- a platform for young Indian bands to showcase their talent.

With the on-going pandemic, pro audio market has been affected just like other industries. This is the testing time for businesses and people alike. We have been cognizant of the current scenario and wanted to utilize this opportunity to impart knowledge learning

amongst our Professional Segment customers, and partners. Sennheiser initiated a campaign #DontStopTheEducation – a series of free online webinar sessions as we believe that there should be no reason to stop learning even in the current social distancing and working from home situation.

To support the community during these tough times, we initiated a campaign called #DontStopTheMusic. It was an exclusive streaming concert on Sennheiser's Instagram channel. We had a line-up of artists such as David Guetta, DJ Madoc, Murthovic, Bob Sinclair, Third Eye Blind amongst others. Through this initiative, we encouraged people to support the WHO in its fight against COVID-19.

From the Indian market perspective, what according to you are the three main milestones in terms of product development in the 75-year history of Sennheiser?

Sennheiser stands for the establishment and development of trends. We are always re-inventing the future. Our passion goes to such lengths that we are only satisfied with a solution when we see it as being perfectly adapted to the needs of the given case. So the trailblazing ideas of our developers have made Sennheiser products famous throughout the world and repeatedly met with an enthusiastic response from audio enthusiasts. Our achievements have won us numerous international awards: two innovation prizes of German industry, the 'technical Oscar' (the Scientific and Engineering Award), a Grammy and the most significant television prize in the USA, the Emmy Award.

We created the first directional microphone in the fifties, the open headphone in the sixties, infrared transmission technology in the seventies and multichannel cordless transmission in the eighties. In the nineties we developed head-related surround systems, while intelligent audio information systems were the focus of our interest at the start of the new millennium - and today we continue to drive the progressive digitalization of the audio world and create immersive audio experiences with the 3D audio technology program AMBEO.

To ensure that it stays this way, we have created a unique instrument: Sennheiser Innovation AG. This is the company whose designers, market researchers, business managers and engineers study and shape the themes of the future. Today it is more important than ever to be setting the points for innovation at the earliest possible stage. We aim to detect important developments in consumer preferences right from the start, with a view to focusing
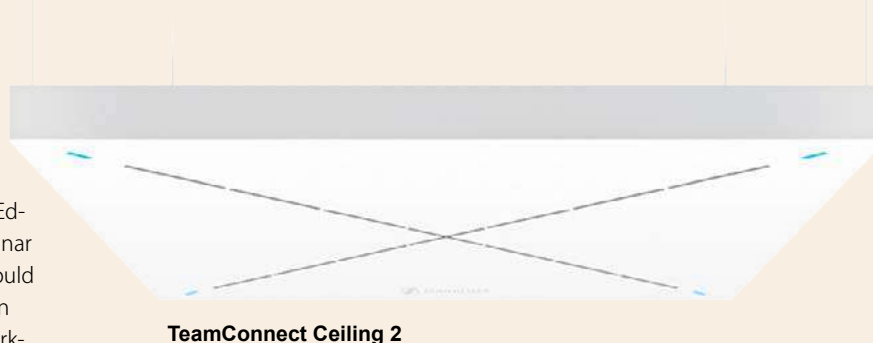
TeamConnect Ceiling 2

our company's thinking, products and services accordingly.

What are the priority markets or application segments in India currently? And which product are you currently pushing most aggressively in the pro-audio market?

For Sennheiser, Live Segment, Audio for Video, Corporate, and Education are the priority markets in India currently.

As one of the world's leading producers of audio technology, Sennheiser has aimed for decades to provide up-to-date audio solutions. Sennheiser's decision to make use of Dante (Dante™ created by Audinate), the worldwide leading multi-channel audio over IP standard, is part of this ongoing effort to create future-proof products.

Products like Digital 6000 Series

> **As per a report, the global wireless microphone market is expected to grow at a higher rate during the forecast period 2020-2025. These microphones are easy to use since they are portable, and a versatile way to record or broadcast sounds.**

offer outstanding audio quality and rock-solid RF wireless transmission for live performance. The intermodulation-free HF technology from Digital 6000 guarantees, even in very narrow frequency ranges, additional channels which can be relied upon. The new Link Density mode doubles the possibilities. 5 channels in 1 MHz bandwidth offer lots of leeway. Not theoretically, on paper, but in real life on the stage. Where there is sweat, moving about, and in the

most demanding of HF scenarios. The Digital 6000 system delivers an audibly better sound quality and wider dynamic range even in the most challenging RF scenarios, working with our proprietary Sennheiser Digital Audio Codec (Se-DAC) ensures the highest quality sound whatever the environment.

Sennheiser has developed its patented 3D Audio technology known as AMBEO. It is born from the desire to deliver the ultimate sound experience, selectively including the most advanced 3D audio technology/surround sound into new products, tools and features. Some of the products that we have introduced under AMBEO are the Soundbar, the VR Mic and Smart Headset.

What are the big areas of opportunity for Sennheiser going forward?

Pro-audio industry is going through rough times, just like any other industry. However, by constantly keeping an eye on customers' needs, one can continue to strengthen the foundation of trust and present itself as an agile, flexible, and ready to help and guide them during this period.

During this lockdown, technology has become the biggest enabler in helping both communities and business to sustain and navigate through this global crisis. Audio solutions now have become an integral part – whether working from home or organizing virtual concerts. There is a growing need of extraordinary technology to bounce back stronger than before. Sennheiser, being at the forefront of shaping the future of audio sees this as strength and an opportunity to provide enhanced solutions to customers.

Having spent several weeks working from home during lockdown, employers are busy developing plans for returning to work – while still observing hygiene rules and social distancing – with the aim of gradually increasing the number of people present at their workplaces. In fact, many manufacturers are finding that employees are becoming more and more keen to return to their deserted offices as time goes by. Touch free conferencing solutions such as TeamConnect Ceiling 2 provides a safe environment and is proving to be a great tool for the same.

Where or how do you see the market

for wireless microphones and headphones in India in the next five years?

The wireless industry is growing due to the rapid technological advancement and the increasing need for convenience such as portability and remote accessibility among consumers. Wireless headphones have also become a necessity for many due to the exclusion of headphone jacks from modern devices. Additionally, the rise of smart assistants and in-ear biometrics and companies have further pushed the growth of the headphones.

As per a report, the global wireless microphone market is expected to grow at a higher rate during the forecast period 2020-2025. These microphones are easy to use since they are portable, and a versatile way to record or broadcast sounds. Without a cable connecting the microphone to a camera, recorder, or speaker, an artist can act unhampered.

What is the greatest challenge that you face in the Indian market?

Currently, the pandemic has had an enormous impact on almost everything including all brands and businesses. The pro-audio industry has been facing a few challenges just like any other industry. However, there is an opportunity to learn with every crisis. We are closely assessing the situation as some Pro Audio Business segments like Live Performance are expected to impact significantly. Other segments like Broadcast, OTT, Home Recording Studio, Government, Virtual Meetings are expected to gain momentum.

Sennheiser has been focusing on the future of audio for the past 75 years now. The Indian market is constantly evolving along with the other markets in the world. Moreover, we have a strong consumer base in India for the Pro Audio segment. We have been very successful in the market as customers across the board here are well informed and are quality conscious. They expect top class post sales services. Moreover, they are ready to pay the price for premium products.

Your vision for Sennheiser India, for the next year or two?

At Sennheiser, the customer is at the center of everything. We create audio products our consumers can rely on- whether on stage, when listening to music and during conferences or meetings. By designing sound that people can not only hear but also feel, we go beyond product reliability to fulfill our vision: Shaping the future of audio and creating unique sound experiences and solutions for our customers.

ADIYOGI DIVYA DARSHANAM
CONTINUES TO RAISE STANDARDS

*24 Epson 15,000 lumen
projectors and WATCHOUT
multi-display software
enables Award-winning
14-minute projection show*

Since it's unveiling in 2019 by the President of India Shri Ram Nath Kovind, the Adiyogi Divya Darshanam has enthralled spectators from across the globe. In May this year, this one of its kind projection mapping show won the Mondo dr EMEA & APAC Award for Technology in Entertainment in the category of House of Worship. **PT** spoke to **Axis Three Dee Studios** who joined forces with market leading pro AV solution providers Epson and Dataton to produce and deliver a magnificent projection mapping show that lights up an iconic 112-foot towering statue at the Isha Yoga Centre in Coimbatore. **Mr. Avijit Samajdar**, CEO & Founder, Axis Three Dee Studios, **Mr. Pravin Kumar A.**, Product Head, Epson India and **Mr. Ashok Sharma**, Regional Sales Manager, APAC, Dataton elaborate on how the team has ensured that the spectacular show continues to perform flawlessly with maximum impact.

Project of Magnitude

One hundred and twelve feet tall, the statue of Adiyogi, which is the largest bust in the world and has its place in the Guinness Book of World Record, rises from the foothills of the Velliangiri Mountains at the Isha Yoga Center in Coimbatore, Tamil Nadu.

The statue of **Adiyogi Divya Darshanam**, which roughly translates to "Adiyogi's Divine Appearance," is imbued with a series of images of how Adiyogi became Adiguru. The interpretation

Avijit Samajdar, CEO & Founder, Axis Three Dee Studios

was commissioned by the yoga center to provide the visitors and devotees with a visual experience the likes of which has never been seen before.

The center appointed Axis Three Dee Studios Pvt. Ltd to execute the entire project from start to finish, including the complete production of the visuals with CEO **Avijit Samajdar** taking the role of producer and director.

Axis Three Dee Studios brought this world record bust to life in a new projection mapping interpretation of the story of Adiyogi. It is a projection-map-

ping chronicle depicting how Adiyogi transmitted the ancient science of Yoga to his seven disciples (called the Saptrarishis), to his beloved wife Parvati and his constant companions, the formless Ganas.

Avijit Samajdar credits Isha foundation for their support in writing the script and the storyline which laid the foundation of the project. The vivid 4K content is complemented with a background narrative by the founder

Epson EB-L1755UNL projector

Pravin Kumar A., Product Head, Epson India

Ashok Sharma, Regional Sales Manager, APAC, Dataton

of Isha, Sadhguru Jaggi Vasudev.

The project took three months from December to February for its complete installation and was inaugurated in time for the Mahashivaratri festival in March 2019.

According to Avijit, what tipped the scale in their favor was the project itself. "Firstly, it was the beautiful story of how Adiyogi became Adiguru and the way the story flows. Secondly, the sheer size of the monument which is 8000 sq ft. to light it up and to unfold a story on to that itself was quite exciting," he says.

Conceptualization and Production

The treatment phase for this challenging and sacred project lasted from October to December, which included the writing of the concept, the scripting, and the entire building up of the project. The production started in the month of December and went into the post-production stage between mid-January till 20th of February. **Manish "Manu" Kadam**, who is well-known in the industry as one of the best mapping professionals was in-charge of the projection mapping process.

The project became fast-paced after the 20th of January till the 04th of March where in the teams spent almost 20 to 25 nights at the ashram working through the night, setting up everything and testing the hardware and other equipment. "We would start at three in the afternoon, by five in the evening we would go full swing, and then we would keep time to when the sun would rise the next morning," says **Pravin Kumar A.**, Product Head, Epson India.

For the 112ft Adiyogi statue the content had to be created at the Axis Three Dee Studios in Kolkata. It was not possible for the team to create the entire content and test it on the real surface and keep going back and forth. Epson provided the team at Axis Three Dee some projectors that they installed in

their studio; Dataton provided them with the server and software for testing purposes. Every piece of content the team of Axis Three Dee Studios created was tested at every stage on a seven feet replica statue to check the outcome and the shortfalls.

Technology Rules

Since many factors like ambient lighting, distance and the black surface of the statue itself needed to be taken into account when designing the installation, Axis specified a higher number of projectors stacked in a set of six each to ensure illumination from all sides.

To light up and cover this huge surface the team used 24 hi-tech Epson projectors that were running on the Dataton WATCHOUT software and servers. These projectors were stacked in a unique configuration to ensure maximum optimization of lumens and angle of incidence of the projected light.

Projectors

Axis Three Dee Studios used the **Epson EB-L1755UNL projector** 15,000 lumen projector for the project. The black surface of Adiyogi needed 90,000 lumens of illumination, so the team decided to use a total of 24 projectors, stacked in a set of six to give maximum illumination and brightness to the

Epson projectors stacked at a height of 30ft.

statue from all sides. The total brightness all the 24 projectors delivered was about 360,000 lumens on to the Adiyogi. The projectors were stacked on a custom-made mount made by **Sirvinder "Lucky" Singh** of Purple Vector. In terms of controlling the projectors, due to the fact that the surface was not a flat surface, and light travels a long distance, the pixels were getting deformed, and because there were six projectors on every quadrant, all the pixels had to fall precisely upon one another. Manu who was the projectionist for the project used some projector professional tools to align the projectors which were at a height of 30ft. The projectors were stacked on two towers which were erected on either side of the statute to provide an unobstructive view of the Adiyogi.

Servers and Software

WATCHOUT has been in the industry for almost 20 years. Though it was not a big challenge for the team of Dataton, the sheer size and scale of the project as well as the statue of Adiyogi had to be taken into consideration as well as the fact that the whole show had to be controlled simultaneously.

"WATCHOUT had made it quite simple for all of us; it helped us control the projectors, the laser and the lights all at one go. We could just sit near the monument and do the blending and warping of the colors in the projector. It became quite easy for us to handle," said **Ashok Sharma**, Regional Sales Manager, APAC, Dataton.

"Since the canvas was a huge one, the hardware had to work flawlessly every time; the data had to travel simultaneously across all the quadrants without any lag and without any hiccups. This is where the Dataton media server **WATCHMAX 9100** and mapping software WATCHOUT helped us a lot. This is one the most versatile software for mapping a surface which was absolutely not smooth anywhere," informed Avijit.

The topography of the statute was undulating all the time. All the geometric corrections, the blending, the color correction, and every last-minute add-onswere done by the WATCHOUT software.

"It's a coming together of all components but it is also a bit of art and science working together.There's a huge expectation from the client of how things are going to appear, how it is going to evolve.It boils down to the combination of all the factors, science, technical, art, visualization, creativity and the expectation of what it's going to be that will work in your favor at the end of the day," says Pravin.

Speaking about why he chose Epson and Dataton for this spellbinding projection mapping project on the 112ft statue of Adiyogi, Avijit says, "We wanted to work with the best. We have done many projects with Dataton servers and software. We were very clear of what we wanted."

The entire show is now run by the staff at the Isha Yoga Center who are technically sound to manage the show. "There was no specialized man-power needed as WATCHOUT is very simple

to use. Even after the installation, ISHA Foundation is able to run the show themselves due to WATCHOUT's easy to use GUI," said Ashok.

Challenges

The 14-minute projection mapping brought with it challenges, particularly in relation to the size and scale of the project. The statue of Adiyogi is the largest bust in the world with a projection mapping area of 8000 sq. ft.

According to Pravin Kumar A, "It was indeed a tough project to be implemented considering the sheer scale and size of the project. It being a monumental piece of projection, the underlying components, complexity and coordination was challenging, nevertheless a combination of creativity, content, software, hardware, integration brought to life this mammoth project. The monument was not only huge but black in color which was another challenge."

Black Surface

One of the biggest challenges faced by the team was projection mapping on a black uneven surface. The projectors when showing the light on the statue, was creating a lot of interference hue, the challenge for the team was to find a solution around it. "We worked with a special color palette, which was developed by our studio in house. It is called 'real time color cancellation' (RTCC) wherein the interference hue gets cancelled out in real time," informs Avijit.

The unique color palette created by Axis Three Dee Studios was devised by creating three different color palettes that were used as first, second and third layers. The final layer was a combination of various color hues mixed together which were being reflected independently off the surface and were being cancelled off with other spectrum of colors.

Power Challenges

"In the initial stages of testing, the projectors were mounted on temporary scaffoldings with cables and switches all over the place. The ashram quickly constructed two 40ft towers and these towers would occasionally run on generators as there used to be a lot of power cuts at the location. On the eve of the inauguration on 4th March one of the generators blew and shorted one of the projectors and the team had to get a replacement projector at the last minute," recalls Pravin. He further added that there were times during the testing phase when there were power outages and something would fall apart and the team would have to start from scratch and there were times when there was no signal coming from some cables and somebody had to go and fix the cables.

Dataton WATCHOUT software and WATCHMAX server deployed for flaw less mapping

"A project like this has its own pace and time this was the challenge for us especially when we have a deadline and no room for error," adds Ashok.

In Conclusion

Adiyogi Divya Darshanam is a permanent show at the Isha Yoga Center, open to all visitors free of charge. It plays from 8pm on every Saturday and Sunday. The show also runs on other auspicious days such as Amavasya (New Moon) and Purnima (Full Moon).

About three and a half lakhs people witnessed this extravagant 14-minute show live at the ashram and another 10 lakhs audience live streamed the show on the day of the inauguration.

"I believe it is a one of kind immersive storytelling that brings together a unique story which is relevant to all our lives even now and in the future also," says Avijit. "At every stage we felt Sadhguru's blessings, at every stage we felt Adiyogi's blessings because hurdles did come, obstacles did come, but to the

extent which made us strong," he adds.

"What I feel is each one of us put in a lot of effort in putting all of these together to deliver, but, I think Adiyogi is beyond all this. Of course the high expectations of the client and the personality of Sadhguru, his expectation of what he wanted to communicate, for him I think I would suspect that Adiyogi was a medium to communicate this message. What we all finally did was, we delivered a visual experience.A visual experience when the lights went out and the first wave of projection hit the Adiyogi and the sound that went up from the audience. We knew at that time that every single bit of effort that went into this was acknowledged in that one moment when the audience erupted into applause, I think the whole thing translated into a huge big scale visual experience," concluded Pravin.

Mondo Award for Technology

The Adiyogi Divya Darshanam project had already received a lot of press coverage around the world and Avijit was approached by Mondo to nominate the project for the awards, which the team eventually won in the category of House of Worship.

The worldwide shortlisted entries besides the Adiyogi project were from UK (St. Joseph's College Chapel, York Minister) and France (Eglise Saint Denis Sainte Foy). The jury panel included, Andy Taylor from Gasoline Design, Ben M Rogers from Ardent, Scott Willsallen from Auditoria, Emma Bigg from Octavius Re, Kapil Thirwani from Munro Acoustics, Bas Scheij from Basz Design & Live Operating, Mogzi from Disguise, Philip Heselton from Signify, Simon Austin from Schuler Shook, Gareth Collyer from Nexo and John Hughes from Adlib.

Commenting on the win, Avijit says, "From a creative point of view, when we create something, we always want people to like it, to feel a part of it and remember it. For that to be recognized all over the world and to be appreciated and awarded by experts who understand the technicalities behind a project of this magnitude, is immensely satisfying and gratifying".

According to Ashok Sharma, the project was worth the award because the team was efficient and understanding in what they were doing. "The project in itself has a great touch and was a story in itself which in its own space has won many hearts both in India and internationally. Thank you to the Team and Jury of Mondo*Dr 2020" to have considered us and awarded us with this prestigious award," quoted Ashok.

The equipment list

- Epson EB-1755U Projector – 24 nos
- Dataton WatchMax, WX9100 and WATCHOUT6 – 2 units

Crew list

• Axis Three Dee Studios

- Background Original Music : **Sounds of Isha**
- AVSI Supervision : **Sirvinder Pal (Lucky) Singh**
- Projectionist & Mapping : **Manesh (Manu) Kadam**
- VFx, CG & Render Supervision : **Arijit Haldar**
- Art Direction : **Priyam Modak**
- Sound Designer : **Dipankar (Jojo) Chaki**
- IT & Networking Supervision : **Gautam Mondal**
- Project Creative Lead : **Mayuri Dutta**
- Overseas Producer : **Sangman Lee**

• Dataton

- Installation Crew : **Manu Kadam**
- Installation Crew : **Lucky Singh**
- Installation Crew : **Alok Rai**

• Epson India

- Projector Hardware testing, set-up & installation: **Pravin Kumar A**
- Projector Hardware testing, set-up & installation: **Anand Kumar**
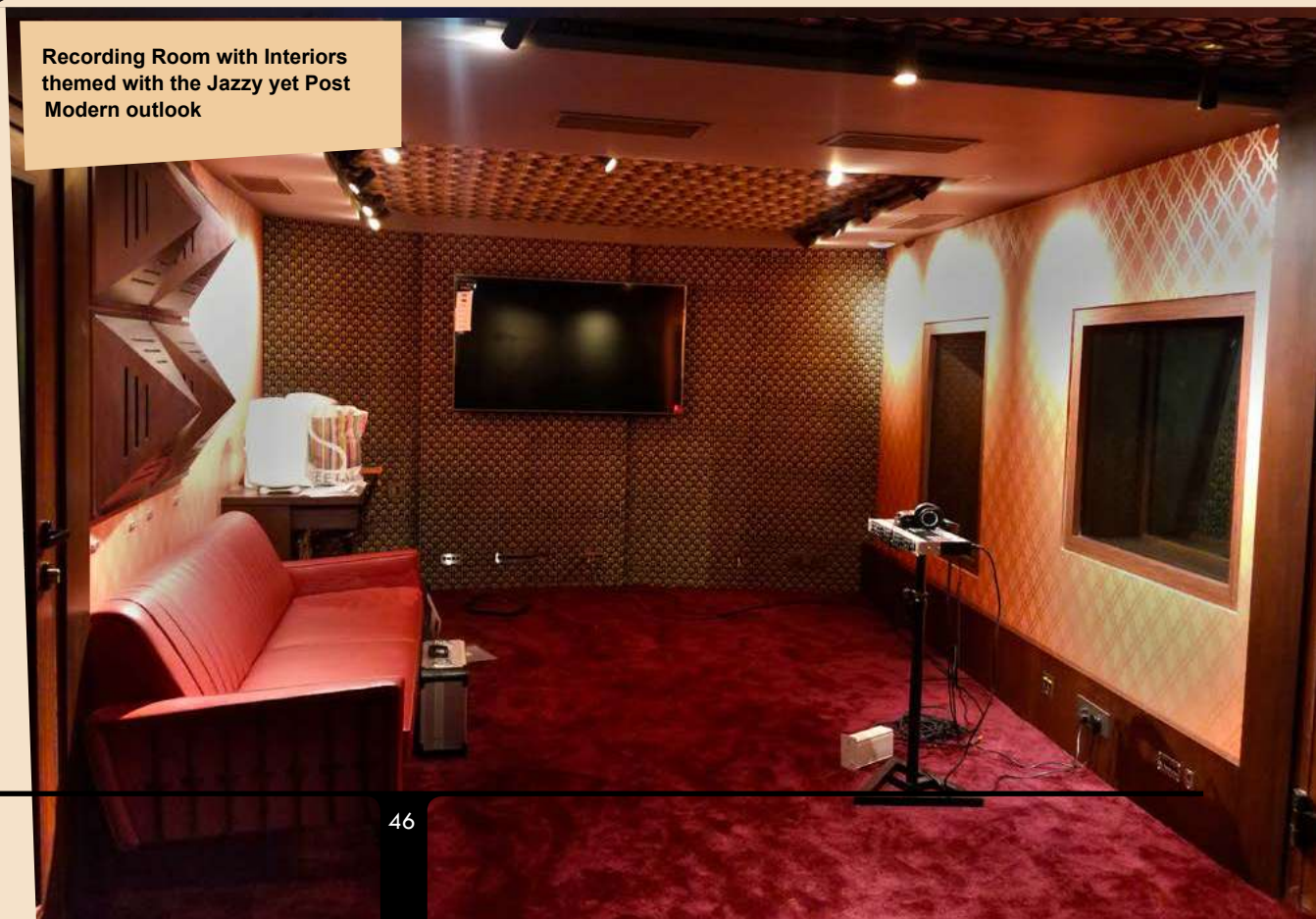
Shankar & Siddharth Mahadevan's
LAMBODARA STUDIOS

Control Room's Front Baffle wall with the gorgeous Quested Q412Ds and subwoofer Quested QSB 118s.

In the March-June 2020 issue of PALM Technology, PT did a cover story on Shankar and Siddharth Mahadevan's new studio Lambodara. Here are some more images of the new studio designed by leading acoustic consultants Sound Wizard.

Recording Room with Interiors themed with the Jazzy yet Post Modern outlook

Lambodara Studios is located in Navi Mumbai and is a stunning new facility designed by Auroville based leading acoustic consultants **Sound Wizard**. The new facility has been built to the latest international acoustic standards and interior design trends. The attention to detail in acoustic and interior design has resulted in a comforting and pleasing mixing and recording environment that fosters and encourages creativity at the highest level.

You can read the complete article on Lambodara Studios *(Pages 46-47)* in the **March-June 2020** issue of **PALM Technology**.

Recording Room equipped with Pyramid Diffusers and Absorbing False Walls and Ceilings while retaining ample floor area for tracking a live band.

Honey Comb Diffuser in the Control Room custom designed by Sound Wizard targeting specific frequencies, aesthetically enhanced with Lighting design from KS Design Studio

Side wall of Control Room with plenty Visual Interaction with the Recording Room using vertically angled glazings to avoid comb filtering at/around Listening Position.

View from the lavish couch behind the engineer position in the Control Room.

14thedition

INDIAN
RECORDING
ARTS ACADEMY
AWARDS

STAY TUNED

SUNDAY

20 | 2020

5:00 PM

Supported by:

HARMAN ™

IRAA 2020 GOES VIRTUAL

HARMAN Supports The Endeavour

PALM expo's concern to ensure safety from ongoing pandemic mandated cancelation of the 2020 edition of PALM expo and in the best interest of the industry and business, decided not to move forward with the expo in 2020, carrying forward the show to May 2021. However, **The Indian Recording Arts Academy Awards (IRAA) 2020** continues into its 14th edition and will once again recognize work of distinction and exceptional achieve-ments in the field of Sound Recording and Engineering.

For the first time ever, the IRAA Awards will take place as a digital-only ceremony. Following the ceremony's postponement in May due to the Covid-19 pandemic, the IRAA commit-tee and Jury Members, motivated by IRAA's spirit in recognizing excellence and discovering best work and talent in sound recording technique and creative sound recording, decided to continue with the awards in its digital avatar.

IRAA's spirit in recognising exception-al skills in music, soundtrack recording and mixing in Indian music for albums and movies, thereby uplifting standards of excellence in sound recording in In-dia, is the motivation which drives IRAA each year to discover the best work and discover the studio and talent which drives India's experience in sound engi-neering technique and creative sound recording.

RECORDING ARTS AWARDS SUPPORTED BY HARMAN PROFESSIONAL SOLUTIONS INDIA

The Indian Recording Arts Academy Awards (IRAA) is proud to announce that HARMAN Professional Solutions, India has committed its support to the prestigious award platform, which is now in its 14th consecutive edition.

"The great work done by folks in mu-

sic, soundtrack recording, and mixing in India along with the innovation and creativity in music composition and tracks must be recognized and celebrated. We at Harman Professional Solutions India are pleased to support the Indian Recording Arts Awards (IRAA) and appreciate the efforts put in by PALM Technology to recognize the talent of studios and engineers in the country, for the fourteenth year in a row," said **Aditya Todi**, Senior Director of Sales and Marketing, HARMAN Professional Solutions, India and SAARC.

"IRAA is a very important forum. I believe its value contribution to recording arts in Indian music and cinema industry is critical to being creative to world standard, which today resonates on global platforms. IRAA endeavours to true talent. My vision and perseverance has persisted in embedding strength to IRAA, especially with the fraternity itself. I stand impressed with India's sound engineers whose contribution indeed has built IRAA to this level of esteem. HARMAN sponsorship and joining the vision is recognition of IRAA as a neutral and independent forum and certifies HARMAN philosophy to recognize talent. Recording arts is at the pinnacle of professional audio and sound technology and indeed HARMAN is at the frontier edge in these technologies. I am now confident IRAA will build further and play its true role in coming years. Kudos to Harman for joining this mission," said **Anil Chopra**, Founder & Chairman of IRAA.

VIRTUAL EVENT

Winners will be announced across 51 categories by the IRAA Committee and Jury, from the **Sound Ideaz Studio** in Andheri on **20th September, 2020** at **5:00 PM**.

Due to the ongoing pandemic and social distancing norms mandated by the Government, the event, will be held without an audience and the event will be streamed live on PALM Social media platforms. Only the IRAA committee, Jury Members and executives from HARMAN will be present at the event.

Opportunity for Bands to Perform at the Event: This year IRAA also invites Solo artistes and /or Musical Bands to send in YouTube links of their performance and get an opportunity to perform at the virtual event.

RECORD NOMINATIONS

IRAA recording categories and genre of music each year represent trends in music production. Sound recording fraternity from across

IRAA CAMPAIGNS FOR ROYALTY

Note from Anil Chopra – Founder & Chairman of Indian Recording Arts Academy (IRAA) Awards

In the 1980s there was an explosion of record labels and hundreds of music companies riding high on cassette technology obliterating vinyl and HMC/EMI strangle hold. Music releases in hundreds monthly exploring centuries of folk and religious genres and a river of talent coming out of the woodwork. Hundreds of self-taught sound engineers doing all sorts of magic to tracks they had an emotional connect with.

There was one refrain. "It's an Art". You can't learn this in an institute. You see, lyrics are given life by composers. We give life to lyrics, compose, musicians, and singers. Alone all are worthless." I have personally experienced this too. The final mix is an art. Period. It's a techno-spiritual-musical art, of synthesis greater than what a pianist uses a musical instrument to express his composition. The mixer isn't mixing anything else than music. It's an Art.
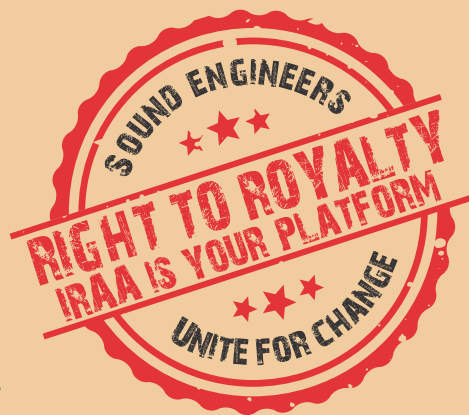
I created the Indian Recording Arts Academy Awards way back in 2013 with this conviction, that recording is an Art, technology allows it to be repeated. So does technology allow compositions to be repeated; so it has value. Lyrics also have value when technology repeats it.

When you say art and copyright basis is when it cannot be repeated. So also the supra compose of an audio mix surpassing that of a music compose if it is not recorded. So there is copyright.

IRAA stands for and will campaign for Royalty for the final mix. It's not for nothing that the final master is called the Final Mix.

Mankind has entered into the digital era.

When you hear a track (songs are heard as tracks!!), where and how you hear a sound or voice and how it enters your mind space is an art.

We need solidarity and belief. That's what brings change. And realisation is the key.

Alright Gentlemen. The hour cometh, cometh the man.

Cheers!

India recognise the sincere endeavour of IRAA to award great recordings whether emanating from Chennai or Delhi or Mumbai, whether Bollywood or regional cinema.

The IRAA awards, which has gained aspirational value through the years has become an eagerly looked forward to annual event as was witnessed by the nominations pouring in for this year's recognition. The IRAA committee and Jury member's vision has translated to increased entries for selection of the best music and recording from studios all over the country. IRAA 2020 received record **1000+** nominations this year from the sound engineering and studio fraternity from across India.

With the objective of recognizing the regional music industry, the IRAA awards had instituted '**Regional Awards'** in the Audio Engineering,

Here's a look at the categories!

Audio Engineering
- Song Recording & Mixing – Independent / Film or Web Release / Web Series
- Classical & Instrumental Recording & Mixing
- Sound mixing for Advertisement

Audio Post Production
- Sound Designer
- Dialogue Editor / ADR Engineer
- Sound Editor Effects & Ambience
- Foley Artist & Foley Engineer
- Film / Documentaries / Short Films / Web Series / Broadcast Mixing
- Sync Sound Recording

Music Production
- Music Producer – Hindi / Regional / Non-Film / Web Series

Audio Post Production and Music Production segments to honour talent outside Mumbai in 2018. This year also witnessed an increase in the number of nominations received in the regional categories.

AWARDS PROCESS

The IRAA Awards 2020 nominations were open to Music producers, recording professionals and sound engineers, submission of entries for which was closed on 20th June 2020. Submissions by Audio files were submitted online on IRAA website.

Soundtracks and albums released in the period, January 1- December 31 2019, were eligible for nominations. The list of categories which include Film as well as Non-Film, is available on the IRAA website - *www.iraa.in*.

The commendable Jury on their part spent many hours of hard study despite being pressed for time, as the Jury itself comprises successful professionals who contribute selflessly, as they too believe sound recording is an art. Spearheaded by IRAA Director **Yogesh Pradhan** and Honorary Chairman **Pramod Chandorkar**, the nominations were screened by an 12 member Jury comprising of top audio engineers, music producers and arrangers from across the country Besides Pramod Chandorkar and Yogesh Pradhan, the jury comprises of **Aditya Modi, Ashish Saksena, Bishwadeep Chatterjee, Indrajit Sharma, Jim Satya, Mujeeb Dadarkar, Sreejesh Nair, Shantanu Hudlikar, Vijay Benegal and Vijay Dayal**.

In order to ensure that evaluation and judging process is completely neutral and unbiased, the Jury assessment form did not include name of Nominee and Nominator, thereby ensuring that all entries received are reviewed and judged fairly.

The great work done by folks in music, soundtrack recording, and mixing in India along with the innovation and creativity in music composition and tracks must be recognized and celebrated. We at HARMAN Professional Solutions India are pleased to support the Indian Recording Arts Awards (IRAA) and appreciate the efforts put in by PALM Technology to recognize the talent of studios and engineers in the country, for the fourteenth year in a row.

Aditya Todi - Senior Director - Sales and Marketing-Pro Division - HARMAN

Winners of the 13th IRAA Awards

For more information on the **Virtual Event**, *email info@iraa.in*

All are invited to register and tune in via the link provided on the **IRAA** and **PALM Expo** website.

www.palmexpo.in
www.iraa.in

http://iraa.in/IRAA_Virtual_Event_Registration.aspxl

Sound Engineering and Post Expo

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BOMBAY EXHIBITION CENTRE, GOREGAON (E), MUMBAI, INDIA

The Bright Spark

SHINE ON

Viraf Pocha

Why did you become an Entertainment Technician? Come Now – Be Honest! Did You Knowingly sign up for all the sleepless nights, extreme stress and perennial abuse?

Did you shrug when you were blamed for equipment malfunction?

Smile to protect a junior technician's eff up?

Are you in it solely for the high of doing a great job ? (that nobody notices). And are prepared to receive flack for something that somebody did not approve of? (after it was done)

If you answered 'YES' to ALL of the above, then stay with me buddy. You're not going anywhere.

If you thinking about where you stand. It's time to look for something else to do with your life.

Our way of life isn't coming back for a while. There will be an old way of doing things, and there will be a new way of doing things. Both will co-exist until performers, producers and investors will decide what works best for them.

Our lot probably won't have a say in the outcome. We will have to adapt. Luck will play a huge part here. Which one of us will be most familiar, most well known in practicing the technologies that will become mainstream?

So the big Question – What do we do now? While we wait for a clearer picture.

Obviously we all have our own priorities and so we must attend to them first. Our families must eat, stay healthy and stay sane. Live as 'normal' and as 'familiar' a life as we can.

Try and ignore the fear mongers and the sensationalists and use common sense for the main part.

Nobody knew anything about fighting this enemy. How wise our leaders were to chase weapons and build great wasteful institutions at the cost of basic healthcare is becoming apparent all over the world. I hope that will correct in time.

The big question remains – Does the world have enough resources to support its population?

Look for those answers in another kind of publication.

All of us here are focussed on making sure everybody we share our planet with is fed on a steady stream of great music, great visuals and crystal clear communication.

If the past years of recorded history are anything to go by even the earliest inhabitants of our planet were looking for ways to express themselves. Rock Music took a long time to evolve into Led Zepplin and the Beatles. And continues to evolve rocking the world. Does anybody here see any signs of slowing down?

Great! Then stay with me.

My Plea and my advice to all of us – especially the young ones, is use whatever free time you have to study ART.

ART in all its aspects. Be it painting, sculpture, music, visual arts, or architecture.

Open your eyes and mind to study any art form that speaks to you.

Not just to glance through it – but delve deep and study every aspect of it.

The Internet makes it easy to browse. But please don't stop there. Pick anything and really go deep. Narrow down

> So the big Question – What do we do now?
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> visual arts, or architecture.

the field and get to the bottom.

Use the Internet to Research. Read everything you can on the subject. Open yourself to appreciate every significant detail of your art form.

What came before it? How and why did it take its current form? Who led the movement? Study the lives and careers of the stars. Did they chance upon this art form or were they guided to it. What shape did they find it initially? How did they twist it?

I promise you it will be a journey that you will enjoy. A Journey you never had time for earlier.

But immerse yourselves into it as deep as you were immersed in your career before this interruption.

Whatever you are doing before, whatever you choose to pursue now. Trust me you will evolve.

You will understand transition. Understand what leads to what.

We are in the business of communication. Every artist from the Cave Painter, through Leo Da Vince, and down to Beyoncé entire career paths were created by their ability to communicate with their audiences and give them what they want.

They amuse on one level, are role models to some, lead us on a cathartic journey and deliver us spent and exhausted at the gates of ecstasy.

We need to understand that bridge and build one for ourselves.

No! we are not performers – we are the bridge builders that magnify this experience to an audience of thousands and if we are lucky – Millions.

All without the pressures of stardom and living in the public eye.

True we will never experience the power a performer has, as she holds a few million enthralled with her performance.

But Hey – look on the bright side – if we are good and in demand – we will be sought after by a diverse range of performers.

Our careers will be longer. Our Experiences more varied and definitely multi coloured.

Make the Best of that diversity.

But –in my view we must always be inspired. And to be inspired we must be educated.

To make the best of what we have. Adapt it to be applied in as many different fields.

Real Example. I studied Rembrandt. It all started with an article years ago that spoke of his work 'Eating Light'. What the hell was that?

It started a journey, in the days before the internet that took me to museums; spend scarce pocket money on books. Devour the work of contemporary artists that claimed to be influenced by his work. Artists, cameramen, architects, printers. I met a range of diverse characters (in spirit).

Looked through their work and slowly understood the master through their eyes. His shading. Every time I saw a print or a photo I discovered another shade of brown and amber. Another detail. Saw glimpses of his work by contemporary artists. Wondered what the old man would do with the modern techniques of today.

How would Rembrandt light an EDM concert?

It was great journey. One that fulfilled me and drove me mad. To date not one person has caught me copying the master's tricks. They appreciate the shading and the texture – and think it's original.

Perhaps it is, as the old Bugger never had Robe and ClayPaky and Avolite to help him.

I will never paint 'Man in the Golden Helmet '. But the masters at the World Gold Council will shake my hand and congratulate me for making their latest Gold jewellery Line sparkle in just the right Lustre.

I will be grateful and deposit a share of my earnings into the 'Visit Rijksmuseum Fund'. Sadly, I'll never be able to Own the Original. Got to be glad for all the many prints that just don't capture every aspect of the painting.

But then it gives me something to look forward to after lockdown is lifted.

To finally spend my 'Visit Rijksmuseum Fund' on what it was meant for. Pray for me that I won't have to dip into it to live through this crisis.

Happy Hunting guys. Find something that catches your eye and hope that spark ignites your journey to the very top of your chosen field.

ACOUSTIC AND AUDIO SYSTEM DESIGN FOR SMALL ROOMS

- PART 2

By - Rahul Sarma, CEO, Menura Acoustic Labs
In collaboration with Sound Wizard

In Part 1 of this series we defined a small room, introduced the concept of sound waves as they relate to phase shift and comb filtering, and even touched on the Haas (precedence) effect. In this article, we will talk about an important design consideration that is often an afterthought. Sound isolation is usually looked at when there are known external sources of noise like traffic and diesel generators, or when there is an important reason to prevent sound leakage out of a space. There is an equally important reason to consider isolation, and it goes by the term "dynamic range".

Dynamic Range

Ever watched a movie in your living room, and the dialogue in a quiet scene is completely unintelligible? You grab the remote and increase the volume until you can finally understand what is going on, and you settle back into your couch, ready to enjoy the movie again. A super loud gunshot or crash suddenly has you scrambling for the remote again, rushing to reduce the volume before your ears bleed or you wake up the dead! More likely than not, you were initially forced to increase the volume to drown out some background noise, either from a nearby construction site, traffic, or even other people in your own house. That background noise created a noise floor that adversely impacted the dynamic range of the audio playback. Simply put, dynamic range is the level difference between the softest sound and loudest sound in a recording. Increasing the volume restored the dynamic range by bypassing the noise floor, but the upper limit of the dynamic range became too loud to handle. Sound isolation is
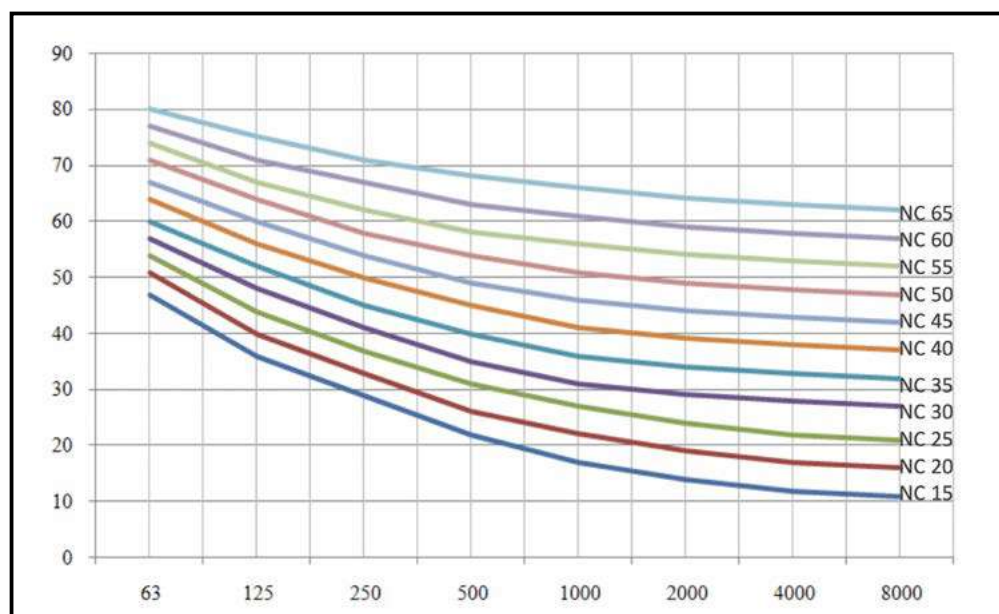

Fig.1: Noise Criteria Curves

the key to suppressing the noise floor, and figuring out how much to isolate begins with quantifying background noise.

Noise Criteria

Noise Criteria is a simple and standardized way to evaluate the background noise level in a space. It takes into account the fact that not all sources of noise are broadband, and can be obtained by super-imposing a measurement in dB(A) of background noise over the graph seen below.

The highest NC curve that intersects the measured levels at any frequency determines the final NC level. Recording and broadcast studios require NC 15-20 background levels, while an NC level as high as 25 can be acceptable in auditoriums. Please note: the NC number has little correlation with average dB(A) levels. Also, NC 20 does not equate to 20 dBA. A narrow band 63Hz tone measured at 50dBA corresponds to NC20, so to reiterate; do NOT confuse NC with dB(A). To properly understand why the NC curves are shaped the way they are, look up "Fletcher-Munsen curves". A simplified explanation is that human hearing is less sensitive at lower frequencies, and hence we are less affected by lower frequency noise. Before we explore techniques to isolate a space from outside noise, it is important to understand that sources of noise within "small" rooms can sometimes be more detrimental than those outside it.

HVAC Noise

Air conditioning and ventilation are vital in acoustically isolated spaces and must be given importance during the design process. Central air conditioning is usually the best (and sometimes only) way to ensure low noise levels in your space, since noisy ac units can be located far away from the listening positions. Larger ducts reduce the velocity of air and hence lower the noise from turbulence, and open cell rubber inside the ducts can help a great deal in reducing sound transmission through ducts. Sharp turns in ducts must be avoided to prevent an increase in self
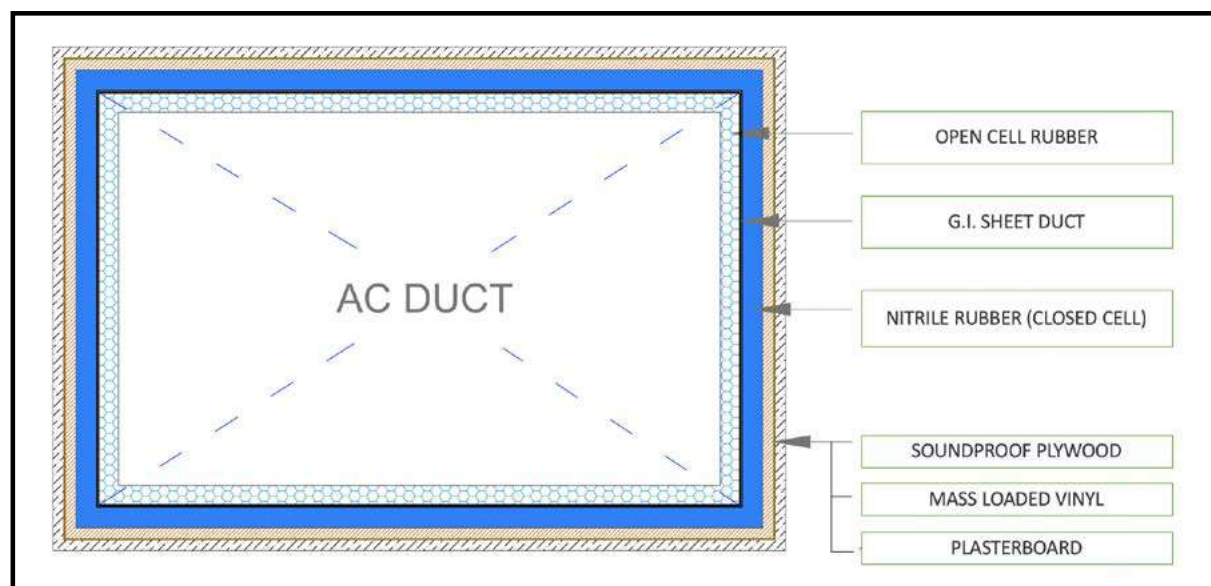

Fig.2: AC Duct Isolation Treatment

noise. Ducts themselves can be hung using ceiling hanger isolators, preventing structural vibrations that are often significant sources of noise. The following diagram is an example of layers and materials you might use to contain duct noise. There are a few different ways to achieve the same isolation, and software prediction can help greatly in this regard.

Room Isolation

For critical audio applications, proper room isolation is a requirement. The mass law states that the airborne sound insulation of a single-layer partition is directly proportional to the mass per unit area of the partition. Solid concrete walls do a great job of isolation, and thin single layer wooden partitions do the opposite. The downside of a single layer

shells" which essentially form a "room within a room". Any rigid links between the inner and outer layers will severely compromise isolation through flanking transmission.

Software solutions like INSUL by Marshall Day Acoustics can be an invaluable tool to accurately estimate transmission loss of various materials, while also accounting for flanking losses in the real
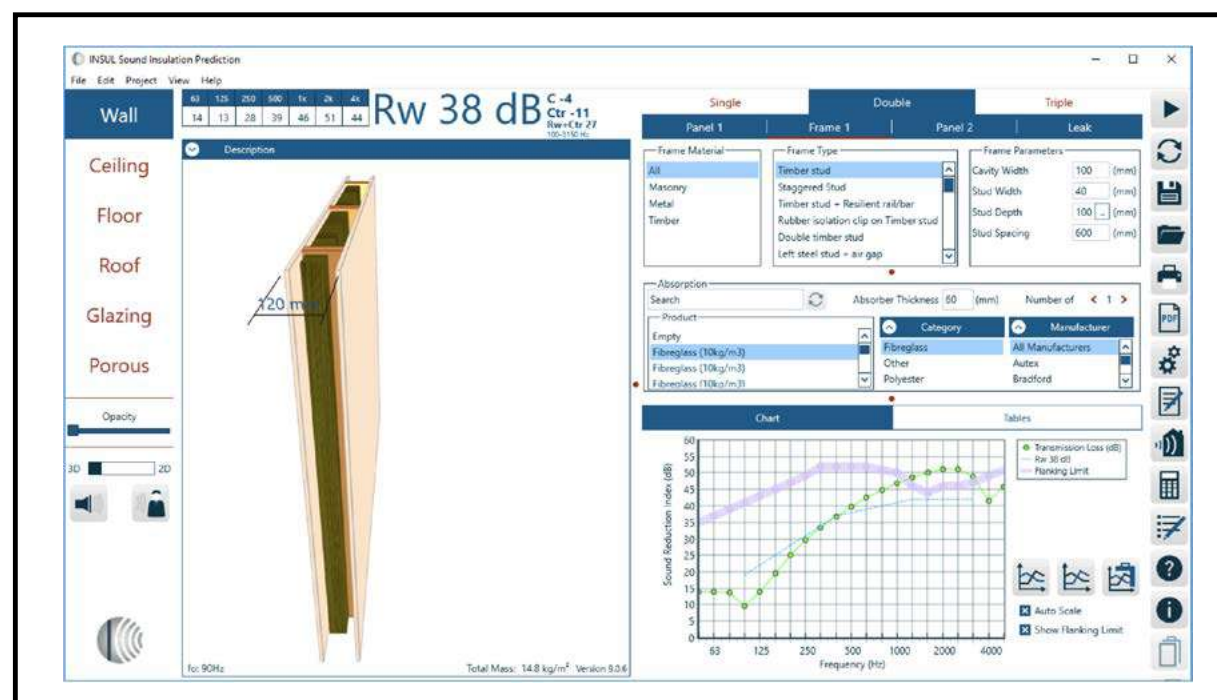

Fig.3: Software Predicted Sound Isolation

partition is that every material has a resonant frequency, for which sound waves will pass through the layer easily. Composite layers made up of materials with different densities can help address this issue. To address structural noise transmission, it is important to decouple layers. Heavy duty resilient isolators can be used to this end, enabling acousticians to create "floating

world.

Finally, it is extremely important to consider the "air-tightness" of a room. Isolation is only as effective as the weakest links, which are usually found in the gaps around doors and windows, electrical outlets and AC inlets and outlets. Even the smallest crack in a layer can compromise the isolation of a room, pouring your entire investment in isolation down the drain.

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ADAM HALL GROUP EXPANDS ITS GLOBAL MARKETING AND BUSINESS DEVELOPMENT

With **Jason Echols** and **Kati Eismann**, the **Adam Hall Group** is filling two key management positions. Jason Echols has been responsible for international sales of the Cameo brand as Business Development Manager, Lighting Technology since May 1, 2020. Kati Eismann has been responsible for the global strategic and operational marketing of the event technology company since June 1, 2020. Jason Echols

The 53-year-old Jason Echols supports the business development team around COO Markus Jahnel as Business Development Manager, Lighting Technology. In this role, the experienced sales professional will drive the global expansion of the cameo sales network and further expand the market position of the Adam Hall lighting technology brand in the areas of rental, installation and industry. Before moving to Adam Hall Group, Jason was responsible for Asia as a sales director for a well-known Asian lighting technology manufacturer.

"Over the past few years, Cameo has continued to develop its

product portfolio and have earned an excellent reputation worldwide as an innovative, reliable and practice-oriented lighting technology brand with first-class design," said Jason Echols. "I look forward to welcoming our customers and partners from the international cameo sales network here in Neu-Anspach and to convincing them of the brand's innovative strength in hands-on demonstrations and training courses. Together we will continue to expand

Cameo's global reach. "

Markus Jahnel, COO of the Adam Hall Group, adds: "With Jason, we have gained a global networker who will drive the success of the Cameo Light brand worldwide. Thanks to his many years of experience in the American and Asian Pro Lighting market, he is the ideal person for us in this key position. ''

As Global Marketing Director, Kati Eismann is now responsible for all marketing activities of the Adam Hall Group

Jason Echols and Kati Eismann, the Adam Hall Group

- from online and brand marketing to customer relationship management and campaign & advertising. The professional experience of the 42-year-old marketing and communication expert includes A&R and marketing positions at Warner, Universal and Virgin, marketing, sales and brand building expertise in the areas of fashion, entertainment and lifestyle (Eastpak, Endemol) as well as managerial positions as Managing Director at Idols & Brands and Client Service Director at Mindshare. "I am very impressed by the long history and successful international development of the Adam Hall Group," said Kati Eismann. "This is exactly what spurs me on to write the path to a continued successful future for the umbrella brand and its single brands."

Alexander Pietschmann, CEO of the Adam Hall Group: "We are very happy to have Kati Eismann as an experienced leader with global expertise in the team. With it, we will set the course to drive the global branding and digitalization of the Adam Hall Group's marketing."

MARTIN INTRODUCES ZOOM LENSES FOR ELP SERIES FIXTURES

New accessories expand the versatility and range of class-leading LED ellipsoidal lights

HARMAN Professional Solutions, the global leader in audio, video, lighting and control systems, today introduced Zoom Lens accessories for the **Martin ELP** family of ellipsoidal LED light fixtures.

Martin ELP Zoom Lenses broaden the functionality of ELP CL and WW LED ellipsoidal lights with two industry-standard beam ranges and two housing colors. Their innovative 6-lens design delivers stunning optics, providing the

ultrabright output, unmatched flat projection and crisp focus of a static lens with the speed and flexibility of a zoom lens. Lenses are engineered for rock-solid operation, featuring a mechanical anti-slip locking mechanism and a convenient service hatch for easy lens cleaning and maintenance. A gobo/accessory gate accommodates A/B-size gobos, and a color gel frame is included.

"Martin ELP LED ellipsoid fixtures are famous for their unrivaled luminance, output and light quality," said **Mark Buss**, Product Manager, Entertainment Lighting, HARMAN Professional Solutions. "By expanding their functionality with zoom lenses in

a choice of beam ranges and housing colors, lighting professionals can bring new simplicity, flexibility and speed to their designs.

"ELP Zoom Lenses eliminate the need to perform the beam angle and distance calculations required to achieve comparable looks with fixed lenses. And, the optics are truly stunning: An all-new 6-lens design delivers flat projection across a full zoom range, with consistent, razor-sharp focus—all with virtually no loss of output compared to fixed-lens options."

Two variants are available: Variant 1 offers a 15–30-degree range with a 7,000-lumen output (ELP CL in High Output mode); Variant 2 offers a 25–50-degree range with an output of 6,900 lumens (ELP CL in High Output mode). Both lenses are available in either black or white housing.

Availability: Martin ELP Zoom Lenses will be available in Q4, 2020. For more information, please visit martin.com.

Martin ELP Zoom Lenses

CITY THEATRICAL LAUNCHES RADIOSCAN SPECTRUM ANALYZER

City Theatrical's newest product, **RadioScan™ Spectrum Analyzer**, is a 900MHz and 2.4GHz spectrum analyzer that allows users to easily visualize radio energy that is otherwise invisible. With its a hardware dongle and accompanying free software, RadioScan helps users create wireless DMX broadcast plans that optimize the available spectrum, and help prevent interference with nearby mission critical radio devices.

RadioScan shows all nearby radio activity in a chosen frequency, including frequency hopping gear like wireless DMX, as well as Wi-Fi networks, Bluetooth, wireless headsets, video transmitters, cordless phones, baby monitors, and microwave ovens. RadioScan can display spectrum data either in Spectrogram View or Waterfall View, and snapshots can be taken of both in the program. With RadioScan, scans of unlimited length can be recorded, saved, emailed and played back with the RadioScan software, without the need for the RadioScan hardware dongle.

By identifying SSIDs, broadcast channel, and the signal strength of wireless networks, RadioScan can help setup, maintain, and troubleshoot wireless installations.

For users of City Theatrical Multiverse wireless DMX/RDM products, RadioScan guides users in creating the optimum broadcast plan for a production. The RadioScan software program for PC or Mac guides users in selecting Multiverse SHoW IDs by opening a table that shows the relationship of Multiverse SHoW IDs to the spectrum, and helps choose the optimum area of the band in which to broadcast.

The RadioScan hardware dongle is a 2.0" x 2.0" x 0.5" square that fits in your hand or pocket, and is made of rugged NEMA 4 IP20 ABS Plastic. Its detachable external omnidirectional broadband, 2dBi 900MHz, 4dBi 2.4GHz antenna allows for 900MHz and 2.4GHz dual band spectrum analysis. RadioScan comes with a USB-C power/data connector with 1m USB-A to USB-C cable.

RadioScan is CE certified and compliant with FCC, IC, and RoHS standards and is compatible with both PC and MAC computers.

RadioScan Spectrum Analyzer

MAGMATIC DEBUTS OUTDOOR-RATED PRISMA UV LED LIGHTING SERIES

Magmatic atmospheric effects have introduced **Prisma**, a new generation of advanced **UV LED lighting** products with weatherproof IP65 rating.

Ideal for clubs, EDM events, glow paint gatherings, or any production with a UV element, Prisma's IP65 rating and rugged yet sleek fanless design mean they can be used in even the most challenging environment. Compact, lightweight and easy to handle, a variety of narrow to wide beam angles are available.

Prisma combines true 365nm UV output for long and wide throw performance with the control and efficiency of LEDs. Because Prisma uses high quality, medical grade LEDs that emit UV light in the 365nm range, no visible light

Prisma can be used in even the most challenging environment

is emitted, meaning only the UV reactive material glows and nothing else. Prisma effects use durable LEDs of the highest quality with special silicone lenses that are UV resistant and slow to degrade.

ETC ANNOUNCES COLORSOURCE SPOT JR

ColorSource Spot-Jr

ColorSource Spot jr is the newest addition to the ColorSource family of **ETC** fixtures. At only 12 lb (5.5 kg) ColorSource Spot jr is nearly half the weight of a full-sized ColorSource Spot fixture.

Like the other ColorSource fixtures, Spot jr reportedly offers stunning colors and precise dimming at an irresistible price. Spot jr is available in two array options - Original for subtle pastels and beautiful white light to enhance skin tones, and Deep Blue for more saturated, dramatic colors. Like all ColorSource fixtures, Spot jr includes ETC's color integrity technologies so you can be sure the colors you set in rehearsal are the same colors you see during the show. This includes thermal droop compensation, third-party lifetime testing, and comprehensive factory color calibration.

Spot jr has built-in 25-50 degree zoom which is ideal for small stages, club spaces, and retail with both longer and shorter throws.

ETC offers an impressive 5-year warranty on the entire fixture, and an astonishing 10-year warranty on the LED array. Pair that with ETC's unmatched 24/7/365 phone support and you'll never regret buying a ColorSource Spot jr.

With over 5,700 lumens of brightness ColorSource Spot jr apparently gives more at a fraction of the cost and a fraction of the size.

ROBERT JULIAT RELEASES NEW 800W LED FOLLOWSPOT

Robert Juliat is excited to announce the launch of **Arthur**, its new **800W LED Long Throw** followspot capable of matching the lumen output of a 2500W HMI RJ Aramis followspot and delivering up to 29,000 lumens. This eagerly-anticipated move marks the arrival of the LED followspot the industry has been waiting for – one that opens up the use of LED followspots into large venues such as opera houses, musical theatre and live music venues, concert and touring venues, both indoors and out.

Arthur's powerful LED engine, narrow beam angle (5.5° - 15°) and long-throw capability, ensures invincible performances with a minimum output of 2000 lux at a distance of 40m (200fc at 130 ft), while offering premium light quality with a high CRI (>90) - an essential feature for a

followspot whose main role is to shine a light on performers in the most sublime way possible.

A smooth at beam with no hot spot is teamed with excellent gobo projection, sharp focus at every beam angle and independent control of image size and focus, thanks to Arthur's variable zoom optics featuring a 3:1 beam ratio.

The electronic dimmer ensures smooth, high quality dimming without clipping or cut-out at low intensity levels, and no shift in colour temperature.

Power consumption is minimized, not only by the lower power requirement of the LED source, but also because it can be switched o when inactive, unlike discharge sources which need to run constantly throughout a show.

With the choice of several ventilation modes and silent-running cooling fans, Arthur is much quieter than any of its discharge rivals - Arthur can rule as easily over opera houses as TV studios or concert halls. In addition to the long-celebrated

Robert Juliat features and qualities, Arthur offers unique benefits for easy service and maintenance making it especially attractive to rental houses and touring technicians with busy, time-critical schedules. Robert Juliat has designed Arthur's lamp housing with separate, removable modules for the CPU, drivers and power supply unit in a simple plug & play system.

Arthur represents the next step in Robert Juliat's development of top-class LED followspot fixtures, which began first with the 300W LED Roxie, and then the hugely successful 600W LED Alice and Oz, the first professional LED followspots capable of matching the output of conventional 1200W discharge units.

The most powerful LED followspot on the market, Arthur is set to become the crowning glory of Robert Juliat's LED followspot range.
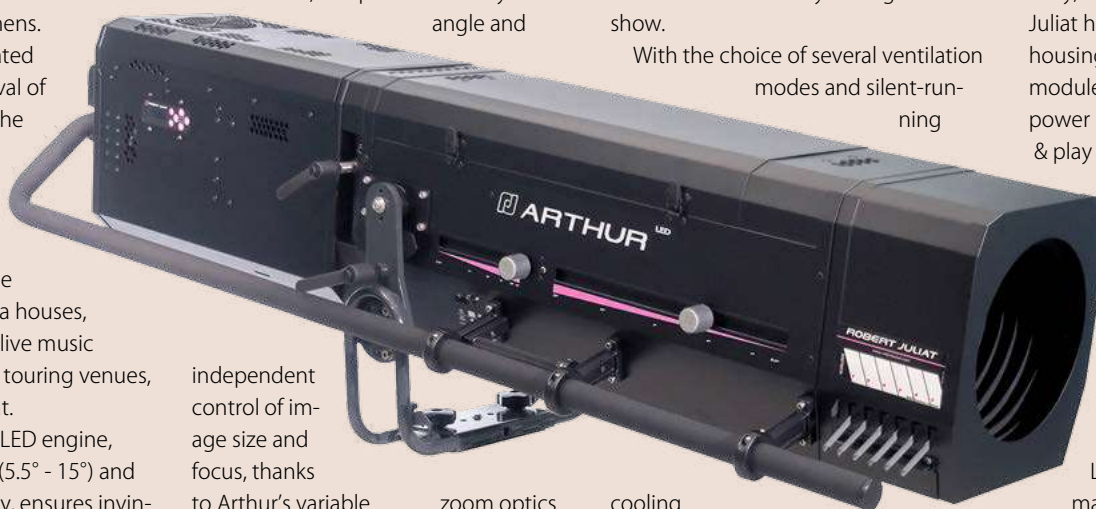
AYRTON LAUNCHES NEW IP65-RATED FIXTURE DOMINO "THE MASTER OF THE ELEMENTS"

Ayrton has launched the latest in its series of IP65-rated fixtures, **Domino** – the Master of the Elements! Building on the success of Perseo, Ayrton's first IP65-rated fixture, Domino delights in dominating the most extreme environments while delivering the most stunning effects.

Delivering 51,000 lumens from its 1000W LED source, Domino is a brilliantly versatile fixture that combines the output and exceptional optics of Huracán-X with the feature set of Khamsin, in an IP65-rated body. Designed to operate in the most extreme situations, Domino can resist hot or cold temperatures, wind, rain, hail, salt fog, sand and dust. It can withstand arid environments, heavy rainfall, and sudden climatic variations.

Ayrton has included all the weatherproofing features of Perseo and given it the same minimalist

design, reduced visual footprint and, for maximum effectiveness, a liquid cooling system with six IP68-rated submersible fans outside its weatherproof enclosure.

Fitted with a 178mm frontal lens, Domino's proprietary optical system uses 13 lenses, producing a 10:1 zoom ratio and a zoom range of 6° to 60°. The exceptional optics deliver an extremely uniform flat beam with no hot spot and reproduce impeccable high-definition images over the entire zoom range.

Domino has a sophisticated subtrac-

tive CMY colour mixing system combined with a variable CTO and a wheel with six complementary colours for infinite pastel and saturated colours. The framing section allows accurate positioning of each of its four shutter blades across a 100% surface area. The image section includes 14 interchangeable HD glass gobos on two wheels. The effects section contains two dynamic effect-wheels with continuous movement in both directions, a CMY multi-layered wheel for creating multi-coloured effects, a standard monochromatic effect-wheel,

a 15-blade iris diaphragm, two frost filters (for light and heavy diffusion), CRI and TM30 optimizing filters, two rotating prisms (one circular with five facets and one linear with four facets), a dynamic sparkle effect with speed and fade adjustment, and an electronic dimmer.

Domino is available in S and TC versions: Domino-S delivers metallic white light with a record-breaking output of 51,000 lumens at a colour temperature of 7000K for incredible brightness; Domino-TC is calibrated at a colour temperature of 6000K with a CRI greater than 90 and very high TM30 readings for perfect colour rendition.

Weighing in at 52kg, Domino is designed for stadium-sized settings and intensive outdoor use. This Master of the Elements is ready to take on the most extreme conditions and is shipping with immediate effect.

CHAMSYS LAUNCHES MAGICQ MQ500M STADIUM

With the introduction of the **MagicQ MQ500M Stadium console** ChamSys has made it easier and more seamless for fades to be woven into a variety of massive lighting designs. This new powerhouse, offers 256 universes of control direct from the console without the need for additional processing nodes, giving designers and programmers greater flexibility at the highest level of show control.

The MagicQ MQ500M Stadium incorporates a robust array of software features that support motorized playback faders, playback encoders and customizable illumination.

With 15 motorized faders and 15 playback encoders per bank -- and up to six banks -- a total of 180 playbacks can be accessed at the touch of a button. RGB LED illumination enables different colors to be assigned to each individual fader and playback encoder enabling unlimited customization.

The programmer modes give access to intensities for each patched fixture, to groups of fixtures, or to individual channels of a fixture. The master modes provide instant master control of individual fixtures or groups of fixtures without having to pre-program masters, making it ideal for live moments when lights are flaring in cameras or key lights need modifying.

Playback encoders can be used for controlling intensity, LTP channels, FX size, FX speed, rate and time. They can also control cue stacks of their own, be tied to the fader playback below, or even control a whole bank of playbacks.

Rugged and ergonomically designed with an inbuilt UPS, the console has two inbuilt full HD multi-touch displays with adjustable viewing angles. The MagicQ MQ500M Stadium Wing adds a third full HD multi touch display and doubles the number of fader and encoder playbacks. Up to five additional touch monitors can be connected to the system via network using the simple Multi-Window PC application giving a total of 8 monitors.

The MagicQ MQ500M is built on the MQ500 software which has excelled on 200 universe shows with thousands of fixtures. Show files are fully compatible between MQ500M, MQ500 and all other ChamSys consoles, making it easy to move between consoles. Show files unique to ChamSys are both forwards and backwards compatible with the console, eliminating the need to be concerned about software versions.

In addition, MagicQ MQ500M has inbuilt plot and visualisation, audio timeline editor, and a multi emitter color picker. The inbuilt 3D palette system and support for external XYZ trackers allow innovative features like Focus line, Focus Hold and tracking of artists and moving objects to be used.

Shows with all 256 universes can be previsualised and pre-programmed on a PC or Mac without additional hardware or dongles and then loaded into the MagicQ MQ500M console. All 256 universes can also be visualised within the inbuilt MagicVis visualiser or with a direct link to 3rd party visualisers such as WYSIWYG, Capture, Vectorworks, Depence and L8. Both the Patch and the XYZ fixture position can easily be transferred from the chosen visualiser into MagicQ. The MQ500M Stadium console also has two front pockets with high power USB sockets intended for charging phones and storing small objects.

PR LIGHTING RELEASES ADVANCED XRLED 3000-W FRAMING SPOT

PR Lighting has announced a new shutter blade device, the **XRLED 3000-W Framing**.

This new addition to the popular XRLED moving head series features the latest advanced 1200W white LED light source. In addition to its complete range of spotlight effects and features, the fixture's four sets of framing blades offer endless rotation, different size and shaped graphics, and a curtain effect in a module designed and patented by PR Lighting.

This bright and powerful spot, which is suitable for any type of project, comes in two versions. The **6500K, 70 CRI, 55000 lumen version** is suitable for concerts, major events and exhibitions while the **5600K 92 CRI 41000 lumen spot** has been designed specifically for theatres, TV studios and corporate events.

Thanks to the unique design of the LED engine cooling system, the noise level can be controlled at a very low level—and lower still when run in theatre mode (39dB), making it an excellent choice for both theatres and TV studios. Moreover, for pan and tilt use, PR has upgraded to a new non-contact magnetic encoder positioning system that gives the lighting designer more precision and stability. Another key feature which is sure to impress designers and operators is the 6°-54° variable light angle, with autofocus.

Other highlights of the XRLED 3000-W Framing include: Electronic strobe (0.3-25fps) and four selectable dimming curves (0-100% linear adjustable). It offers full CMY linear colour mixing, with macros; two colour wheels, each with six dichroic filters (plus open); half colour effect, variable speed rainbow effect; optional stepping or linear colour changing and linear colour temperature adjustment, with 0-100% linear CTO system.

The optical path also includes a rotating gobo wheel, with six replaceable gobos plus open (either glass or metal). These are bi-directionally rotatable and shakeable, at variable speed, and offer indexable scrolling. The second, fixed gobo wheel offers seven replaceable gobos (plus open).

The fixture, which weighs 45kg, also contains a 4-facet prism and a linear prism, bi-directionally rotatable at variable speeds, and indexable; light and heavy double Frost filters; replaceable animation wheel, bi-directionally rotatable at variable speed; 5-100% linear adjustable Iris, with macro; motorized linear Focus and Zoom; Pan 540°, Tilt 270° head movement, with auto position correction and Swap and Invert functions.

MA LAUNCHES GRANDMA3 ONPC COMMAND WING XT

MA Lighting launches a new member of its grandMA3 onPC solutions range: the **grandMA3 onPC command wing XT**. It is the grandMA3 onPC console solution. With the grandMA3 onPC software pre-installed on a built-in MA motherboard, the grandMA3 onPC command wing XT offers 4,096 parameter– just add one to four touchscreen monitors, and it's ready to go!

grandMA3 onPC command

are applied to the entire grandMA3 product range ensuring that users will benefit from this MA DNA. grandMA3 onPC command wing XT is the perfect option for new MA users as well as MA veterans.

As a member of the grandMA3 family the grandMA3 onPC command wing XT uses the same user interface as the other grandMA3 consoles. It therefore allows new users to learn the MA user interface from start and later seamlessly switch between this solution and other

to use a full-grown grandMA3 console. The grandMA3 onPC command wing XT enables them to seamlessly program, playback or backup within the grandMA3 world. Of course, 24/7 worldwide MA support is ensured for the grandMA3 onPC command wing XT as well.

With 10 motorized faders, 40 physical playbacks, 16 assignable x-keys and a dedicated master playback section the grandMA3 onPC command wing XT provides plenty of playback options.

Control are all on hand directly with the grandMA3 onPC command wing XT. Additionally, it has four individual monitor outputs allowing users to tailor it to suit their needs best.

The grandMA3 onPC command wing XT provides the maximum number of parameters available for grandMA3 onPC solutions: 4,096 parameters with 2 DMX outputs and 2 x Ethernet Gigabit connectors included for DMX over Ethernet protocols. A total of 1,024 DMX universes can be assigned to any of the physical DMX outputs or transmitted via MA-Net, sACN or Art-Net.

There are three choices for onPC solutions: the grandMA3 onPC command wing XT, which is the ultimate grandMA3 onPC console solution, the grandMA3 onPC command wing, which offers the ultimate grandMA3 mobile

MA Lighting grandMA3 onPC command wing XT

wing XT is an extremely versatile solution for smaller and mid-sized installations and shows as well as streaming studios and a powerful preprogramming and backup tool on the road. It is built to the same highest standards of quality in software and hardware that

grandMA3 consoles. Furthermore, newcomers will benefit from the amount of free trainings and webinars MA offers which allows them to quickly build up their skills.

Experienced MA users can keep their proven workflow and rely on this solution wherever it is physically difficult

Thanks to the grandMA3 onPC command wing XT incorporating the command section of the grandMA3 consoles, it has never been easier to use the grandMA3 onPC software. All inputs and outputs of a grandMA3 console are available to the user. DMX, Midi, Ethernet, Timecode and Remote

solution, and the grandMA3 onPC xPort Nodes, which offer the most cost-effective DMX output solution for software only show control.

To know more about MA products, contact **Hi-Tech Audio Systems Pvt. Ltd.** who are the India distributor of MA Lighting.

ELATION PROFESSIONAL LAUNCHES NEW ONLINE LEARNING CENTER

Lighting professionals are taking the downtime situation owing to the Covid 19 pandemic, as an opportunity to educate themselves and prepare for the eventual reopening. **Elation Professional** is offering an opportunity to designers with the launch of a new online Learning Center available on the www.elationlighting.com website. Designed to provide lighting professionals with easy-to-access learning options, the new resource site is full of free educational and training material.

View Training Videos from Obsidian Control Systems covering the Onyx platform, Dylos pixel composer, Capture Visualization software, and more; or access Elation Educational Experience (E3) training videos, many presented by one of the industry's top technical

educationists, ETCP Recognized Trainer **Richard Cadena**. Other resources like White Papers and How-to Articles covering a host of topics relevant to lighting professionals are also available.

The entire Elation Hour and Innovation Hour webinar series is available to view. Elation's popular virtual presentation series addresses the technology and process behind the company's most popular product series and includes discussions with some of our industry's most noted designers. Elation's Virtual at Home Demos, is a video series that sees Elation's sales team

and product specialists demoing some of Elation's newest lighting products from the comfort and safety of their own homes.

Another feature of the Learning Center includes videos of product, trade show and showroom light shows. Visitors can also view and register for upcoming E3 events, as well as schedule a demo room appointment at Elation facilities in the U.S., Europe or Mexico.

The **Elation Learning Center** will be continually updated with new material so lighting pros can return to it again and again. For access, follow the Learning Center link at the top of the *www.elationlighting.com* webpage.

NUMARK INTRODUCES TWO NEW DJ CONTROLLERS

Numark has introduced two new controllers the **Mixtrack Platinum FX** and **Mixtrack Pro FX**. These two new controllers are the benchmark for bringing a full scope of features and incredible sound for DJs looking to get started, as well as established DJs looking for a professional solution at a great price.

With dedicated buttons for the most popular DJ effects, professional toggle paddles, and everything needed to control Serato DJ, these feature-packed devices can grow as the users DJ skills progress. Both the Mixtrack Platinum FX and the Mixtrack Pro FX come with Serato DJ Lite and 3 free months of TIDAL Premium, giving the ability to stream millions of songs from TIDAL or SoundCloud.

Mixtrack Platinum FX

At its core, Mixtrack Platinum FX is a 24-bit 4-deck digital DJ controller with a dedicated software effects section, large 6-inch capac-

Mixtrack Platinum FX

itive-touch jog wheels with built in hi-res displays and 16-multifunctional performance pads. Ready to take on any DJ style and perfect for small events, parties and developing individual DJ skills, Mixtrack Platinum FX fuses in-demand functionality with all the tools to craft a signature style.

Mixtrack Pro FX

The Mixtrack Pro FX is similar

to the Mixtrack Platinum FX, but in a 2-deck configuration. This replaces the jog wheel displays with a standard touch-capacitive counterpart. It features large 6-inch jog wheels, a 24-bit digital audio interface for pristine sound quality, six dedicated software effects buttons for easy transitions, 16 performance pads for hot cues, auto loop, fader cuts and sampling.

Mixtrack Pro FX

ALGORIDDIM DJAY AND VIRTUAL DJ INTRODUCE REALTIME VOCAL AND INSTRUMENTAL STEM SEPARATION

The all new software from **Algoriddim djay** and **VirtualDJ** boasts realtime separation and control of stems in each track without the need for a special file format. It's a huge step forward for digital djing, and it has made a big impact on the future of the digital DJ industry.

Algoriddim djay Pro AI

Algoriddim djay Pro AI makes the most of Apple's Bionic chip to achieve stem separation on iOS devices. Algoriddim djay Pro AI allows DJs to isolate, play, remix individual parts across multiple tracks on-the-fly. If the user wants to solo a vocal track, for example, or mute the drums, the Neural Mix slider controls allow doing it effortlessly. To avoid clashing vocals in the mix, users can crossfade components of two songs together in a single track.

The app is also the first music app to get full use of Apple's Bionic chip in realtime playback. These chips allow Neural Mix to function for seeking, scratching, and time-stretching with high sound quality, sample-accurate precision and low latency.

Automatic EQ and AI, which automatically identifies the best EQ settings

Algoriddim djay Pro AI

for the most effective intro and outro sections of the songs, calculates the optimal fade duration and can automatically make changes to EQ filters for cleaner transitions. Users can upgrade to DJing Pro AI, which includes a full suite of features such as a DJ mixer, DJ controller, and a new DJ app.

Virtual DJ

A new and innovative Virtual DJ 2021 promises to change the way DJ mixes forever, with a new, more immersive, and more powerful virtual DJ experience. The updated software catered for Mac and Windows also incorporates realtime stem separation.

VirtualDJ's ModernEQ takes the three - band EQ to the next level, using faders to take control of individual track

User can control five components - vocals, instruments, bassline, kick and hi-hat that are grouped to the three-band EQ but can be controlled independently with extra EQ knobs if the user MIDI up to a four-channel mixer with MIDI mapping. Stemp pads are also a great addition to VirtualDJ, which take up five of eight

Virtual DJ 2021

components. This means that instead of low/mid/hi, the user will have drums, instrumentation and.

performance pads, giving full control of the components to make quick mash-ups and fluid transitions.

PIONEER DJ LAUNCHES DDJ-400-N AND DDJ-SB3-S DJ CONTROLLERS

Pioneer DJ has recently launched the new entry-level limited edition DJ Controllers, DDJ-400-N and the DDJ-SB3-S.

DDJ-400-N

This new, limited-edition version of the DJ controller features flourishes of gold coloring on its black body to

Black DDJ-400-N

create a unique look.

The DDJ-400-N is compatible with professional DJ applications, rekordbox, and users can stream and mix music from Beatport LINK, Beatsource LINK and SoundCloud with it. If users connect to Algoriddim's free app, djay for iOS, or if you upgrade to djay Pro for

PC/Mac, Beatport LINK, Beatsource LINK, SoundCloud and Tidal are available.

Besides the compatibility with rekordbox, users can instantly access millions of songs from within djay and use the controls on the DDJ-400-N to mix the music. Speed it up, slow it down, loop,

slice, and add FX to put a spin on each song. Then, mix from one track to the next to build sets and create a trademark sound.

Thanks to the lightweight and portable design, the DDJ-400-N can be carried easily to houses or taken to parties and small venues to perform.

The controller inherits design traits from Pioneer DJ's professional range and the layout of dedicated play/pause and cue buttons, Beat FX, CDJ-style looping controls and more is inherited from NXS2 set-up.

DDJ-SB3-S

A brand-new limited-edition version of one of Pioneer DJ's most popular DJ controllers. Featuring high-quality, silver-colored aluminum jog wheels and a matching body, the new unit brings a

Silver DDJ-SB3-S

fresh look to parties and home set-up.

The DDJ-SB3-S includes all the features from the original DDJ-SB3, the

2-channel controller which unlocks Serato DJ Lite. The layout design of the DDJ-SB3-S is inherited from the top models in the DDJ-S series. The jog wheels, Performance Pads, play and cue buttons, independent Auto Loop buttons, and all the knobs and fader positions in the mixer section are arranged in a way that enables users to craft intuitive, professional DJ performances.

The controller's intuitive interface is ideal for learning the basics on, as well

as moving onto more advanced techniques. Use Pad Scratch to effortlessly reproduce scratches the FX Fade to ensure the mixes are smooth.

HERCULES ANNOUNCES THE LAUNCH OF NEW HIGH-PERFORMANCE DJ CONTROLLER - DJCONTROL INPULSE 500

Hercules has announced the launch of a new DJ controller - Hercules **DJControl Inpulse 500**.

The new DJControl Inpulse 500 controller, comes with both Serato DJ Lite and DJUCED, Hercules' in-house mixing software. "We have been working alongside Hercules since 2015, most recently on the DJControl Starlight, which in 2019 became a super popular, portable controller," said **Nick Maclaren**, Chief Strategy Officer from Serato. "We're thrilled to partner with the team again on the DJControl Inpulse 500, a controller that lets young DJs take the first steps towards public performances. We have also adapted our software to integrate Hercules' unique, award-winning learn-to-DJ hardware features so that users who choose to mix on Serato can go into their first performance with the confidence they need."

Although the DJControl Inpulse 500 features Learn-to-DJ guides and DJUCED's AI-driven Intelligent Music

Assistant, it also boasts multiple features: a professional design with a sturdy metal backing plate, four extendable/retractable non-slip feet to elevate mixing, a hardware mixer for the audio inputs, a dedicated Filter/FX area with awesome effects, two large jog wheels with touch detection for scratching, 16 backlit rubber RGB pads, and helpful light guides for mixing.

- **Ready-to-mix audio options:** Powered by USB, DJs can plug in their smartphone or a media player via dual RCA auxiliary input or a 3.5mm stereo mini-jack as a back-up or as an extra source of music.
- **Filter FX:** This pro performance feature lets DJs push their mix customization to new levels and personalize their sets with effects available with

Serato and DJUCED.
- **Solid retractable feet:** With folding feet underneath that glow when extended this unique feature protects the controller from spilled drinks during performances.
- **Build quality:** built-in Velvet Sound DSP from AKM for processing audio inputs and outputs.
- **Streaming support:** mix millions

of tracks with TIDAL and SoundCloud Go+ integrated within Serato and with Beatport LINK, Beatsource LINK and Qobuz integrated within DJUCED.

The DJControl Inpulse 500 offers a portable, professional look and feel, performance-ready controller that helps first-timers look cool and perform with confidence.

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