

PALM AV-ICN expo 2021 Preponed in May Pg:04







Lighting Designer Becket Tundatil talks about the lighting industry scene in the current scenario and the future of lighting design in the virtual events space

IRAA 2020 – 1000 nominations highest ever

INDIAN RECORDING ARTS ACADEMY





Founder & Chairman of IRAA

Awards live streamed on Youtube and Facebook 14th edition - 55 awards in 42 categories presented Fixed Install Pg:08

National War Memorial – Bose Professional gives befitting tribute to War Heroes

<u>Virtual Events</u> Pg:38 NJSM-BNA set the ball rolling for Virtual Live Entertainment Events

Product Focus Pg:32 **Moving Heads** Lighting Consoles

SEPTEMBER - OCTOBER 2020

The Lighting issue



081

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CONTACT:

For Booth Booking: exhibit@palmexpo.in For Conference Opportunities: Smita Rai, Project Head - Features srai@palmexpo.in For Advertising Opportunities: Priyanka Shukla, Assistant Manager - Ad Sales pshukla@palmexpo.in





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PALM TECHNOLOGY

CONTENT CHIEF Anil Shiv Raj Chopra achopra@palmexpo.in

CONTENT ANCHOR Smita Rai srai@palmexpo.in Mob: +91 982 094 3398

CONTENT MANAGER Meghna Porwal

mporwal@palmexpo.in Mob: +91 982 040 3040

ASSISTANT MANAGER - AD SALES Priyanka Shukla pshukla@palmexpo.in Mob: +91 810 850 4929

> DTP MANAGER Peter Pereira ppereira@palmexpo.in

WEB DEVELOPER Dimple Shah dimple.s@abec.asia

Amol Kanchawade amol.k@abec.asia

DISTRIBUTION Meetali Solanki meetali.s@abec.asia

CONTENT PRODUCTION & RESPONSE OFFICE PALM TECHNOLOGY

530, Laxmi Plaza, 5 th Floor, Laxmi Industrial Estate, New Link Road, Andheri (W), Mumbai - 400 053. T: +91 22 4286 3900



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IRAA is going to grow exponentially and we are targeting 1 lakh members 55 Anil Chopra, Founder & Chairman, IRAA **16**



NOTE from Content Anchor *Smita Rai*

Pro Audio and Lighting industry struggling to survive

2020 has hurriedly gone by from being a promising year for the events industry to being the most disastrous. Even as the pandemic continues to impact the economy, some industry sectors in India like the auto, housing, building and construction and manufacturing sectors have picked up speed. Unfortunately all our earnest hopes that the events industry, and in turn the pro audio and lighting industry would pick up by the festive and wedding season are belied.

Even the current SOPs announced by the Government this month, does little to provide a boost to the events and exhibition industry. Physical networking and people gatherings are the backbone of the events industry, however, while allowing more social, academic, sports, entertainment, cultural, religious and political events to open up, an unrealistic cap of maximum limit of 200 people has been imposed as per Unlock 5 guidelines.

We are living in uncertain times and only time will tell if the events industry will pick up by early 2021.

Notwithstanding the impediments thrust by the outbreak, as in every other industry, it has also rapidly widened the scope for innovation in the events industry. New applications for audio and light for resourceful virtual events is an evolution. In the struggle for survival, the industry has reinvented itself and redefined its event structure with imaginative virtual touch and feel shows. One such organization which has taken to the virtual entertainment events space, like fish takes to water, is **NJSM Studios** and **BNA Talent**. Read all about how they took on the challenge of entering a relatively new domain and embraced it with great success on *pg.38*.

Also entering the virtual events space is **Beck-et Tundatil's** Firefly. On *pg.48* the ace lighting designer talks about the current situation and the future of lighting design in the virtual space.

IRAA 2020 goes Virtual

IRAA 2020 was a high point for the PALM expo. For the first time ever, the IRAA Awards took place as a virtual event on Sunday, 11 October. Following the ceremony's postponement in May, due to the cancellation of the much-awaited PALM expo, the IRAA committee and Jury Members, motivated by IRAA's spirit in recognizing excellence and discovering best work and talent in the studio domain, decided to continue with the awards in its digital avatar. It was indeed a Sound (pun intended) decision as the event was a huge success with studio sound engineers and music industry professionals from across India gathering in strength to watch the event on the virtual platform. The awards ceremony was streamed simultaneously on the PALM expo Facebook and YouTube channels. IRAA announced winners across 42 categories selected from over 1000+ nominations received from across India. This year the awards enjoyed the support of HARMAN Professional Solutions India, a brand known for its extensive bouquet

PALM AV-ICN expo Preponed in May

After a period of discussion and consultation, the PALM expo management has decided to prepone the PALM expo 2021, which was earlier scheduled to take place in the last week of May. The PALM expo will now take place from May 13 - May 15, 2021.

This decision of moving up the dates by two weeks was taken due to the near clash with the dates of ISE expo which is scheduled to take place in Barcelona in the first week of June.

"PALM AV-ICN Expo is the gravity centre for product sourcing in pro audio and audiovisual. It becomes imperative to host the show on dates that don't clash with ISE. The AV industry finds it important to be at PALM AV-ICN. ISE too increasingly attracts pro audio. Thus, preponing the show will allow all exhibitors and professionals to schedule their participation stress free," said **Anil Chopra**, **Founder Director** of PALM expo.

PALM AV-ICN expo is readying to deliver a safe and motivated expo that will allow the pro audio, lighting and AV community to reconnect and showcase their gear to an eager audience waiting to



attend the show after a year of unanticipated interruption.

Watch out for regular updates on this page.

www.palmexpo.in is also live, offering initial change of date information for exhibitors and visitors.

of signature products for the studio. The credit for the Concept and Production of the event went to NJSM Studios and BNA Talent, who ensured outstanding delivery and a smooth viewing experience. Turn to *pg.16* for an extensive review of the event and a detailed list of the nominees and winners.

The fraternity of sound engineers in India doing great work has been exploding each year and the IRAA awards which is a tribute to all these sound engineers is very ambitious, as we envision this community of sound engineers growing exponentially in the near future. In years to come, IRAA hopes to enroll 1 lakh sound engineers working on soundtrack and music for television, film, music, radio, live etc. as eligible voting members.

IRAA will be back in 2021, on the sidelines of the PALM expo which will take place once again at the Bombay Exhibition Centre in Goregaon, Mumbai in mid-May.

Till then get all relevant updates in PALM technology magazine. Happy Reading!

Imita_

Smita Rai – Content Anchor

Catch the PALM AV Annual Calendar to be out in December 2020.

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TULJA BHAWANI AUDIO INVESTS IN N-LABS

Andhra Pradesh based road show specialist, Tulja Bhawani Audio has purchased two pairs (four) of **Infinity Dual Subwoofers** from Gujarat based AV Manufacturers N-Labs, a registered brand of HV & Co.

The Infinity Dual Subwoofers are a 100% weatherproof line array subwoofer used for high power bass. The 18" dual subwoofer has a frequency response rate of 36 Hz – 200Hz with 3600W RMS. With a highest peak SPL of 145dB per box, the Infinity dual subwoofer can work with both passive and Bi-Amp.

The purchase was facilitated by DASPRO Audio, Mumbai, who are the exclusive dealers of N-Labs products. "We are extremely happy to facilitate this purchase for Tulja Bhawani Audio. For us our customers are very important, and we delivered what we promised to our customer," said **Abid**, Owner, DASPRO Audio.

Tulja Bhawani Audio were looking for

the best ground-breaking subwoofers that were being manufactured in India. They got in touch with DASPRO Audio to make the purchase, after watching a YouTube video of the performance of the Infinity Dual Subwoofers uploaded by one of N-Labs influencers. "After seeing the performance of the Infinity Dual Subwoofers online, we wanted to test the subwoofers for ourselves before making a decision. And we can say the Infinity Dual Subwoofer has a superb bass and we are highly satisfied," said

Vislavath Ramchandar, Owner, Tulja Bhawani Audio.

According to Hemal Bhatt, Owner, HV & Co, "User did not trust the specs nor were they expecting such quality. After testing the Infinity Dual Subwoofer, they were highly satisfied with it and are also now looking to add more to their gigs from us. They did not believe there was a brand like N-Labs who manufacturers AV products that are made in India from scratch. They thought the YouTube video they saw about our product was fake. They researched about our company and once they were 100% satisfied and they then purchased the subwoofers from our dealer in Mumbai."

He added further, "We are happy to see our client satisfied with the quality of the product and the price it was offered at. Our client is now also suggesting our products to others rental companies."

Vislavath also commented on the brilliant working of the subwoofer and also informed they are planning to expand their inventory with more products from N-Labs as they want to start using products that are only Made in India.

Vislavath Ramchandar, Owner, Tulja Bhawani Audio with the Infinity Dual Subwoofers

HK AUDIO UNVEILS THE POLAR 12 COLUMN PA SYSTEM

HK Audio has unveiled **POLAR 12**, a full-fledged active full-range columnar PA system for musicians, entertainers, DJs, presentations, schools and audiovisual applications.

POLAR 12 combines outstanding audio performance with ultra-convenient handling to provide the easiest way to the best sound. Its 24-bit DSP and high-grade speaker components deliver exceptionally clear and natural sound from 35 Hz up to 20 kHz. The premium subwoofer design and 2,000 watts of high power amping ensure an XXL sound experience from whisper-quiet to massive volumes.

A wide coverage angle of 120° and an outstanding resistance to feedback make it easy to position POLAR 12 in any venue. It can even be placed directly behind the performer, meaning no separate stage monitors are required. POLAR can be set up without the spacer for even more flexible positioning options, e.g. on high stages.

POLAR 12 excels in situations where high-powered bass is needed for continuous operation over longer periods of time. Featuring a larger cabinet and a 12" woofer, POLAR 12 delivers the extra helping of low end that bass enthusiasts love so much. This makes it an excellent choice for DJs who have to pump out a big bass sound throughout the gig. In contrast to the usual bass boosting with electronic filters, the powerful bass of POLAR 12 is produced physically by the long-excursion woofer in an acoustically optimized, wooden cabinet. That's why POLAR 12's bass delivers higher sound pressure and headroom even when levels spike, keeping the mid and high frequencies in perfect balance at high volumes.

The onboard 4-channel mixing console offers two mic/line channels,

a dedicated instrument channel, e.g. for acoustic guitar, and an Aux channel for music players, as well as Bluetooth 5.0 Audio Streaming options. Users' favorite POLAR 12 settings can be stored in five individual user presets.

The new E.A.S. connection system makes cables obsolete and guarantees easy setup, while ensuring POLAR 12 sits securely and stably in any location, and the included gig bag for the columnar elements and a cover for the subwoofer make handling even easier.

Rüdiger Forse, HK Audio's Senior Product Manager, says: "Like its popular brother POLAR 10, the new POLAR 12 PA system combines outstanding audio quality with easy handling, and offers features that until today were found only on far pricier systems. While POLAR 10 suits all typical applications for column systems well, POLAR 12 excels in situations where high-powered bass is needed for continuous operation, even when levels spike. The unique subwoofer

design and high power amping deliver the extra low-end that bass enthusiasts love so much. With POLAR 12, you can get the party started and keep it going all night long!"

MEYER SOUND MAPP 3D SOFTWARE TOOL ADDS NEW DIMENSIONS TO AUDIO SYS-TEM DESIGN

Meyer Sound has announced the release of MAPP 3D, the most extensive upgrade to its industry-standard system design tool since the original MAPP Online software program was introduced in 2001. MAPP 3D works on both the Mac and Windows platforms, employs local processing (no Internet connection required) and

emerging technologies. "The detail in the renderings is spectacular and the flexibility of the user interface is unprecedented, but what really sets MAPP 3D apart is the extreme accuracy of the predictions. What you measure with MAPP 3D's virtual microphones is precisely what you will see in measurements from real microphones." The combination of a streamlined. add and configure processors, view prediction results, and later synchronize these settings directly to the hardware processors on site. Complete output processing functions of all GALAXY processor models are available, and a copy and paste feature can be used to the anechoic chamber," says **Todd Meier**, Meyer Sound director of product management, "as will the loudspeakers in the final installed system. In addition, self-powering eliminates variables associated with external powering, such as

MAPP 3D

is now available as a free download from the Meyer Sound website.

As the name implies, MAPP 3D provides highly accurate, three-dimensional renderings of predicted sound system performance within detailed, wire-frame venue drawings. Equally important, MAPP 3D now offers complete integration with the GALAXY Network Platform and Compass control software for a seamless workflow from initial design through on-site tuning. Comprehensive processing parameters for complex systems can be optimized using MAPP 3D predictions, with the resulting processor settings pushed directly into multiple GALAXY processors with the click of a mouse.

In addition to traditional calibration test signal sources, MAPP 3D supports M-Noise, an emerging industry standard to determine the maximum linear SPL for music. This combination provides the industry's most accurate prediction of a sound system's maximum capability when reproducing music.

"The release of MAPP 3D marks a milestone in the development of sound system design software, not only for Meyer Sound, but for the industry as a whole," says **Perrin Meyer**, Meyer Sound director of user-friendly interface and seamless integration with GALAXY processors — and easy import of SketchUp (SKP) and AutoCAD (DXF) files — will afford significant time and cost savings in both system design and on-site optimization. With multiple views and fingertip control of a free-rotation tool, audience areas can be quickly defined, even within complex architecture. Line arrays can be quickly configured and automatically splayed for uniform coverage, and multiple system options can be evaluated simultaneously.

In addition, MAPP 3D enables system designers to perform virtual system optimization in the design phase. MAPP 3D includes virtual GALAXY signal processors, allowing the designer to



Pearson Theatre ISO Step View All Cinema

replicate settings in one or more other processing channels.

Because MAPP 3D includes precise sensitivity data for all Meyer Sound loudspeakers, it can display predictions as real-world SPL as well as attenuation. The inclusion of sensitivity coupled with M-Noise compatibility also provides highly accurate predictions of system headroom. Accurate headroom predictions alleviate any tendency to overdesign systems, leading to greater cost efficiencies in the final specification.

MAPP 3D loudspeaker performance is based on more than 65,000 three-dimensional measurement points, taken in 1/48th-octave resolution in the Meyer Sound anechoic chamber. Also, MAPP 3D predictions are accurate across the full bandwidth of all loudspeakers, including as low as 12.5 Hz for the VLFC very low-frequency control element.

MAPP 3D also leverages the inherent advantages of working with loudspeakers that are self-powered and manufactured to extremely tight tolerances for uniformity of performance.

"When working with predictions in MAPP 3D, you can be confident that your virtual loudspeakers will behave exactly as the physical models tested in amplifier type, amplifier output configuration and loudspeaker cable length — all of which add complexity and introduce a potential for error in other proprietary prediction tools."

The upgraded, high-resolution graphics and flexible user interface in MAPP 3D provide an array of options for design and performance analysis. System designers can insert simple 3D geometry to reveal array behavior outside the audience area. Layers can be turned on and off to speed workflow. Prediction planes are guickly created from imported drawings with a "Snapping" tool. In addition, multiple prediction planes in large venues with symmetrical sections can be created quickly using linear and angular extrusion in combination with the "Mirror" and "Align" tools.

MAPP 3D is compatible with most recent computers running either Windows 10 or Mac OS versions 10.5.6 Catalina or later. A quad-core processor and at least 8 GB of RAM are recommended as well. MAPP 3D is available as a free download as of August 19, 2020.

Sound & Stage

OUTLINE STADIA 28 NOW SHIPPING

Outline has revealed the immediate availability of the new Stadia 28 constant curvature array designed for outdoor applications, which was launched during the 2020 edition of ISE.

Stadia 28 is a medium-throw system for permanent outdoor installations, ideal for sound reinforcement in stadiums, theme parks, leisure facilities, tourist attractions and public spaces.

Its main point is its weight: power ratio, being a single enclosure, weighing just 21 kg (46.2 lb), but able to reach 139 dB SPL, by means of two 8" mid-woofers and a compression driver with a 3" diaphragm - all in neodymium. The system operates in bi-amp format.

The dispersion angle of 90° by 22.5° degrees enables, for example, to form horizontal or vertical arrays with no less than 135° by 90° using just 6 cabinets, which means guaranteeing coverage in any context, as well as remarkable

versatility.

Furthermore, Stadia 28 hardware is designed for safe long-lasting installation: the 10 mounting points in extremely light top-grade anodised Ergal are fixed to the internal load-bearing structure, manufactured entirely in stainless steel.

IP55 protection rating is ensured by a 3-layer coating in elastoplastic material ('OutSIDE Coating Technology' - Outline proprietary technology) along with a series of sophisticated ideas introduced in Outline's manufacturing process.

Outline Senior Loudspeaker System Designer, Francesco Simeoni commented: "The lines of the cabinet, combined with the waveguide designed and optimised specifically for this type of application thanks to the use of simulation software of the finished elements. enable to create real 'sectors' of acoustic projection that can be configured with

extreme flexibility, thus meeting the coverage requirements

of any kind of venue."

Francesco explained the effort that was taken with the design of the cabinets and with the choice of the components, focussed on the water/ weather-proof characteristics "to ensure the system remains fully operational through time and in any situation, even under severe conditions," he added. "In the majority of standard applications,

A transparent Outline Stadia 28 V-Array

the internal mechanical load-bearing structure enables the installation of arrays without any expensive complex external mechanical structures being required."

STUDIOMASTER CLUBXS COMPACT MIXER SERIES RECEIVES AN UPGRADE

Studiomaster's highly popular ClubXS compact mixer series has received an upgrade with the introduction of uprated 6-, 8-, 10- and 12-channel 'XS+' models.

The addition of a DSP on/off foot-switch socket comes with new black livery - matching the brand's digiLiVE console series - and more ergonomic colour coding of channel rotary controls.

ClubXS has been a big seller for Studiomaster since its introduction in 2016. A dedicated compact design for small to medium entertainment installations or portable live sound, it offers a wealth of product-class leading features and specs for these applications at an amazing price point. The ClubXS+ refresh maintains the value for money proposition with 6-, 8-, 10- and 12-input channel models now equipped with the DSP on/off foot-switch capability, bringing them into line with the already existent ClubXS16+ model.

Input channel configurations on all models feature two stereo channels, and increasing +48V phantom power mic channel counts across the range, with; two on the ClubXS6+, four on the ClubXS8+, six on the ClubXS10+, eight on the ClubXS12+ 8, and 12 on the ClubXS16+

Series' specifications include balanced mic/ line connectors, 3-band EQ, built-in variable independent input channel compression (non-stereo chs), 2 Aux channels, channel MUTE switch, 16 programmable DSP effects, and a versatile MP3/USB/ SD card playback and recording system. This includes a Bluetooth play-

back capability that enables playback of audio from phones, laptops and other Bluetooth devices. High quality



Studiomaster ClubXS 6plus

60mm smooth faders and a robust, quiet internal switch mode power supply are also standard.

WAVES NOW SHIPPING DSPRO STAGEGRID 1000

Waves Audio is now shipping the DS-PRO StageGrid 1000, a Waves Sound-Grid-compatible stagebox.

The DSPRO StageGrid 1000 is a compact I/O device for Waves' eMotion LV1 live mixing systems, with eight mic/ line ins, four analog out and AES/EBU ins/outs, all digitally controlled. Use this versatile unit close to your mixing console to add more inputs and outputs at FOH or monitors, or on stage in order to

add more inputs and outputs for stage performers.

With eight digitally controlled mic/ line ins, four balanced analog outputs, and an AES/EBU stereo I/O, this 1U rack unit offers the perfect balance between size and functionality, delivering exceptional, no-compromise sound quality and reliability

This rugged and road-ready Stage-Grid 1000 unit is powered by the same



proven audio interface as the larger DSPRO StageGrid 4000, making the DSPRO StageGrid family the perfect I/ Os for the most demanding live mixing environments.

StageGrid 1000 is fully compatible with Waves' SoundGrid ecosystem. It interfaces with SoundGrid hosts and

Waves SoundGrid®-compatible stagebox

network components to make up a modular, scalable audio distribution infrastructure, which can process multichannel audio at ultra-low latency using Waves' award-winning plugins.

Bose Protessional gives befitting tribute to Mar Hegoes

M/S Fine Arts Solutions brings the audio experience to life with Bose Professional Loudspeakers at the National War Memorial

The National War Memorial stands as a stellar tribute to the Indian Armed Forces who served our country in times of conflict. The scale and significance of the memorial means that it attracts a huge amount of attention.

Making it engaging and memorable for visitors is a new integrated audio solution from **Bose Professionals** featuring ArenaMatch loudspeakers, which enhances the memorial's purpose to commemorate the sacrifices made by our armed forces and also provide a place where future generations will continue to come together and remember the sacrifice and contributions made by our brave soldiers. **PT** reports. S pread over 40 acres of land and built around the existing canopy near the iconic India Gate in New Delhi - the National War Memorial (NWM) was inaugurated on February 25, 2019, by the Honorable Prime Minister of India Shri Narendra Modi; and it stands as a stellar tribute to the Indian armed forces, as names of personnel martyred during the armed conflicts of 1947–48, 1961 (Goa), 1962 (China), 1965, 1971, 1987 (Siachen), 1987-88 (Sri Lanka), 1999 (Kargil), and other operations such as Operation Rakshak, lay prominently inscribed on the memorial walls.

110000

Drawing inspiration from the 'Chakra-

08



vyuh' formation (a multi-tier defensive formation that looks like a blooming lotus), the memorial has been designed in the form of four concentric circles around the main 15mtr tall obelisk which is located at the center.

The innermost circle is named the Amar Chakra (circle of immortality), which hosts an eternal flame that burns bright at the foot-end of the obelisk; and it is at the Amar Chakra Section where a memorial service is held each evening honoring the life and sacrifice of martyred personnel, in the presence of their family and loved ones.

The Challenge

The Amar Chakra Section had a previously outfitted system which, over a period of time, began to deteriorate in terms of its audio performance. The NWM management therefore sought to equip the space with a new pro audio system that would not only deliver the kind of high-quality sound experience befitting the space, but would also be easy to use and maintain, and would also be cost-efficient, taking into account the management's failed investment into the previous system.

M/s **Fine Arts Solutions** from Haryana, were contracted as the lead integrators for the National War Memorial to upgrade the audio performance of the Memorial.

From the design and integration point of view; finding the right combination of durable high-quality and high-performance weatherized loudspeakers that offer precise coverage angles was a key challenge owing to the outdoor nature of the project and the sheer physical dimensions of the space. Added to this was the onus of optimizing the loudspeaker system to achieve the desired result through the use of fewer modules in order to keep costs manageable as per the client.

Finally, in order for the team to appropriately install the loudspeakers at the desired points, the team had to commission extensive civil work at the space; all of which had to be completed within a 30-day deadline.

Bose Solution

Taking into account the client's needs and the demands of the physical space itself, the Amar Chakra section was commissioned with Bose Professional's leading-edge **ArenaMatch loudspeakers** which emphasizes Bose' proven DeltaQ technology sound quality and flexibility to outdoor installations, offering features like IP55 weather rating, impressive SPL with long-throw music reproduction, impeccable vocal intelligibility, modules with multiple coverage patterns, and inter-changeable waveguides.

With the Bose Professional Arena-Match series, the design and integration team could choose from nine different coverage patterns and modules that offer 10°, 20°, or 40° vertical coverage, and easily swappable 60°, 80°, or 100° hor-

The ArenaMatch AM40 loudspeakers and ArenaMatch AM20 loudspeakers were placed strategically across the space to ensure optimized intelligibility and even distribution of sound coverage with consistent tonal experience, with additional reinforcement that was delivered through a pair of FreeSPace DS40SE loudspeakers





Col Digvijay Singh Basera, VSM**(Now Brigadier) was the Director at the National War Memorial (NWM) during the installation, seen here along with his team and the team at Bose Professional and M/s Fine Arts Solutions

izontal waveguides, which meant that they could build a custom loudspeaker array system that's not only lighter than most other systems, but also easy to use, easy to rig, and easy to maintain.

The loudspeakers were rigged using customized mounting brackets; with the exact loudspeaker placements being finalized only after a detailed analysis of the available space was carried out, which involved commissioning extensive civil work at the venue.

Atul Tripathi of Fine Arts Solutions reveals, "Bose ArenaMatch is an absolute dream to work with. Not only is it super impressive in its performance value, but also the fact that it is so easy to rig and tune enabled us with the comfort of dealing with the last-minute stresses of commissioning the rehabilitation of the ground surfaces in order to capably support the installation of the loudexperience; with additional reinforcement that was delivered through a pair of FreeSPace DS40SE loudspeakers. Individual zone control and amplification was achieved through the use of Bose Professional's acclaimed Power-Match PM8500 power amplifier and FreeSpace IZA250LZ zone amplifier along with total loudspeaker system processing and control achieved through the ControlSpace ESP880A engineered sound processor.

The Result

The Bose Professional audio solution installed at the Amar Chakra section of the NWM has worked splendidly in meeting the client's expectation of attaining high-quality world-class sound experience through a cost-efficient system that delivers comprehensive audio coverage through the use of fewer modules.

Col Digvijay Singh Basera, VSM** (Now Brigadier) professed, "From the onset, we knew we would need a sound system that could do justice to the sentiment of purity and sanctity

Technical Information

Loudspeakers:	4 X ArenaMatch AM40
	4 X ArenaMatch AM20
	2 X FreeSPace DS40SE
Amplifier:	PowerMatch 8500 power
	FreeSpace IZA250LZ zone
Control:	ControlSpace ESP880A

ous choice for us to partner with them. We're very pleased with our decision to have Bose as our sound partner – not only has the system met all our expectations, but it has continued to amaze us with its performance value with each passing day."

Vibhor Khanna of Bose Professional (India) shares, "The new ArenaMatch series represents Bose Professional's evolution in bringing our patented DeltaQ technology to outdoor install applications. The ArenaMatch DeltaQ modules accentuates unique design philosophy and an extraordinary set of features that empower SIs and system designers with the capacity to conceive easy to assemble outdoor





Vibhor Khanna – Country Manager SAARC, Bose Professional

speakers. It feels great to have positive feedback from the management at the National War Memorial about the performance of their new Bose Arena-Match system. We couldn't be more pleased."

Components Used

The Amar Chakra section of the National War Memorial was commissioned with a total of four units each of the ArenaMatch AM40 loudspeakers and ArenaMatch AM20 loudspeakers that were placed strategically across the space to ensure optimized intelligibility and even distribution of sound coverage with consistent tonal

that the memorial service at the Amar Chakra represents And we were left impressed with the performance of the Bose Professional system since the first time we heard it when M/s Fine Arts Solutions provided offered a demo of the system on-site. The sound experience was sublime indeed; and we were also acquainted with how easy it is to use and maintain the system. Plus, the decorum, attention to detail and timeliness displayed by the team at M/s Fine Arts Solutions and by Bose Professional's official representatives in presenting the preliminary sound system designs and for our project and quick resolutions to all our queries, made it an obviloudspeaker arrays that assure consistent, intelligible sound for outdoor installation venues of all types. And it is amazing to know of the great results that Atul and his team at Fine Arts Solutions have managed to achieve with the ArenaMatch system at the National War Memorial. It is a privilege for Bose Professional to be chosen as the preferred audio solution for such an esteemed project; and we thank the management at the National War Memorial and the Fine Arts Solutions team for investing their faith and belief in our path-breaking products, technologies and extended capabilities."

SENNHEISER COLLABORATES WITH MEGHDEEP BOSE FOR NEUMANN HOME STUDIO ACADEMY INDIA SERIES

German audio giant, **Sennheiser** has announced collaboration with renowned music producer, composer, arranger, and singer Meghdeep Bose, for creating **Neumann Home Studio Academy** India edition series. Meghdeep Bose is known for the songs such as 'Swag se Swagat,' 'Slow Motion,' 'Kaun-Tujhe,' and 'Dus Bahane.' His work on 'Bol Do Na Zara' has won him the Indian Recording Arts Academy Awards in 2017.

The Neumann Home Studio Academy offers high-quality tutorial videos on various aspects of recording via a dedicated website and an associated YouTube channel. The videos, which have met with an extremely positive response in recent years, are often described by viewers as being the best in this field. Now, Neumann has launched new India edition in collaboration with Meghdeep Bose- offering best practice insights on how to record the beats produced by typical Indian instruments -Tabla and Sarangi by using a high-quality Neumann microphone.

In the first of the 3-part video series of the home studio recording, Meghdeep Bose introduced viewers to the basic recording techniques of Indian instruments. As part of the video, he deep dived into the history of Indian classical music, nuances of Tabla and Sarangi, and a brief history of these instruments and where they originated from.

The second part of the series focussed on how people can position their Neumann microphones accurately for the best sound quality output, and how the tone changes with the different settings of these mics. With the help

of microphones such as the legendary **Neumann TLM 102** or **TLM 103**, people can set up the home studio recording like a pro and even the slightest sounds of the instruments can be captured by these microphones.

In the third and the final part of the video, Meghdeep Bose introduced various microphone techniques that can be leveraged using Neumann microphones. The video further details out the difference in the sound of the instruments by using various miking techniques.

According to **Vipin Pungalia**, Director, Professional Segment, Sennheiser India, "We are very excited to collaborate with Meghdeep Bose and this is a remarkable moment of great pride and honour for us. We believe that Sennheiser



Meghdeep Bose, Neumann Home Academy Studio India Edition-2

has always aimed to create unique experiences for its audience. When we collaborate with such renowned artists in the country, we feel immense joy and pride in saying that we are doing something fruitful and providing a meaningful contribution to the professionals and the budding artists across the country. Sennheiser comes with a rich 75-year history, and always committed to creating products which help the future of the audio industry evolve. I would sincerely like to thank Meghdeep for being with us through this journey and for his contribution in teaching the nuances of setting up the home studio which is guite essential in this new normal."

"I've always believed that quality

education is the most crucial and concrete step towards success and growth in any area and I consider it to be a great honour & privilege to have been chosen for one such educational venture. I would sincerely like to thank Sennheiser and Neumann for making me a part of the Neumann Home Studio Series' Franchise's Indian Edition. It was truly an enriching experience as we were able to engage with the new generation in whose hands lies the future of the music industry. I look forward to creating more such enriching videos and contribute my learnings to the Music Industry and the budding professionals," said Meghdeep Bose.

AUDIO-TECHNICA RELEASES LIMITED-EDITION AT2020V AND AT2020USB+V CARDIOID CONDENSER MICROPHONE

Audio-Technica, recently announced two limited-edition iterations of its acclaimed AT2020 Cardioid Condenser Microphone featuring a reflective silver finish: the AT2020V (standard) and the AT2020USB+V (USB model). The visually striking finish is meant not only to celebrate the mic's clear, natural sound quality, but to mirror the creative force of its user, making these mics ideal for YouTubers, live streamers and other content creators.

These rugged side-address condensers are equipped with low-mass diaphragms custom-engineered for extended frequency response and superior transient response. The mics' cardioid polar pattern reduces pickup of sounds from the sides and rear, improving isolation of desired sound source. All models in the AT2020 mic line – the price/performance standard in side-address studio condenser microphone technology offer a wide dynamic range and handle high SPLs with ease. Both of the limited-edition V models come with AT8458a shock mounts to attenuate any noise, shock, or

vibration transmitted through a mic stand, boom, or mount.

The AT2020V is ideal for vocal pickup in home-studio applications and features an analog XLR output for easy connection to a digital converter or mixer. The AT2020USB+V, perfect for podcasting, streaming, home studio recording, and voiceover use, gives you the power to present your vision with the convenience of plug-and-play USB operation. The AT2020USB+V features a built-in high-output headphone amplifier with volume control that allows direct monitoring of the microphone signal with no delay. It also offers a mix control that blends microphone and pre-recorded audio. The microphone's A/D converter (16-bit, 44.1/48 kHz sampling rate) ensures extremely articulate sound reproduction. A 10-foot (3.1 m) USB cable is included.

HARMAN PROFESSIONAL LAUNCHES NANO SERIES: USB AND BLUETOOTH ENABLED MIX-ERS BY SOUNDCRAFT

HARMAN Professional Solutions have announced new Soundcraft Nano Series compact mixers for India.

The new compact mixers deliver legendary Soundcraft performance for home-studio workstations, small PA systems, retail stores, small live-music venues and more.

Available in four models, the Nano M08BT, Nano M12BT, Nano M16 and Nano M24 mixers support a wide range of sources, including microphones, musical instruments, digital playback, recording and more. In addition to versatile compatibility, the mixers feature playback and recording from a USB flash drive, simple Mac and PC connectivity via USB and physical vertical faders, for easy level control and operation.

"As leaders in the professional audio, we understand that there is an evolving need for products that are agile and cater to various requirements. The excellent performance of Soundcraft Nano Series Mixers will satisfy users' multiple tuning needs at a time when consumers are looking for quality and versatility in professional products" said Aditya Todi, Senior Director - Sales and Marketing, HARMAN Professional Solutions, India and SAARC. "With the incoming festive season, these mixers will be ideal companions to small gatherings, homes studios, retail and many such venues and occasions."

The M16 (16 channels) and M24

Nano M08BT

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Nano M16

(24 channels) represent a new level of design, quality and performance. Nano Series M16 and M24 multi-channel analog mixing consoles inherit legendary SOUNDCRAFT craftsmanship and are designed to meet various application requirements from live performances, to studio recordings and fixed installations. The M16 and M24 mixers have a built-in USB player, support MP3 format audio file playback and recording storage. They are upgraded with durable steel, and all interfaces are made of professional-grade metal. The body is compact and lightweight, and Nano M12BT



Nano M24

flash drive.

the appearance is dynamic and stylish. In addition to supporting traditional sound sources such as microphones and musical instruments, Nano M12BT supports Bluetooth-enabled digital playback devices, such as mobile phones, tablets, Macs, and PCs. The mixer also has USB playback and recording functions, allowing to play the supported tracks in the USB flash drive or record and store directly to the USB

When used at home or in a recording studio, the integrated USB audio interface of Nano M12BT and Nano M08BT can work seamlessly with Mac and PC, making it easy for you to use commonly used audio production software to easily record, edit and play audio. Nano M12BT and Nano M08BT have flexible input and connection options, a built-in compressor

that can provide excellent sound, a sound effect processor and vertical channel faders, etc., suitable for various application scenarios, including live performances, studio recording and fixed installations.

The all new range of Soundcraft Nano Series Mixers are available at select offline dealers that

are HARMAN Professional Authorized. Soundcraft Nano M16 and M24 are exclusively available with Pro Audio Vision and Marqbac LLP respectively.

Details below:

Marqbac LLP: House No-25, Madhabdevpur, Rehabari, Guwahati-781008, Assam. (*Contact details:* calvin@ marqbac.com, 9007640407)

Pro Audio Vision: Shop No:3, Sona Arcade, Ground Floor, Opp.PassPort Office, Railway Station Road, Secunderbad- 500003. (*Contact Details*: proaudiovision@gmail.com. 9959433319, 040-27843319)

D&B AUDIOTECHNIK ANNOUNCES NEW FLUSH MOUNTABLE, HIGH-PERFORMANCE, FLEXIBLE 44S LOUDSPEAKER

German audio technology and solution company **d&b audiotechnik** has announced the introduction of an innovative new addition to the company's extensive product repertoire, the **44S loudspeaker**. The 44S is d&b's first ever flush mountable cabinet, delivering compact, high performance audio and a wide range of flexible mounting options.

"For audio professionals who may be challenged by dimensions, architecture, or aesthetics, the 44S loudspeaker is a powerful, compact, flush-mountable loudspeaker that provides the sound needed, no matter what space they have to work with," comments **Wolfgang Schulz**, d&b product manager. "It's a very compact point source loudspeaker for flexible use in nearfield applications, and there is a big need in our industry for this type of form factor."

An intelligent waveguide and baffle design creates a very smooth horizontal dispersion down to the lower frequencies while being tightly focused vertically. The 90° x 30° dispersion pattern keeps sound directed exactly where it

keeps sound directed exactly where it should be. The asymmetric cabinet design and the optional back box supplies addi-

the optional back box supplies additional flexibility that allows adjustments of +/- 20° in 5° increments, accommodating different listening heights. A rotatable waveguide extends this to both



horizontal and vertical positioning.

Paired with the 10D or 30D installation amplifiers the 44S claims an exceptionally high performance to size ratio providing a powerful 121dB and123dB output, respectively.

"We at d&b are very proud to

showcase our ongoing commitment to the installation market with the launch of this new product", comments Schulz. "At a time when the market is challenged more than ever, it is important for us to bring flexible, multi-function solutions to the industry."

The two-way passive loudspeaker cabinet measures just 128 x 390 x 150mm (5 x 15.3 x 5.9-inch) in size and houses 2 x 4.5" neodymium LF drivers and 2 x 1.25" HF dome tweeters, delivering a frequency response of between 90Hz – 17kHz.

PRISM SOUND APPOINTS TRIMAC PRODUCTS AS INDIAN DISTRIBUTOR

India's pro audio community can now access **Prism Sound's** high-quality range of converters and audio interfaces through **Trimac Products Private Limited**, a leading audio company with offices in Delhi, Mumbai, Kolkata and Chennai.

With over 400 channel partners and representation for more than 20 pro audio brands, Trimac is ideally placed to bring the benefits of Prism Sound technology to the Indian market.

Pankaj Kumar (pictured), Trimac's Chief Operating Officer, says: "Prism Sound's products complement the products we already distribute and are a valuable and marketable addition to our roster. We are delighted to be able to offer this high-end solution to our customers, many of whom are professional studios and hobbyist musicians. We also have customers in the education sector and we look forward to introducing them to the Prism Sound range."

Alongside its sales business Trimac, in association with its channel partners, is also involved in studio design and installation. The company has a strong reputation for customer service and support and prides itself on providing efficient and reliable marketing services to the local dealers it works with.

"As a brand, Prism Sound is well known in among Indian pro audio professionals, but we feel there is still plenty of support we can give the brand, particularly in terms of bringing its products to the attention of the younger generation of producers, which is an area where we have good contacts," Kumar says.

Mark Evans, Prism Sound's Sales Director, adds: "We are very pleased to welcome Trimac as our new partner in India and we look forward to working with them in the future. Trimac's excellent reputation across a number of market sectors can only be of benefit to the Prism Sound brand."



CELESTION ANNOUNCES DIY CABINET DESIGN FOR THE F12-X200 GUITAR LOUDSPEAKER

Celestion, the premier manufacturer of guitar and bass loudspeakers and professional audio drivers for sound reinforcement applications, is offering

users a DIY custom cabinet design made specifically for the F12-X200 loudspeaker. The F12-X200 combines Celestion's expertise in guitar speakers and pro audio speakers into one transducer that has the benefits of both. It is the first speaker designed especially for use with profiling amps, modeling software, impulse responses, and all technology for emulating coveted guitar amps and speaker cabinets, and delivers full range frequency response combined with the live feel of a guitar speaker.

The F12-X200 is a coaxial speaker that delivers a frequency response from 60Hz all the way up to 20kHz. The higher frequency part of the signal is reproduced using a Celestion compression driver that has



been integrated using a high-quality crossover circuit, enabling the F12-X200 to reproduce the full spectrum of audible frequencies, for the most accu-

> rate output possible, whatever the playing environment or set-up.

Designed to produce a neutral output, the lighter moving mass and straighter sided cone—of a type commonly used with guitar speakers—still gives the F12- X200 the feel and live response of a traditional guitar speaker. The physicality and tactile response of the speaker is live, as it would be playing through a traditional quitar amp.

The F12-X200 works like any guitar speaker upgrade; it's designed to be "plug and play" so that users can drop it into any regular open or closed back guitar speaker cabinet and be ready to go. Together with amp and profiling hardware a player will get all the tone that they have programmed with little or no additional coloration that would come from a traditional guitar speaker.

Celestion is also offering a custom cabinet design. Specifying 18mm birch plywood for optimum sound quality and ruggedness the DIY cabinet is also vented to further extend the bass, extracting maximum performance from the speaker's full range capability.

While it wouldn't generally be recommended to use a traditional guitar speaker with a vented cabinet which could risk low frequency over-excursion and damage to the speaker's cone, the F12-X200's pro audio parentage means there's no risk of over-excursion at the lowest end of the frequency range.

AUDIO & MUSIC PROFESSIONALS SOCIETY OF INDIA ANNOUNCED AT IRAA 2020

Eminent Sound Engineer Pramod Chandorkar, who is also the Honorary Chairman of the IRAA Awards announced on 11 October at the IRAA Virtual Event platform, the formation of an Independent National Association for all Audio and Music professionals. This will be called as "Audio & Music Professionals Society Of India" (AMPS India). The association's Managing Core Committee will comprise of Eminent Audio And Music Professionals representing all generations.

The Association will bring together and represent Audio Engineers & Music producers, pan India. The association aims to be an umbrella association for the unrepresented Audio & Music Professionals. Now, with the rapid rise of music, film and OTT, we have a large group of freelance professionals from the audio and music business that are left unorganized and so unrecognized. The purpose of the Society is to form a community to collectively address their issues and create a disciplined structure that can also evolve over time.

"We all have been facing real tough times currently, and this is the time when we realised that we have to get organised . Unless we are together, we cannot face tough times and unless we come under one umbrella of an association, our voice won't be heard. It's time that we all come together and stand tall as a community, so that we can face the future challenges head on," said Pramod Chandorkar. "The details of this association and its membership will be soon made available to all of you."

STUDIO TECHNOLOGIES REDEFINES QUALITY AND FLEXIBILITY IN NEW ANNOUNCER'S CONSOLES

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Studio Technologies has launched a new series of Announcer's Consoles with DanteAudio-over-IP connectivity, superior audio quality, and a flexible set of features that supports a wide range of live commentary and related applications. The new line of Announcers Consoles includes three products - the Model 232, Model 234, and Model 236. All feature a "pro quality" microphone input circuit, Dante and analog output channels, plus two, four, or six talkback inputs and outputs. Each unit can be easily incorporated into a Dante- or AES67-based network and is compatible with the Dante Domain Manager (DDM) application.

"We designed these units such that they can be used as part of just about any on-air or live-event commentary application," says **Gordon Kapes**, President of Studio Technologies. "In addition to their terrific sonic performance, we builtin an incredible number of options that let their performance be easily



optimized. We've also included some unique, specialized features so they will work very well in REMI/At-home applications."

The unit's high-performance microphone preamplifier features selectable gain over a range of 20- to 65-dB with available P48 phantom power. For flexibility, an external source of audio, arriving by way of a Dante receiver (input) channel, can be used instead of the microphone input. This allows devices, such as wireless microphones, to be directly supported. A Dante transmitter (output) channel is provided as the main or "on-air" output. In addition, an analog microphone-level output is available to allow the unit to be integrated with analog inputs on audio consoles or remote I/O interfaces.

A stereo headphone output and associated rotary controls allows a user to create their own monitor mix. Each unit provides two Dante receiver (input) channels, typically used for their program or talent cue (IFB) input sources. In addition, each talkback channel has a Dante receiver (input) channel associated with it. This allows a Model 236 user to create an individual headphone mix from up eight audio inputs channels. In addition, a sidetone function provides the user with a microphone confidence signal. The unit is housed in a compact, rugged enclosure and provides all the resources required by one announcer or commentator. Two spare connector locations are available on the back panel, allowing installer-implemented options to be created. By simply adding an XLR connector the unit's remote-control inputs and low-voltage DC tally output can be utilized.

The Studio Technologies' STController software application is used to configure the capabilities of the Model 232, Model 234, and Model 236. Configuration choices can be viewed and changed in "real time," as well being saved and recalled as desired.

WHARFEDALE PRO 'I-SERIES' NOW SHIPPING

Wharfedale Pro is now shipping their new 'i-series' of installation loud-speakers.

Designed specifically for small to medium scale commercial installations, the 'i-series' is made up of 3 ABS plastic models (4", 6.5" and 8"). Each model is available in a 70v/100v or in a 8 Ω low impedance configuration.

All i-series loudspeakers are IP54 Certified, which makes them suitable for installation into extreme environments where excess moisture or dust ingress are a risk. A full-face aluminium front grille also gives solid protection against any physical impact damage.

All models are supplied with fully adjustable steel wall mounting brackets. Internally, the i-series use a two-way design with a 1.0" silk dome tweeter and custom Wharfedale Pro 4", 6.5" or 8" low frequency drivers.



This combination results in a natural sounding speaker that suits both

pre-recorded music playback or voice applications.

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WAVES NOW SHIPPING THE KALEIDOSCOPES PLUGIN

Waves Audio is now shipping the Kaleidoscopes plugin.

Waves Kaleidoscopes is a super-suite of inspiring Phaser, Flanger, Chorus and Tremolo sounds, crafted from the best analog modulation studio classics. The plugin's unique Dual Cascade engines enable users to combine or "cascade" any two effects for magical textures. The plugin also features intelligent triggers that respond dynamically to their playing in real time.

Waves has handpicked all-time-favorite analog effects from legendary eras – '60s phasing and tape flanging, '70s stadium tremolo-guitar vibes, '80s chorus – instilling the truest analog tones into Kaleidoscopes' DNA.

Furthermore, Kaleidoscopes' Dual Cascade architecture gives users two FX engines, which users can "cascade" serially into one another for unique effects or, alternatively, run in parallel for super-wide soundscapes. On each of the two engines, users can choose a selection of waveshapes or any sidechain signal from their DAW session to be the modulation input. They can even select their performance as the input, allowing their live playing to control the sound in real time and drive the pulsing of the effect.

Users can control the Speed, Resonance, Width and Depth of the modulation, plus filter settings and mix knobs for extreme versatility. They can also choose from five different effect "characters" for different analog flavors, and tempo-sync the modulation effect to their DAW session to keep things consistent every time they re-open their song.

Since Waves built this plugin for musicians, producers and engineers, there is an added THRU mode for that much-loved stompbox sound, with the dry signal on one channel and the wet signal on the other.

With its innovative Trigger section,



Waves' Kaleidoscopes plugin becomes an extension of users playing. By setting input-sensitive envelopes and adjusting intelligent triggers, users enable the two effects to "listen" to their playing and respond dynamically, expressing nuances of emotion and feel. With this section activated, Kaleidoscopes becomes a personalized musical instrument, modifying its character in real time based on how intensely or lightly, fast or slow users sing or play.

Kaleidoscopes is included in Waves' Mercury, Pro Show and SD7 Pro Show bundles.

IZOTOPE RELEASES RX 8 AND ANNOUNCES UPDATES TO FLAGSHIP SUITES

iZotope Inc., has released RX 8, the latest update to its flagship audio repair and enhancement software, as well as launched RX Post Production Suite 5. Additionally, iZotope announced that Music Production Suite 4 will be coming this fall.

Its newest version is a complete toolkit for audio cleanup and restoration needs at any level, from content creators to music producers to post production professionals. The two-time Engineering Emmy Award-winning RX Advanced allows audio professionals greater audio fidelity, whether repairing streamed dialogue with new features like Spectral Recovery or correcting pitch modulation with Wow & Flutter. The Batch Processor and Loudness Control have also been revamped, saving users precious time when they are repairing or delivering audio files.

New RX 8 Standard features allow



musicians to instantly adjust guitar recordings with Guitar De-noise, to rebalance their mix and create or isolate stems with the improved Music Rebalance, and to prep music for streaming with the updated Loudness Control. Both the standalone audio editor and the included plug-ins allow users to surgically fix audio problems and music performances with RX 8.

The new RX Elements is a budget-friendly noise reduction and audio repair tool for small home studios that need the basics. It includes a standalone audio editor with spectral editing as well as four essential, real-time noise reduction plug-ins to fix clipping, hums, clicks and other unwanted background noise, like amp hiss or air conditioner noise. Its Repair Assistant continues to use the digital signal processing in RX Elements to analyze your audio and provide solutions to common audio issues.

"Since we first released our flagship RX product, additional years of research and innovation in machine learning have allowed us to continue to provide the industry with timely solutions to audio repair issues that were previously impossible," said iZotope Principal Product Manager **Mike Rozett**. "Our latest edition of RX continues this tradition with new features such as Spectral Recovery, Guitar De-noise and Wow & Flutter, all designed to help people solve the unsolvable in audio."

iZotope has also released RX Post Production Suite 5, which features its most powerful tools for post production, including RX 8 Advanced, Dialogue Match, Neutron 3 Advanced, Nectar 3 (with Melodyne 5 essential), Insight 2, RX Loudness Control, Relay, Symphony 3D and Stratus 3D by Exponential Audio, and Tonal Balance Control 2, plus a one year all-access pass to Groove 3, a video training tool.

In addition, Music Production Suite 4 will release this fall, which will include RX 8 Standard, Ozone 9 Advanced, Neutron 3 Advanced, Nectar 3 (with Melodyne 5 essential), Insight 2, NIMBUS by Exponential Audio, and Tonal Balance Control 2. Those that have purchased Music Production Suite 3 after September 2, 2020 will receive a free upgrade to Music Production Suite 4. **Review: IRAA Awards 2020**



IRAA 2020 Recording Arts Awards a huge success

Winners across 42 categories at India's only technical excellence award for the sound recording industry represent the future of the industry setting new standards in sound engineering

Continuing its quest to seek and applaud creativity, commitment and excellence in recording Arts, the **2020 Indian Recording Arts Academy**, awarded the most deserving, for their ingenuity and skill at the 14th edition of the awards. For the first time ever, the IRAA Awards took place in a virtual environment due to the ongoing Covid scenario. Following the suspension of the physical awards in May, the IRAA committee and jury decided to take the much awaited awards online. The event was a huge success as sound engineers and music industry professionals from across India gathered in strength to watch the event, cheer their peers and engage with each other on a virtual platform. **PT** reports his year's virtual Indian Recording Arts Academy (IRAA) awards demonstrated how the best time to go live can be in the midst of turmoil, as on the evening of Sunday, 11th October, 2020 the Indian sound engineering fraternity gathered in strength on their mobile and computer screens to watch the virtual streaming of the 14th edition of the Indian Recording Arts Academy Awards and to celebrate the year's top talent in the studio sound recording and music production domain.





Hosted by Ms. **Kennie Kukreja**, the awards ceremony was streamed simultaneously on the PALM expo Facebook and YouTube channels.

Click on link for Awards Ceremony video

IRAA announced winners across 42 categories at the ceremony. The winners and final nominees represented bold and innovative talent in sound mixing technique and creative sound recording from across the country setting new standards in sound engineering and influencing creation of music content in an ever increasing competitive domain. The winners and final nominees were selected from over **1000+ nominations** received from across India, for movies, soundtracks and albums released between 1 January 2019 and 31 December 2019.

The IRAA 2020 was supported by HARMAN Professional Solutions India, a global leader in studio technology boasting of an extensive catalog of signature products for the studio, from legendary brands.

Leading the Concept and Production of the event were trailblazers in the Virtual Entertainment Events production space in India – **NJSM Studios**, in association with leading talent agency **BNA Talent**, ensuring superlative execution of the award ceremony.

Key Note Address

Anil Chopra, Founder & Chairman of the IRAA awards delivered the keynote address at the IRAA 2020 virtual Awards ceremony.

Speaking on the occasion, he said that the fraternity of sound engineers in India doing great work has been exploding each year and that the IRAA awards was a tribute to all the sound engineers who believed in their art. He thanked the sound engineers for diligently sending in their work for consideration. "The 14th IRAA awards received the largest number of nominations ever! We have crossed the figure of 1000 nominations and I'm happy to see dedicated sound engineers who believe in their work and have nominated themselves. I'm truly happy to see that the nominations are growing from year to year." he said.

He also thanked all the august Jury members and said, "Ever since the IRAA put together a jury under the Vice-Chairmanship of Pramod, the awards have become a matter of great pride for the PALM expo. IRAA is deeply indebted to the Jury for their time and extremely conscientious work. The level of sincerity in choosing the winner

⁶⁶ IRAA is going to grow exponentially and we are targeting 1 lakh members.
ANIL CHOPRA, Founder & Chairman, IRAA

and the level of process that they have followed is truly amazing."

Click on link for list of esteemed 12 member Jury

In his keynote address Anil Chopra emphasized on two key points – 1. His disappointment on the absence of legitimate film awards platform and 2. His vision and mission that recording arts be treated as an Art.

"It is a very big shame that the film industry in India has not gathered together under an umbrella to form an academy with valid members and valid voting. They have failed to put up a legitimate platform which we can showcase to the world," he said. "IRAA is the only awards in India that is process

> driven with valid jury that can stand for the awards and it's the process that matters. The IRAA is a leader and we are playing a leadership role here. There should be attention to these awards from the film industry and brethren sound engineers across the world," he added.

> Talking about his campaign, which he started at the 2019 IRAA awards he said, "I have a vision and

I have a mission. I have created three logos. The vision and mission is that recording is an art. I propose that the man who has the credit of the final mix and who puts all the sounds together should get the royalty just like the composer and the lyricist. In a recording, the myriad sound and the placement of the sound gives the composition meaning. It gives the compose meaning and the lyrics meaning." He urged all the recording engineers in the country to use the logos (see adjoining box) in collateral and social media.

He ended his keynote address by ex-



⁶⁶ This ceremony is a celebration for all audio and music professionals. The respect and acceptance for IRAA has grown rapidly, thanks to each and every one of you who have had faith in the jury. **99**

> PRAMOD CHANDORKAR, Honorary Chairman, IRAA 2020

pressing his gratitude to the event's sponsors – HARMAN Professional Solutions, India. "This platform has a reputation for being clean and so HARMAN has associated this year and I hope this association continues for a long time to come," he said.

He also commended NJSM and BNA Talent for outstanding execution of the awards ceremony.

Click on link for full video of Anil Chopra's Keynote Address

Neutral, Independent forum with focus on technical excellence

The IRAA stands out distinctly from other film awards because of the

⁶⁶From the post production segment we had a lot of very interesting entries and we listened through everything. The reason was that it had to be a complete and fair judgment. **99**

> SREEJESH NAIR, IRAA 2020 Jury member

The focus on technical excellence rather than subjective opinions, budget or commercial success of the tracks and movies was pertinently summarized by **Sreejesh Nair** who was one of the juries winners and final contenders

Click on link for list of winners

Inclusion of important sound categories

Also unique to IRRA is the inclusion of categories like Sound Mixing for Advertisement and other fields of sound engineering art that are crucial to the recording and music production industry. These include Sound Editor (Effects & Ambience), Foley Artist and Foley **Engineers and Dialogue Editors** and ADR Engineers across streams which include Films, Documentaries and Short Films. In the last couple of years, with the objective of recognizing the regional music industry, the IRAA awards instituted 'Regional Awards' in the Audio Engineering,

Audio Post Production and Music



IRAA Founder Anil Chopra's Vision and Mission for the Sound Engineering Fraternity

award's focus on technical excellence. The jury was tasked with assessing a great variety of different content from all over the country. The diversity and skill on display, demonstrated fantastically a growing dedication to the art. The jury was looking for brilliance in the art based on several assessment criteria, from which the jury drew up the shortlist for the 42 different categories.

Click on link for assessment process blue print

IRAA prides itself on the validity of the awards, with winners being selected solely on merit.

In his address to the audience, Honorary Chairman **Pramod Chandorkar** said, "It gives me immense pleasure and satisfaction to see you all through this virtual event. This ceremony is a celebration for all audio and music professionals. The respect and acceptance for IRAA has grown rapidly, thanks to each and every one of you who have had faith in the jury."

Click on link for full video of Pramod Chandorkar's message judging the post production section for IRAA. In his message to the virtual audience he said "This is one of the most stringent and most comprehen-

sive juries I have been on. Since this is probably one of the only awards for sound engineers by sound engineers, the entire judgment is extremely stringent. For instance, if any of the jury members has their entry in a particular section, then that iury member steps out of the whole discussion and he's not part of that decision making process at all. If there were entries in categories which were not up to the mark, there were no awards in those categories. We have taken a critical approach to these awards so these awards for me personally carry a huge weight and a huge amount of respect.

The credibility and appropriateness of the methods used to measure the outcomes was evident in the winning list. To learn more about our award Production segments to honour talent outside Mumbai. This year witnessed an increase in the number of nominations received in all these categories.

⁶⁶ Many entries this year have been filed under the wrong categories. Please choose the category that is best suited for your production. While we are happy to fight over a half mark for the quality of work, please try not to give us a hard time by miscategorization. **99**

> MUJEEB DADARKAR, IRAA 2020 Jury member

The Virtual Awards Ceremony

The ceremony kicked off with a message from **Aditya Todi**, Senior Director of Sales and Marketing, HARMAN Professional Solutions, India and SAARC, wherein Todi reinforced HARAMAN's commitment to the prestigious IRAA platform and reiterated the philosophy of the global leader in audio innovation to recognize recording talent and supporting engineers.

Click on link for video of Aditya Todi's message

The awards were segregated into three main segments - Audio Engineering, Audio Post Production and Music Production, with the winners in Audio Engineering Segment being announced first.

Mujeeb Dadarkar who was on the Audio Engineering assessment panel addressed the audience and voiced some concerns with regards to the nominations and appealed to the sound engineers to make note of it. "I'm happy to say that this year's entries have been the most ever, but on behalf of the jury, I would like to express some concerns. Many entries this year have been filed under the wrong categories. Please choose the category that is best suited for your production. While we are happy to fight over a half mark for the quality of work, please try not to give us a hard time by miscategorization," he said. He went on to appreciate the independent music community and urged the independent music producers to also nominate their tracks in audio engineering. "This year a lot of independent material has stood out against mainstream feature film productions. Kudos to all you indie guys! A lot of

entries in the music production categories would have qualified for entry in the engineering categories as well. Unfortunately they were not entered there. May I remind you that anyone can file a nomination. So a music producer can nominate his entry in the appropriate sound engineering category as well. So please do it next time," he said

Click on link for full video of Mujeeb Dadarkar's message

The Audio Engineering awards were followed by the Audio Post awards. Elaborating on the assessment process for this segment Sreejesh Nair said, "When we were judging entries in postproduction, factors like compression, distortion pan⁶⁶ IRAA AWARDS 2020 is the finest technical & only platform for technicians in sound engineering, designing and music production and I request for more entries next year with outstanding creative work. 99

> YOGESH PRADHAN, IRAA 2020 Award Director

ning correction, reverb matches dialog tonality, foley tonality etc. were all taken into consideration."

He explained how the assessment process involved a lot of discussion and debates for deciding the winner. "It's a very comprehensive process

Concept and Production by



and it's very important to understand how good a mix is. Some of the mixes are completely out of the box in terms of their design, thinking and approach and it's very important that we as members also understand and discuss if that was a creative decision or not. We were also debating about a db level of changes - whether it was creative or a mistake. whether it was unintentional, how well the dialogs are matched between scenes of the same location, what were the reverbs, what was the context of those reverbs. From the post production segment we had a lot of very interesting entries and we

listened through everything. The reason was that it had to be a complete and fair judgment. We cannot assume the quality of any work by looking at a portion of it. We even loudness matched each one of these except for the streaming ones because the streaming





Vijay Benegal was announced as Award Director for IRAA 2021

ones were already loudness matched just so that we were not influenced by the levels," he elucidated. "There are not a lot of award that go into this detail of judgment," he added.

Click on link for full video of Sreejesh Nair's message

The ceremony concluded with the Music Production awards. IRAA 2020 Awards Director **Yogesh Pradhan** congratulated all the nominees and winners. "Every year it is getting competitive and challenging and I congratulate all the nominees and winners who have showcased outstanding work in every genre. IRAA AWARDS 2020 is the finest technical & only platform for technicians in sound engineering, designing and music production and I request for more entries next year with outstanding creative work." He also thanked the jury members for devoting their precious and valuable time for assessment and appreciated the vision of founding Chairman Anil Chopra and efforts of the IRAA team.

As a part of IRAA tradition of announcing the Award Director for the forthcoming year, Pramod Chandorkar announced Mr. **Vijay Bengal** as the Award Director for the IRAA 2021.

Due to the Virtual nature of the event and the inability to present the awards physically, as a mark of respect, the India Recording Arts Academy did not announce any Lifetime Achievement Awards as these awards are intended to honour leaders who have made significant contributions to the sound recording and music industry in India.

ABC in the house

The IRAA 2020 also featured a special performances by **Anand Bhaskar Collective**, a band that has rapidly became a favourite amongst independent rock and Hindi-rock consumers in India. Band members comprising **Shishir Tao** (on drums), **Neelkant Patel** (on Bass), **Hrishi Giridhar** (on Guitar), **Ajay Jayanthi** (on violin) and of course **Anand Bhaskar** (vocals) delivered power packed performances on a number of their tracks from their albums like Samsara, Ufaq and others, which were very well received and appreciated by the online audience.

Band Performance can be accessed on https://youtu.be/FdiR7wm5n5U?t=2373 https://youtu.be/FdiR7wm5n5U?t=3978 https://youtu.be/FdiR7wm5n5U?t=6601

Please visit www.iraa.in for the videos and for more information about the awards. You can also follow the posts published on Facebook, Instagram and YouTube.



Anand Bhaskar Collective rocks the IRAA 2020 Virtual stage. Pic Courtesy: Suraj Uchil

IRAA Awards 2020 List of Nominees and Winners

Au	ıdio Engineering	14 th edition
INDEPENDENT SONG RECORDING & MIXING		$\frac{1}{R} = \frac{1}{R} = \frac{1}$
Winner Aftab Khan	 Ocean Rain, Ocean Rain by Shashaa Tirupathi 	A A A A ARTS ACADEMU AUIARDS
Onkar Tarkase Malay Vadalkar	Baawri, AmritaanshMadeline, My Place to you	SOUND MIXING FOR ADVERTISEMENT
CLASSICAL RECORD	ING & MIXING	Tilak Goswami – Maruti Suzuki Limitless
MT Aditya Srinvasan	 Varnam Song 1, Sandeep Narayan Madrasana Headphone concert series live 	Russel Issac Stephen–Khwaishein Morris GarrageNinad Lad–Hero motors - The prophecy
Winner Abin Paul	 Sees gang bhasm ang, Karuna Nidhaan by Abhradita Banerjee 	Music Production
INSTRUMENTAL & F	USION RECORDING & MIXING	MUSIC PRODUCER – HINDI FILM SONG
Varkey	 Stories of Love - Kerala, Stories of Love - Kerala 	Arunvijay– Titiliyon Sa, PraanaMeghdeep Bose– Saugandh Mujhe Is Mitti Ki, PM Narendra
Winner Ishit Kuberkar Shamik Guha Roy	 May I, Chango Tales Paper Boats, Paper Boats 	Modi Winner Sunny M.R., Arijit Singh,
	& MIXING – HINDI FILM	Dj Phukan, Jim Satya & Prasad Sashte – Kalank (Title Track), Kalank
Eric Pillai, Ashish Manc Aman Moroney	– Chashni, Bharat	MUSIC PRODUCER – NON-FILM
Winner Shadab Rayeen	– Kaise Hua, Kabir Singh	Dhi Harmony – Life, 2 Pi Pravin Saivi – Kaathaley (Single)
Nakul Kamte & Vrikpal Singh Khambay	- Meri Gully Mei, Gully Boy	Winner Vivek Thomas – Khoj (Passing By), When Chai Met Toast
	y – Asli Hip Hop, Gully Boy	MUSIC PRODUCER – REGIONAL FILM SONG
	& MIXING – REGIONAL FILM	Winner
Winner		Abhillash Lakra – Hosatalla Ninna Parichaya, FAN
MT Aditya Sinivasan Shadab Rayeen Sujith Hydher Thaha	 Enda Poovum, Unarvu Nuvvu Naatho, Disco Raja Nee Himamazhayayi, Edakkad Battalion 06 	Adil Nadaf – Neenene Neenene; Kapatanataka Patradhaari
	& MIXING WEB SERIES	Lokesh Kanithi – Kaalo Ma Kaalo, Nimtoh (Invitation)
Farhad K DadyBurjor	 Mayanagari, City of Dreams 	
Winner		Aniruddh & Mikhail Marak – Yaar Tu Mera, Thinkistan
Ninad Lad Shadab Rayeen	 Abhi Abhi - Arijit Datta, Hey Prabhu Shaamein, Broken But Beautiful Season 2 	WinnerNilotpal Bora– Ishq Ka Haafiz, TRIPLING - SEASON 2Simran Hora– Gullak - Title Track, Gullak

• 🛞

Audio Post Production

DIALOGUE EDITOR / ADR ENGINEER – HINDI FILM

Winner

Harsh Bhadesiya &

Ashutosh Walkar	– Aladdin (Hindi)
Shrikant Yeligeti	– The Lion King (I
Bulganin Baruah	– Super 30

ion King (Hindi) 30

DIALOGUE EDITOR / ADR ENGINEER FOR REGIONAL FILM

Winner

Hamza Daginawala	– Chasani
Boby John	– Kumbalangi Nights
Baylon Fonseca, Manavendra Mali	– Noblemen

DIALOGUE EDITOR/ADR ENGINEER FOR WEB SERIES - HINDI

Winner

Pranit Purao	 Cubicles 	
Sudeepta Sadhukhan	– Gullak	
Sachidanand Tikam	– Hostel Daze	

DIALOGUE EDITOR / ADR ENGINEER FOR DOCUMENTARIES

Winner

Sreejesh Nair	-	A few sound Men
Baylon Fonseca	_	Broken Gods
Ashutosh Walkar & Gaurav Tawade	-	The Elephant Queen

Dialogue Editor / ADR Engineer for Short Films

Winner

Baylon Fonseca - Gubbarey

FOLEY ARTIST FOR SHORT FILMS

Winner Karan Arjun Singh, Ram Nath – Gubbarey

FOLEY ARTIST - HINDI FILM

Winner

Sultan Ibrahim, Jagadeesh & Khadar Baasha – Gully Boy Girish Singh – Blank

FOLEY ARTIST - REGIONAL FILM

Winner Mohammad Iqbal – Mamangam Kumar Maarthaandam – Kumbalangi Nights Mohammad Iqbal – Jallikattu Karan Arjun Singh, Shankar Singh, Anil Pawar, Ram Kishan Nath

- Noblemen

FOLEY ARTIST – WEB SERIES

Winner

Raashid Khan /	
Rahul Kunkerkar	– Made In Heaven, Episode 3
Mohammad Iqbal	- BARD OF BLOOD

FOLEY ENGINEER, HINDI FILM

Winner

Vijay Rathinam & - Gully Boy Sreesan G Ram Nath & Joseph Thomas – Blank

FOLEY ENGINEER, REGIONAL FILM

Winner

Dattaprasad Desai	– Jallikattu
Nikhil Lanjekar	– Fatteshikast

FOLEY ENGINEER – WEB SERIES

Winner

Prasad Chavan	-	Made In Heaven, Episode 3
Dattaprasad Desai	-	Bard of blood

SOUND DESIGNER – HINDI FILM

Winner

Bishwadeep Chatterjee –	URI: The Surgical Strike
Ayush Ahuja –	Gully Boy
Susmit Bob Nath –	Ghost Stories (Dibakar Banarjee)

SOUND DESIGNER REGIONAL FILM

Winner

Jayadevan Chakkadath) –	Android Kunjappan Ver 5.25
Sampath Alwar	-	Aadai
Debajit Gayan	-	Bornodi Bhotiai

SOUND DESIGNER FOR WEB SERIES – HINDI

Winner

Anmol Bhave	– Hostel Daze
Vivek Sachidanand	– Inside Edge - 2
Shajith Koyeri	 Made In Heaven, Episode - 1

SOUND DESIGNER FOR SHORT FILMS

Winner

Devraj Bhaumik	– Chait
Nakul Anil Talwalkar	- The Breakfast School
Baylon Fonseca	– Gubbarey

SOUND DESIGNER FOR FOREIGN FILMS

Winner

Siddharth Dubey	– Shift
Tummala Abhyuday & Rushik Patel	- DROP
Aravind Vijayakumar, Rhitwik Raj Pathak	– Superstar

SOUND DESIGNER FOR DOCUMENTARIES

Winner

Sreejesh Nair	 A Few Sound Men 	
Baylon Fonseca	– Broken Gods	
Debajit Gayan	– Chiaroscuro	

SOUND EDITOR - EFFECTS & AMBIENCE, HINDI FILM

Winner

Udit Duseja	– Gully Boy
Kingshuk Moran	- URI: THE SURGICAL STRIKE
Imran Shaikh	– Super 30

SOUND EDITOR - EFFECTS & AMBIENCE, REGIONAL FILM

Winner

Renganaath Ravee, Boney M. Joy, Sreejith Sreenivasan – Jallikattu

Ankita Purkayastha	 Nimtoh (Invitation)
Shijomon George	 Kumbalangi Nights
Shijomon George	 Android Kunjappan Ver 5.25

SOUND EDITOR EFFECTS & AMBIENCE FOR WEB SERIES - HINDI

Winner

Kushal Sarda	-	Hostel Daze
Ateesh Chattopadhyay	_	Gullak
Gaurav Shakya	_	Inside Edge - 2

SOUND EDITOR EFFECTS & AMBIENCE FOR DOCUMENTARIES

Winner

Sreejesh Nair	 A few sound Men
Baylon Fonseca	– Bullet
Niranjan Rasane	 Broken Gods

SOUND EDITOR EFFECTS & AMBIENCE FOR SHORT FILMS

Winner

Baylon Fonseca

– Gubbarey

FILM MIXING HINDI FILM

Winner

Debajit Changmai	-	Gully Boy
Koteswara Rao SV	_	Ghost Stories (Dibakar Banarjee)
Rhitwik Raj Pathak	-	Blank

FILM MIXING REGIONAL

Winner

Pranam Pansare	– Anandi Gopal
Sudeepta Sadhukhan	– Nimtoh (Invitation)
Tapas Nayak	– Kumbalangi Nights

WEB SERIES MIXING

Winner

Anmol Bhave	 Hostel Daze
Sudeepta Sadhukhan	– Gullak
Sarath Mohan	 Insdie Edge - 2

SHORT FILMS MIXING

Winner

Jithin Joseph	-	Drunkards of Cana (Kaanayile
		Madhyapanikal)
Subir Das	-	Dristikone - The Perspective
Baylon Fonseca\	-	Gubbarey

DOCUMENTARY MIXING

Winner

Sreejesh Nair	 A Few Sound Men
Baylon Fonseca	– Broken Gods

SYNC SOUND RECORDING - HINDI FILM

Winner

Amala Popuri	-	Kadakh
Gunjan Augustine Sah	_	Gully Boy
Sameer Patra	-	Lukka Chuppi

SYNC SOUND RECORDING – REGIONAL FILM

Winner

Jayadevan Chakkadath –	 Kumbalangi Nights
Ankita Purkayastha –	Nimtoh (Invitation)
Debajit Gayan –	Bornodi Bhotiai

SYNC SOUND RECORDING WEB SERIES - HINDI

Winner

Gunjan Augustine Sah	-	Made in Heaven, Episode 1
Abhishek Tripathi	_	Inside Edge - 2
Ankur Chaudhary	-	Gullak

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HARMAN PROFESSIONAL INDIA LAUNCHES HARMAN TECH-KNOW CHAT SERIES

Showcasing Industry Experts, Marquee Installations and Future Technological Advancements

Through conversations with industry leaders, product demonstrations and much more, **HARMAN TechKnow Chat** shines light on the AV industry's past, present and future.

Creating a new platform where customers can learn from the AV industry's most knowledgeable and accomplished professionals, HAR-MAN TechKnow Chat by HARMAN Professional India is a series of virtual, fireside chats that celebrate key contributors, projects and products across the industry.

In addition to speaking with consultants, integrators and other renowned AV professionals about their journey in the industry, HARMAN TechKnow Chat will include product demonstrations and highlight noteworthy projects and case studies that feature HARMAN Professional's cutting-edge solutions. "HARMAN has been at the forefront

of engineering audio solutions for the professional, consumer and automotive markets for decades," said **Aditya Todi**, Senior Director of Sales and Marketing for HARMAN Professional Solutions, India and SAARC. "Continuing the same pioneering spirit, we're introducing HARMAN TechKnow Chat: a medium to showcase and learn from some of the key experts in the Indian AV industry. Through the HARMAN TechKnow Chat series, you can expect insightful case studies, fireside chats, product demos as well as conversations that you can enjoy and learn from."

Here's a look at some of the upcoming sessions:

Digital Switching and Conference
 Room Audio with Mradul Sharma,

Principal Consultant and Managing Director, 3CDN Workplace Tech Pvt. Ltd

- Entertainment Series Speakers with Sunny Sarid, Principal Consultant and Managing Director, Sound of Music India Pvt. Ltd.
- Architectural Lighting with Kelvin Ashby-King, Principal Consultant & Managing Director, T2 Technology Consulting Pvt. Ltd.
- Case Study Discussion: The DAICEC Installation over SVSi with Vineet Singh, Managing Director, HMPL Consulting Pvt. Ltd.

To equip the sessions with crystal-clear sound and treat viewers to an engaging experience, HARMAN Tech-Know Chat features a range of HARMAN Professional's world-class networked AV and control solutions.

Many more HARMAN TechKnow Chat



Aditya Todi, Senior Director of Sales and Marketing for HARMAN Professional Solutions

sessions are in production for release in the coming months, so be sure to visit www.facebook.com/ HarmanProIndiaOfficial/ to view the schedule and learn more.

MARTIN AUDIO ANNOUNCES FIRST IOS APP – FOR BLACKLINEX POWERED

Martin Audio has announced the availability of its first ever iOS app, XP Connect, for control and streaming for its popular self-powered portable series, BlacklineX Powered.

When BlacklineX Powered launched, users were able to access the built-

in three-channel mixer and onboard Bluetooth streaming by utilising the rotary panel controls on the back of the loudspeakers. Now all of that functionality is brought to life in an intuitive, colourful app making it more convenient for the user.

Announcing the app, project leader **Dan Orton**, Martin Audio's Product Group Manager, stated, "The user base of BlacklineX Powered has grown substantially since launch, and we thought it was now timely to introduce the app to the market, rewarding those users and encouraging others to the virtues of this series." In determining the navigation path and User Interface, Orton said the challenges had been simple usability. "We needed to give full control to the end user, with all the functionality of the back panel and in an intuitive format. For the majority of users it's a quick and easy way to set up their loudspeakers and deliver a low scale mix using simple controls, such as input faders, output faders and hi-pass filters.

"You can put them into pairing mode for streaming Bluetooth audio—and because we could control the speaker by Bluetooth as well as streaming, it also lends itself to tablet control," he adds.

The XP Connect app is "absolutely intuitive" once loaded, he affirms, and is designed to control a pair of speakers. "If the Bluetooth pairing on the loudspeaker is activated it will automatically

> find the speaker and ask if you want to connect. Alternatively, in Demo mode the user will be presented with a screen with faders—two channels, Bluetooth the main output fader for the loudspeaker and a clearly visible EQ button. You can set them up as stereo loudspeakers or allow them to work in zones."

> In practice, this means that a single connected BlacklineX Powered will allow mute control of all inputs and outputs, with signal level visualisation and access to EQ and settings. Two connected enclosures will additionally offer the choice of Stereo or Zone modes, with three-band EQ and the hipass filters. It allows set up of the XP12 and XP15 in three modes: Full range, with sub added in, and with floor monitors.



YAMAHA ANNOUNCES ADECIA AUDIO SOLUTION

Flexible Audio Intelligence for the Collaboration and Conferencing of today and tomorrow

Yamaha's brand-new RM-CG dynamic beam forming ceiling array microphone and RM-CR conference processor are the heart of the new intelligent ADECIA conferencing solution, which applies automated room tuning and dynamic, multibeam tracking to the challenges of today's and tomorrow's conference environments.

Yamaha recently announced ADECIA, a complete and customizable audio solution for remote innovative VXL1-16P line array speakers and the optimized SWR2311P-10G PoE+ switch

ADECIA is easy to install, set up and operate. The heart of the system is the RM-CR conference processor, which automatically recognizes microphones and speakers on the same network. During commissioning it automatically sets the optimum sound settings for the environment, taking into account the location of speakers and microphones, the room's reverberation characterison voices. Thanks to the special spiral layout of its microphone elements, the RM-CG provides the narrowest, most precise beam for voice capture, while continuous background noise is eliminated using Yamaha's advanced noise reduction algorithms and Human Voice Activity Detection (HVAD). Combined with its beam tracking technology, it can clearly pick up individual voices, even when more than one person is speaking.

ADECIA features further intelligent

phone and RM-CR processor are also designed to work seamlessly with other Yamaha or third-party components for even more flexible system design.

"As times and business requirements change, achieving pristine audio quality in rooms for training, conferences, meetings and multi-purpose use normally require costly expertise to design, install and set up," says **Nils-Peter Keller**, Senior Director Pro Audio



conferencing and collaboration designed to provide flexible audio intelligence for the meeting spaces, ADECIA can be used in a wide variety of locations and situations.

Available from Q1 2021, this state-of-the-art solution is based on Dante audio networking and comprises the new RM-CG dynamic beamforming ceiling array microphone, the dedicated RM-CR conference processor, Yamaha's tics and echo responses. Auto-tuning is achieved with a simple, five-step process using a special web-based interface. The system then performs auto mixing of all connected Dante audio sources. These can include a wide range of sources, including dynamic microphones, analog line level I/O, USB, Bluetooth and SIP telephony.

The RM-CG dynamic ceiling array microphone features multi-beam tracking technology which focuses

audio technologies - including speaker tracking, adaptive acoustic echo cancellation and more - to deliver crystal clear, stress-free remote communications, without requiring any technical knowledge to set the system up. Dante audio and the control and power are supplied through one LAN cable, while three different mounting methods - ceiling, VESA and wire mount - are included to suit any space.

The Yamaha RM-CG ceiling micro-

& AV Group Yamaha Europe. "The introduction of ADECIA now allows customers to easily customize and configure a professional audio solution for remote conferencing and collaboration. With added safety requirements in today's spaces, ADECIA enables a contact-free conference experience, meaning remote working and social distancing have no impact on the ability to communicate."



SENNHEISER INITIATES #DONTSTOPTHEEDUCATION CAMPAIGN

Sennheiser being an Original Equipment Manufacturer, has always given education paramount importance. The company has started providing pro-audio webinars and technical knowledge globally during these difficult times of the COVID-19 lockdown.

With industry veterans, prominent personalities and training professionals sharing their learnings tend. Customers from across the world participate in these webinars except for the local webinars (the ones in Hindi) which are conducted for Indian territory only.

COVID-19 impact on the pro-audio market

COVID-19 has disrupted the way the world is functioning today. The entire ecosystem is extremely dynamic in nature. It has naturally impacted Sennheiswhich they will share an update.

The pro market is likely to grow based on factors such as increased technology adoption, transition to Digital Audio, and Smart Solutions like Dante (VOIP).

Initiatives taken by Sennheiser during this lockdown

To support the pro-audio community, and boost their morale, Sennheiser initiated #DontStopTheMusic campaign which was an exclusive streaming con-



Round Table discussions featuring top luminaries of Pro-Audio Industry India

and experience, the webinars have been initiated to upskill the professionals in the industry and provide the relevant technical knowledge that will assist them in the future.

#DontStopTheEducation campaign webinars are conducted virtually and is open for all to ater's pro-audio segment as well.

Professionals would want to invest better in technological tools and audio products to enhance communication with customers/audience digitally. The company is also expecting some upgradation in their products soon and also the investment in the AV industry- for cert on Sennheiser's Instagram channel. They had a line-up of artists such as David Guetta, DJ Madoc, Murthovic, Bob Sinclair, Third Eye Blind amongst others. Through this initiative, Sennheiser encouraged people to support the WHO in its fight against COVID-19.

"We had a few plans in place initially



Local and Global webinars on RF Basics, Antenna System Design, In-Ear Monitoring, Digital Wireless Transmission etc.

this year which could not see the light of the day due to ongoing pandemic. With respect to that, we had conducted more than 100 webinars (locally & globally put together). Our product managers are doing a brilliant job of training professionals in Hindi as well as regional languages under #Dont-StopTheEducation campaign. More than 8,000 audio enthusiasts attended it. We have done local webinars in Hindi and conducted local Round Tables involving prominent personalities from India-sharing their journey, career progression, learnings & experiences over the years, challenges faced, their workflow, approach, strategy, tips & tricks. We are planning a few more classes and webinars like these in the coming months," said Vipin Pungalia, Director, Professional Segment, Sennheiser India.

#DontStopTheEducation Campaign

#DontStopTheEducation is primarily aimed to upskill the company partners, customers and stakeholders to take on industry-relevant technical knowledge that will benefit them in the future. However, the webinar series is free for everyone to register.

These webinars are predominantly conducted by Sennheiser's CDAE team (Customer Development & Application Engineering), a few are conducted by the Artist-Sound Engineer Relationship Management Team, and a few by the Product Managers etc. via Zoom calls.

The topics covered in these webinars range from live demo of Team Connect Ceiling 2 to installation of evolution wireless G4 systems, to mixing for live sound, to theory behind wireless microphones. Webinars also discuss the best practices for designing antenna systems processes behind big live productions, using real life examples, overview of Sennheiser software for monitoring wireless mic and IEM systems, walkthrough on Digital 6000 series, SpeechLine Digital Wireless, and the basics of digital audio, working with digital transmission and analog v digital. "This series of webinars have been, by far, the most helpful during this lockdown," informed one of the sound engineers who attended the

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webinar. Another sound engineer who attended these sessions spoke about it being quite informative and how these sessions have helped him increase his knowledge and enhance his skills as a sound engineer.

Veteran & well-renowned Sound Engineer Ashish Saksena was the Host for Round Tables conducted in India & top audio professionals such as Samir Kriplani, Vijay Dayal, Dave Drego, Anupam Roy, Tosief Shaikh, Kuber Sharma, Ranjeet Singh, Nasan Fernandes, Anish Purao were amongst those who were panelists in the various Round Tables. Special mention & a big shout-out to Ashish Saksena for being an amazing host & pulling-off these Round Tables impeccably!

According to Vipin, "To support our community and as a way of giving back the love and appreciation we have been receiving, we initiated a campaign #DontStopTheEducation for our customers, partners, and aspiring professionals."

Celebrating 75 Years

"We had plans to celebrate Sennheiser's legacy of 75 years which we were not able to go through due to the on-going crisis. We couldn't celebrate the anniversary as planned; however, we keep initiating get-togethers and fun team activities to further strengthen the bond," explained Vipin.

"We do have quite a strong network of distributors and channel partners across India who play an extremely crucial role for us in catering to needs of our diverse customers PAN India. As a way to show gratitude to our customers, distributors, channel partners, and thank them for being associated with Sennheiser's journey in India, we ran a 75th Anniversary Promo offer on selected range of professional headphones and microphones which started in July 2020. Additionally, I'm quite thrilled to announce that we do have some exciting offers lined up for them



Crew call with the teams of Ed Sheeran, Blake Shelton, Mahalia, Tom Walker etc.

and will get to know about it soon," he further added.

Sennheiser has started preparing for a post COVID-19 situation

Currently, Sennheiser is expecting to see a change in consumer behaviour and content consumption patterns.

pany and we have always believed and cultivated the spirit of entrepreneurship. Here, employees are aware about their responsibilities- hence there is no culture of micromanagement. Globally we have provided virtual collaboration trainings for courses to upskill themselves. Through this, we are adding value in employees' productivity, and preparing ourselves for the future," he concluded.

Sennheiser has a series of webinars lined up which include a



Global Round Table discussions on Front of House, Theatre, Reality Show, House Of Worship, etc.

"Brands will come out with products that will seamlessly integrate in the new lifestyle of consumers, as purchase decisions will be rationalised in discretionary categories," added Vipin.

"Sennheiser is a family owned com-

our staff to be effective & efficient. As a company we are encouraging & guiding our employees to focus on self-development and learning by taking online courses. Our employees have been active in taking online

MAY 2021

wide range of topics, from RF and microphone basics, to roundtable discussions with sound engineers.

To register for these webinars, go to :

Bombay Exhibition Centre,

Goregaon (East), Mumbai, INDIA

https://en-in.sennheiser.com/webinars





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RYU BAR BRINGS THE BEST OF ASIAN CULTURE TO INDIA NIGHTCLUB WITH HARMAN PROFESSIONAL SOLUTIONS

AM Integrated Solutions and GRS AV Solutions deploy JBL Professional loudspeakers, Crown amplifiers and BSS signal processors to provide RYU Bar with immersive sound quality

AM Integrated Solutions and GRS AV Solutions recently outfitted RYU Bar with a complete HARMAN Professional sound reinforcement said **Aashish Mahindru**, Consultant, AM Integrated Solutions. "I am very happy with what the compact JBL AC28 speakers and ASB6128 subwoofers deliver ed height of the venue, the installation team required a compact PA design with high SPL output and balanced coverage. AM Integrated Solutions and GRS



Rooftop Terrace installed with an array of JBL Control 28-1L indoor/outdoor speakers

18-inch subwoofers.

To extend the sound into the connected lounge area, the team installed three JBL AC18/26 loudspeakers and a compact ASB6118 subwoofer. Two additional JBL AC18/26 loudspeakers provide soft background music for guests in the private dining room, while the rooftop terrace utilizes an array of durable JBL Control 28-1L indoor/ outdoor speakers for high-SPL music. The entire system is powered by Crown DCi 2|2400N, DCi 4|1250N and DCi 8|600N amplifiers, and networked with BSS Soundweb London BLU-50 and BLU-10 digital signal processors.

"A great club venue relies on three things for its success—interiors and ambience; food and beverage; and sound and lights," said **G.S. Anand**, Co-Founder & Director, RYU Bar. "With the first two parts taken care of, we were extremely satisfied with the highly responsive service and support from Aashish and AM Integrated Solutions, and

solution to ensure world-class audio quality for patrons and party-goers alike.

Opened in January, RYU Bar is one of the latest additions to the popular nightlife scene in the bustling city of Gurgaon. Named after the Japanese word for "dragon," RYU Bar delivers a pan-Asian experience, bringing together food, cocktails, music and décor from Chinese, Japanese and Malaysian cultures. To ensure immersive sound throughout the main space, rooftop terrace and private lounges, the owner hired AM Integrated Solutions and GRS AV Solutions to install a complete HAR-MAN Professional sound system, consisting of JBL loudspeakers and subwoofers, Crown amplifiers and BSS digital audio processors.

"RYU was a uniquely challenging project for us, in terms of finding ways around the venue's low height limitations while meeting the client's vision of a bar that transforms into a nightclub in the evening,"



RYU Bar installed with HARMAN Professional Sound System

with some excellent sound tuning." In order to meet the client's volume requirements and work within the limitAV Solution outfitted the main venue space with four JBL AC28/26 two-way loudspeakers and two ASB6128 double

the great products and excellent sound from HARMAN Professional Solutions."

MARTIN AUDIO ADORN CEILING AND PENDANT SPEAKERS NOW SHIPPING TO APAC

Martin Audio has announced that it has now started shipping the **ADORN series** ceiling loudspeakers to the APAC territories. The extension to the popular new installation series, which brings class-leading performance, reliability and value to a wide range of installations, was first announced back in February this year.

Along with the ceiling speakers is the availability of the company's first ever pendant speaker, which comes in black or white as standard. superior sound quality from visually discreet, ultra-compact enclosures. They also provide a seamless sonic transition within a multi-zone complex using larger Martin Audio systems such as CDD or BlacklineX.

All the new ceiling models have a nominal impedance of 16 ohms, enabling four or more speakers to be driven in parallel by one amplifier The ACS-40TS in-ceiling speaker

produces 108dB peak output at 1 metre and its ported design delivers strong bass that extends down to 73Hz. The very wide 180° conical coverage of the ACS-40TS makes it particularly suitable for low ceilings and reduces the number of speakers required for even coverage. It features a shallow backcan for installation in ceilings with a minimum cavity depth.

The ACS-55TS in-ceiling speaker

Featuring Martin Audio's signature sound characteristics, the ADORN in-ceiling series is the perfect choice for background and foreground systems which require Martin Audio Adorn Ceiling and Pendant speakers

channel, thereby maximising efficiency and minimising cost. For full-bandwidth protection, the low and high frequency sections are individually protected against overload in all models. produces 113dB peak output at 1 metre and its ported design delivers strong bass that extends down to 79Hz. The wide 150° conical coverage of the ACS-55TS makes it particularly suitable for

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low ceilings and it features a shallow backcan for installation in ceilings with a minimum cavity depth.

The **in-ceiling ACS-55T** produces 113dB peak output at 1 metre and its ported bass reflex design and backcan with generous internal volume maximises low frequency output and delivers strong bass that extends down to 62Hz. It also features a wide 150° conical coverage.

The ACP-55T pendant speaker produces 109dB peak output at 1 metre and delivers superb sound quality for both music and speech reproduction. Its stylish pendant enclosure is equipped with a single-point mounting system plus provision for attaching a safety cable, and also features a wide 150° conical coverage.

Stated Martin Audio DM, **Dom Harter**, "We're excited to start shipping these additional ceiling and pendant loudspeakers as part of the ADORN range, which is already becoming a firm favourite of commercial installs. APAC was prioritised, as it is a region that has emerged quicker from the pandemic and shows opportunity for growth. It will also start shipping from our European and North American hubs from late September."

QSC ANNOUNCES NEW Q-SYS CORE PROCESSORS

QSC has announced two new audio, video, and control processors native to the Q-SYS Ecosystem – the smaller Q-SYS Core 8 Flex and Q-SYS Core Nano driven by the proliferation of networked endpoints and the expanding processing needs of a wider variety of spaces and topologies. Built on the same flexible and scalable software foundation as the rest of the Q-SYS processor portfolio, including the best-inclass Q-SYS Core 110f, these new Cores expand design options to meet a wider variety of installations.

The Q-SYS Core 8 Flex includes a 64 x 64 networked I/O channel capacity with eight onboard FLEX audio channels and eight GPIOs to quickly and easily integrate analog audio and control devices into the Q-SYS Ecosystem. Q-SYS Core Nano offers the same 64 x 64 networked audio I/O without the onboard analog I/O to support installations with smaller spaces with centralized processing and fully networked endpoints. Both of these new Q-SYS Core processors occupy a smaller half-width, 1RU footprint and include pre-installed 8 x 8 Software-based Dante audio channels (license upgradeable up to 32 x 32 channels), driverless USB audio, and AV bridging capabilities.

These smaller Core processors utilize the same, robust software-based architecture, control engine and design software suite (Q-SYS Designer Software) as the rest of the Q-SYS Core processing portfolio. They both offer powerful and scalable DSP processing, video routing and bridging for web conferencing, as well as third-party endpoint integration without the need for separate dedicated control processors.

"These new processors answer the call of smaller spaces that require fewer I/O as well as the increased popularity of fully networked peripherals with a solution that stays true to the



QSC Q-SYS Core 8 Flex and Q-SYS Core Nano

foundation of our platform, delivering the rock-solid processing power and extensibility you have come to expect from QSC," says **Trent Wagner**, Audio Product Manager, QSC. "The Core 8 Flex and Core Nano right size the onboard I/O and physical footprint without compromising on features, performance or flexibility".

"The introduction of these two new Core processors brings even more design flexibility to the Q-SYS Ecosystem, delivering on the promise of a standards-based software platform that can easily scale-up or scale-out. I'm proud of the innovation and engineering strength of our research and development teams, who continue to deliver solutions that meet the evolving needs of the markets we serve, while reducing complexity and cost for our partners and customers," says **Jatan Shah**, Executive Vice President, Chief Operating Office and Technology Officer, QSC.

AUDAC LAUNCHES ATEO2S CLICK & PLAY SOLUTION

Audac has launched the ATEO2S into the market, a click and play solution featuring the ATEO2 design wall loudspeakers. This compact loudspeaker is equipped with the innovative ClickMount mounting system, which is specifically designed to make mounting the speakers in corners an easy task.

The ATEO2S includes both the speaker and the mounting system bundled together.

ClickMount Technology

With the new ClickMount technology, the system has the advantage of making the speaker cabinet click onto its mounting bracket either horizontally or vertically via a 6.3mm jack connector. After installation, the speaker angle can be adjusted by using the bracket arm, allowing the speaker to be inclined in any direction you choose.

Applications

The ATEO2S' versatile mounting sys-



tem allows the loudspeaker to be used in various fixed indoor applications like modern residential environments, retail stores or offices. Like the ATEO2, it blends into its surroundings, creating a subtle but effective solution.

RENKUS-HEINZ' ICONYX COMPACT SERIES ADDS ICC 24/3 TO BRING MORE POWER AND FLEXIBILITY TO MEDIUM-SIZED INTEGRATIONS

Renkus-Heinz recently announced the latest product in its new lconyx Compact Series: the lconyx Compact 24/3-RN – a solution bringing the benefits of Renkus-Heinz' lconyx to a smaller footprint array.

The ICC 24/3 joins the recently announced ICC 12/3 in the new Iconyx Compact Series, a line that offers additional solutions for integrators seeking flexible and powerful options in "medium-sized" installations. The goal of the line is to open up more opportunities for integrators in the house of worship, corporate, transportation, education, and government markets.

"With twice the array length as the 12/3 in the same ultra-compact footprint, the 24/3 provides signifi-

SHURE MICROFLEX MXN5-C LOUDSPEAKER NOW CERTIFIED FOR MICROSOFT TEAMS

Shure has announced that its new Microflex MXN5-C Networked Loudspeaker is now certified for Microsoft Teams. The MXN5-C joins a select portfolio of Shure networked systems products – the Microflex Advance MXA910 Ceiling Array, MXA310 Table Array Microphones, and the IntelliMix P300 Audio Conferencing Processor – that are now certified for Microsoft Teams, providing a complete audio signal chain.

The networked loudspeaker from Shure provides high-quality speech reproduction for AV conferencing applications. PoE-enabled with an onboard amplifier housed in a low-profile design, the MXN5-C is optimized for easy installation in drop-ceiling configurations.

Microsoft Teams provides a complete solution that includes online meetings, live broadcasts, Microsoft Team Rooms and audio conferencing. Whether it's a corporate conference room, special event venue or higher education campus, sourcing a dependable solution that provides crystal clear audio while also integrating with leading collaboration technologies is important for successful communication.

"This certification illustrates our commitment to providing best-in-class

experience across the entire audio ecosystem for Microsoft Teams users," said **Paul Gunia**, Director of Technology Partnerships, Shure.

Shure is committed to building the next generation of tools that power collaboration in the workplace and classroom. By making it easier to communicate, Shure can deliver on its mission of making meetings and classes simpler and more productive by sounding extraordinary.

"To be certified for Microsoft Teams requires products meet high quality standards to help ensure a better collaboration experience," said **Albert Kooiman**, Director of Microsoft Teams Devices Partner Engineering and Certification, "The Shure MXN5-C, along with Shure's other products certified for Microsoft Teams, rounds out the Shure portfolio to help users achieve a great virtual conferencing performance with all Shure peripherals." cantly more control in challenging acoustic spaces," said Brandon Heinz, Product Manager at Renkus-Heinz. "Interior design, whether traditional or modern is almost always a big consideration, and the ICC 24/3's combination of advanced processing power, acoustic control, and discrete aesthetics make this a great addition to our Iconyx lineup."

The Iconyx Compact Series brings performance and directivity to spaces where even the classic lconyx arrays might be too large. The very narrow profile blends into nearly any environment, while the exceptional control of directivity can help with the most challenging acoustics, making the exceptional performance of beam-steered line arrays available to even the most architecturally sensitive spaces.

An all-new, twenty-four-channel digital amplifier powers twenty-four, 3"/ 7 7 mm full-range, high sensitivity, treated paper cone drivers. With an amplifier and DSP channel for each driver, the flexibility of lconyx is now available in a package nearly 40 percent smaller than the classic lconyx.

Still, the ICC 24/3 offers

the impressive performance synonymous with Renkus-Heinz: full RHAON II beam-steering with the latest U.R.G.O beam algorithms, a movable acoustic center, multiple beam opening angles and high-pass filtering of individual beams.

The included wall-mount bracket makes mounting easy and is nearly invisible behind the arrays. Standard RN units have analog and AES inputs.





SENNHEISER LAUNCHES MKE 200 MICROPHONE IN INDIA

New MKE 200 microphone enhances audio for cameras and mobile devices

Audio specialist **Sennheiser** adds the new **MKE 200** to its portfolio of audio-for-video microphones. The mini-microphone is designed for easy on-camera use with DSLRs and mirrorless cameras as well as mobile devices, where it ensures clean and and followers. India currently has over 1,200 channels with more than a million subscribers. Moreover, most cameras and smartphones sold today come with not so impressive audio features. Keeping this in mind, Sennheiser introduced MKE 200 on camera microphone noise, Sennheiser engineers designed the MKE 200 with an integrated layer of protective mesh inside the housing. This protection is further enhanced by using the included furry windshield when filming outdoors.

A compact companion

The MKE 200 features a compact, sleek design with a stylish finish thanks to a fully integrated shockmount and built-in windscreen. Battery-free operation and a lightweight design allow for optimal gimbal performance.

The MKE 200 comes complete with a furry windshield, two locking connection cables for DSLRs or mirrorless cameras (3.5 mm TRS cable) and mobile devices (3.5 mm TRRS cable) plus a draw-string pouch for storage.

The MKE 200 will be made available exclusively at Amazon. com from 28 September 2020 at INR 8,490.

Cleaner sound Built-in wind protection (furry windshield also included)

Compatibility

Two coiled connection cables, one for DSLRs and mirrorless cameras and another for mobile devices



Sennheiser MKE 200 features directional design and Cleaner sound

noise
Decreased handling noise
Shock-mounted capsule
minimizes handling noise
Secure, universal fit

Cold shoe mount with ¼-20 thread

Enhanced audio

Super-cardioid capsule

provides focus and detail

while rejecting unwanted



Sennheiser MKE 200 features directional design and Cleaner sound

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crisp audio and gives that professional touch to video clips.

According to **Vipin Pungalia**, Director, Professional Segment, Sennheiser India, "We are thrilled to launch of Sennheiser MKE 200 on camera microphone in India. Over the past few years, we have witnessed a significant rise of content creators in India. Due to this, Audio for Video segment has seen a growing demand for wireless audio devices. Capturing high quality sound is imperative to garner subscribers which provides a crystal-clear recording without any background voice. We have seen phenomenal response globally and look forward to seeing how consumers respond to this."

Directional, clean audio

The MKE 200 features a directional design which captures the sound of the subject while rejecting unwanted background noise. To minimize any handling noise, the microphone is fitted with a clever internal shock-mount which acoustically decouples the capsule from the housing. To protect from wind

NEW CONFERENCE CONTROLLER FROM CLEARONE NOW AVAILABLE

The newest **Conference Controller** from **ClearOne**, a leading global provider of audio and visual communication solutions, is now available worldwide. The Conference Controller's 10-inch

touch screen is designed for easy control of ClearOne's CONVERGE Pro 2 audio DSP mixers as well as COLLAB-ORATE Live video conferencing room systems from a single device.

The Conference Controller functions can also be conveniently accessed from a personal mobile device, eliminating the need for touching shared surfaces by downloading the free mobile apps.

A perfect addition to ClearOne's audio and video platforms, the Conference Controller can be paired with



CONVERGE Pro 2 DSPs, allowing users to make and receive VoIP and/or PSTN conference calls and multiparty calls

with the easy-to-use, on-screen dial pad. When paired with COLLABORATE Live room video systems, users can make and receive video calls as well as manage content-sharing options.

A modern user interface makes controlling conferencing functions as intuitive and simple as familiar mobile and tablet devices. The Conference Controller enables easy contact management with built-in search. In addition, the slim and modern industrial design blends well with modern conference-room aesthetics.

The Conference Controller can be powered with the included power cord or by Power Over Ethernet (PoE) for clutter-free connections and can be easily paired by Ethernet or Wi-Fi to any network connected COLLABORATE Live video room system or CONVERGE Pro 2 audio DSP.

Moving Heads

Wash

These moving heads have a soft edge and are usually used when there is a need to light a large area. The wash is primarily a unit that focuses only on color changing.

Altman AP-150 RGBW LED

The AP-150-RGBW is a compact, lightweight 135-Watt RGBW LED par wash light that is packed with a high feature set at an affordable price.

Main Features include:

- >1660 max lumens
- RGBW LED color configuration
- Lightweight, 11.2 lbs. (5.08 kg)
- 8-inch color frame slot with locking tab100 to 240 VAC 50/60 Hz operation with
- PowerCON
- Up to 30 Hz Strobe rate
- DMX 5-pin in and through
- + Compatible with DMX 512 and RDM protocols
- On-board, simple-to-use user interface with keypad lockout security features
- Four different control settings of: 16 Bit/8
 Bit/RGB/HSIC
- Progressive output management allowing for active cooling settings from the luminaire or DMX control
- Color calibration system
- Multiple dimming profiles
- Tech Identify feature to easily identify fixture location
- On-board status indicator lights
- On-board factory set and customer defined color presets
- Preset white select set point settings
- cETLus listed CE marked for indoor use

Technical Specification:

- Materials: Corrosion-resistant materials and hardware
- Control: DMX/RDM
- Light Engine: 135 Watt RGBW



(White=6500K)

- Rated LED Life: Arrays are rated for >50,000 to L70
- Input Voltage: 100-240 VAC 50/60 Hz
- Current Draw: 1.13A at 120VAC / 0.58A at 230VAC
- Current Inrush: At 240 VAC, 40A (1/2 cycle) @25°C
- Quiescent Load: 0.082 AMP (9.84 Watts) @ 120 VAC*; 0.041 AMP (9.84 Watts) @ 240 VAC*; *Fan and display off
- Power Factor: ≥ 0.95
- Power Through: Up to 9 Units at 120VAC*; Up to 14 units at 230 VAC*; * Power linking is only for connecting; AP-150-RGBW Pars only, not other products or equipment.
- LED Engine Cooling: Active with progressive output management
- Environment: 0 to 40 degrees C (32 to 104 degrees F) with humidity of 5%-95%; (non-condensing)

Elation Rayzor 760

The Rayzor 760 is a compact yet extremely powerful Wash Effects fixture featuring Elation's unique SparkLED system and fast continuous Pan and Tilt motion. With its wide zoom range from 5° to 77° it provides intense and well-defined mid-air beams.

Main Features include:

- LED Wash Effects Fixture
- 7x 60W OSRAM RGBW LED with Pixel Control
- 28x 2W SparkLED Effect with Pixel Control (patent pending)
- Extreme Zoom 5° for Mid-Air Beam to 77° for Even Washes
- Fast and Precise 360° Continuous Pan and Tilt Rotation
- Beam FX and Smooth Wash Fixture in a Compact Housing

Technical Specification:

Source:

- (7) 60W Osram RGBW LEDs
- (28) 2W White SparkLED
- 50,000 Hour Average LED Life

Photometric Data:

- 8,400 Total Lumen Output
- CRI 80
- Zoom Range 5° 77°
- Beam Angle 5.4° 57.3°
- Field Angle 7.4° 73.3°



Effects:

- Motorized Zoom
- Linear Color Temperature Presets (2,700 8,000K)
- RGBW Color Mixing and Pixel Control
- White SparkLED Lens Effect
- Color Presets and Macros
- Electronic Strobe and Variable Dimming Curves
- 16-bit Dimming
- Control / Connections:
- 3 DMX Channel Modes (25 / 52 / 80)
- 360° Continuous Pan and Tilt Movement
- 900 25,000 Hz DMX Adjustable Refresh Rate
- 6 Button Touch Panel
- Full Color 180° Reversible LCD Menu Display
- DMX, RDM, Art-NET, and sACN Protocol Support
- 5pin XLR DMX In/Out
- RJ45 Ethernet In/Out
- Locking Power Cable In/Out
- USB Connection (Firmware Updates)
- With Wired Digital Communication Network
- Electrical / Thermal:
- AC 100-240V 50/60Hz
- 700W Max Power Consumption
 14°F to 113°F (-10°C to 45°C)
- 14 F LO I I 5 F (-10 C LO 45 PTI //br (1 / 10%) 2216 5
- BTU/hr (+/- 10%) 2216.5

ADJ Vizi Wash Z37

The Vizi Wash Z37 is a 740W professional moving head wash fixture with variable motorized zoom (10 ~ 60-degrees) and thirty-seven 20W Quad (RGBW / 4-IN-1) LEDs. Moving Heads have become a standard in the live event industry, at concerts, clubs, music festivals and even churches. These well engineered moving head lights provide not only lights, but also color, intensity, texture, sharpness and add a touch of magic to a set or a live show.

PT brings to you some of the moving heads launched in 2019-2020.

Main Features include:

- Electronic Dimming 0-100%
- DMX-512 protocol
- Multiple DMX Channel Modes
- Locking 3-Pin and 5-Pin XLR Connectors In/ Out
- Pixel Zone Control
- Zoom Adjustment
- Gamma Adjustment
- 6 Dimmer Curves With Dimmer Adjustment Speed
- Multiple Unit Power Linking

Technical Specifications:

Light Source:

- 37x 20W RGBW (4-IN-1 Red, Green Blue & White) Osram LEDs
- 20,000 Hour Average LED Life
- LUX @ 5M: 15000 lux @ 10-degrees; 1100 lux @ 60-degrees

Effects:

- 11-zone Ring Control with Color Macros
- Variable Strobe & Pulse effects

Connections:

- · Seetronic locking power In/Out to daisy chain power
- 3-pin and 5-pin DMX connections for data linking
- RDM (Remote Device Management)
- USB Input for Updating Fixture Firmware Control
- Motorized Linear Zoom: 10 ~ 60-degrees • 4-button Touch Control Panel with Large LED Screen
- Control: DMX-512 & RDM
- Multiple DMX Channel Modes
- Dim Modes: 6 Presets (Standard, Stage, TV, Architectural, Theatre & Stage 2)



- Dim Speed control (0.1~10 Seconds)
- Dimming: 0 100%
- Strobe & pulse control
- Various Strobe speeds (1-40Hz)
- Adjustable LED Refresh Rates (900~25k Hz)
- Adjustable Gamma Settings (1.0-2.8)
- 16-bit fine zoom control
- 16-bit fine pan control
- 16-bit fine tilt control
- Color display with touch button on two sides
- With Wired Digital Communication Network Electrical:
- Input Voltage: 100-240V 50Hz/60Hz (Auto Sensing)
- Power Draw: 525W, 4.375A @ 120V or 700W 3A @ 230V

Ayrton Levante 300W LED

TLEVANTE is a non-waterproof moving head wash light (IP20 protection rating) using the latest generation of high-performance of LEDtype lamps. This luminaire can be controlled remotely by an external DMX512 signal.

Main Features include:

- Graphic LCD display for addressing and special functions settings, with flip function
- · Clicking jog wheel to set functions
- Excess-temperature protection
- · Integrated wireless CRMX TiMo RDM receiver from LumenRadio
- XLR 5 pin male and female connectors for DMX connection
- powerCON TRUE1 male and female connectors for power connection

Technical Specifications:

Optical:

- High-efficiency optical system
- Opening angle of the beam: 7,5° to 56°
- Light Source:
- White LED module Color temperature output: 6,500K LEVANTE-S / 5,700K LEVANTE-TC
- Brightness: up to 17,500 lumens (LE-VANTE-S). 14,000 lumens (LEVANTE-TC)
- Estimated lifespan of LED emitters: 50,000 hours
- Guaranteed "no-flicker" effect perfectly suited for television applications and all video recorded events

Colors:

• CMY color mixing + CTO

• 1 color wheel: 7 dichroic filters + open DIMMER, STROBE

• Electronic dimmer for light adjustment from



- 0 to 100% without color change (16-bit)
- High-speed strobe effect in white or color at 1 to 25 flashes/second
- Pre-programmed variable strobe effects Gobo Size:
- 1 gobo wheel: 7 interchangeable rotating gobos – Metal Gobos
- GOBO size: 25mm diameter
- Image size: 19mm diameter
- Control:
- USITT DMX512
- · Automatic features for managing your luminaire without a DMX console
- DMX RDM-compatible
- Clicking jog wheel
- DMX512 input/output
- Choice of 3 DMX modes (from 29 to 50 channels)
- Wireless System: LumenRadio wireless **CRMX RDM receiver**

Power Supply:

- Electronic power distribution with Power Factor Correction (PFC) from
- 110-240 VAC, 50/60 Hz
- 550-Watt maximum power
- Power supply via powerCON TRUE1 connector
- Supplied power cable without plug
- Optional battery for addressing without external power source: Li-ion ICR14500 \geq 350mAh - 3,7V

Coolina:

- Advanced forced-air cooling system
- Self-adjusting fan for reduced noise level (in AUTO mode)
- User-selectable air-cooling modes

Beam

A beam produces a thin laser like light through the air and is used in live events for overall brightness.

ADJ Focus Beam

The Focus Beam LED uses a powerful 80W LED engine to produce a powerful, 7400K, 2.5-degree beam from an advanced optical system. This fixture features motorized focus, two prism effects, and it has a built-in in frost filter for wash effects.

Main Features include:

- Control Protocol: DMX & RDM
- DMX Modes: 2 (16 & 18)
- Dim Modes: 6 Presets (Standard, Stage, TV, Architectural, Theatre & Stage 2)
- Dim Speed control (0.1~10 Seconds)
- Dimming: 0 100%
- Strobe & pulse control
- Motorized Focus
- Linear Frost 0-100% (Wash effect)
- 2 Prisms: 6 & 8 Facet, Indexable and Rotatable
- USB firmware update port
- Adjustable LED Refresh Rates (900~25k Hz)
- Adjustable Gamma Settings (1.0-2.8)
- With Wired Digital Communication Network

Technical Specifications (ARCS WIDE): Light Source:

- 1x 80W Cool White LED Engine
- 2.5° Beam Angle
- Color Temperature: 7400K
- 50,000 Hour Average LED Life

Display:

- Touch display with 5-button touch menu Color Wheel:
- 13 dichroic colors + white
- GOBO Wheel:
- Metal wheel with 15 fixed GOBOs + Open
- GOBO shake effect

Prism Wheel:

- Prism Wheel 1: Rotatable 8-facet Circular
- Prism Wheel 2: Rotatable 6-facet Linear
- Prism Indexing with overlay feature

Control:

 Control Modes: DMX512, RDM & Stand-Alone Internal Programs



September - October 2020

- 2 DMX Channel Modes: 16 & 18 channels
- 16-Bit Pan, Tilt & Dimmer control
- Connections:
- DMX Connections: 5-pin Locking XLR In & Out
- Power Connections: Seetronic Locking
 Power In & Out
- Pan/Tilt:
- Pan & Pan Fine: 630 degrees
- Tilt & Tilt Fine: 270 degrees
- Electrical:
- Multi-voltage operation: AC 100-240V, 50-60Hz (Auto Sensing)
- Maximum Power Consumption: 136W @
 120V
- Daisy chain: 15 units @ 120V; 30 units @ 230V
- Dimensions & Weight:
- Dimensions (LxWxH): 10.96" x 7.55" x 17.61" / 278x191x447mm
- Weight: 27 lbs. (12.25 kg)

Elation Proteus Maximus

The Proteus Maximus is an extremely bright IP65 rated LED Profile fixture offering outstanding projection, beam qualities in any environment. Providing up to 50.000 lumens from its custom designed 950W 6,500K LED engine, the Proteus Maximus is the ideal fixture for any outdoor application requiring superior output, bright and powerful beams, quiet operation as well as stunningly precise gobos and colors.

Main Features include:

- High Efficiency 950W 6,500K White LED Engine
- Up to 50,000 Total Lumen Fixture Output
- CMY Color Mixing and Variable CTO 6 Posi-
- tion Color Wheel, High CRI, UV filterComplete FX System featuring Rotating and Fixed Gobos, Animation, Iris, Dual Prism,
 - Dual Frost
- Indexable Full Blackout Framing System
- Wide Zoom Range from 5.5° to 55° / Large 180mm Front Aperture
- FIL (Form In Lay) Polyurethane Foam Packaging Included

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Technical Specification:

Source:

- 950W 6,500K Bright White LED Engine
- 30,000 Hour Average LED Life
- Photometric Data:
- 50,000 Total Lumen Output
- CRI 70+ (82+ with HCRI Filter)
- 2:1 Hotspot Ratio
- Zoom Range 5.5° 55°
- Beam Angle 4.8° 41.2°
- Field Angle 6.1° 51°



Effects:

- Motorized Zoom (Large 180mm Front Aperture)
- 4 Rotating Full Blackout Framing Blades
- +/-45° Framing Indexing
- + Full 360° Bi-Directional Animation Wheel
- 4-Facet and Linear Rotating Prisms
- 2 Variable Frost Filters (Light and Wash)
 Internal Color, Framing, Prism, and Frost Macros
- Motorized Iris with Variable Pulse Effects
- Variable 16-bit Dimming Curve Modes
- High Speed Electronic Shutter and Strobe
- DMX Controllable LED Refresh Rate
- Color:
- CMY Color Mixing
- Linear CTO Color Correction
- 6 Dichroic Colors including High CRI Filter and UV

Gobos:

- 2 Gobo Wheels
- 6 Rotating / Indexing Interchangeable Glass Gobos
- 7 Static Glass Gobos
- Control / Connections:
- 2 DMX Channel Modes (37 / 61)
- 16-bit Pan, Tilt and Dimming Control
- Motorized Focus and Auto-Focus Presets
- DMX, RDM, Art-NET, sACN Protocol Support
- (6) Button Touch Control Panel

• Hibernation Mode (Power Save)

• IP65 Locking Power Cable In

• Length: 18.0 in (458mm)

• Width: 23.3 in (591mm)

• Height: 32.5 in (825mm)

• Weight: 117 lbs. (53kg)

AC 120-240V 50/60Hz

Max Power Consumption 1,400W

• 14°F to 113°F (-10°C to 45°C)

5pin XLR DMX In/Out IP65 RJ45 ethernet In/Out

Size / Weight:

Electrical:

• Full Color 180° Reversible LCD Menu Display

• With Wired Digital Communication Network


Claypaky Sharpy Plus Aqua Beam

The SHARPY PLUS AQUA luminaire is an IP65-rated moving head fixture perfect for outdoor events, touring, permanent installations, cruise ships, and much more. The SHARPY PLUS AQUA fixture offers two distinct operating modes – beam or spot.

Main Features include:

- Moving head fixture for outdoors (IP65 protection rating)
- Source: Osram Sirius HRI 330W X8 arc lamp
- Two projection modes: Beam and Spot
- + 3° 36° linear zoom in both modes
- CMY colour mixing | 15 colours on 3 wheels
 | 2 CTO filters
- Rotating Gobo Wheel: 8 glass gobos
- Static Gobo Wheel: 18 static gobos (including 6 beam reducers)
- Rotating 4-facet prism on dedicated channel
- Rotating 8-facet prism on dedicated channel
- Animation Wheel
- Linear, soft edge frost filter
- Dimmer and stop/strobe

Technical Specification:

- Power Supplies:
- AC 100 240V, 50/60 Hz
 Power input Neutrik-PowerCon True 1 (IP65) Input Power:
- 560 VA @230Vac 50Hz
- Light Source:
- 330W X8 HRI Sirius Osram arc lamp

Optics:

- 3°- 36° Electronic Linear Zoom
- Motoried Focus system
- Color System:
- CMY colour mixing
- 15 colours on 3 wheels
- 2 CTO filters
- Effects Section:

 Rotating Gobo Wheel: 8 interchangeable
- glass gobos • Static Gobo Wheel: 18 static gobos

- Six beam reducers (down to 0.5°)
- Rotating 4-facet prism on dedicated channel
- Rotating 8-facet prism on dedicated channel
- Dynamic Animation Wheel
- Linear soft edge frost filter
- Dimmer and stop/strobe
- Dense, Sharp, Parallel Light Beams
- Extremely quick movements
- Excellent visual effect projections
- Wide and sharp aerial effects
- CONTROL AND PROGRAMMING
- 31 DMX control channels
- Control signal: USITT DMX 512
- Protocols: RDM, WebServer and Art-Net BODY
- IP65 Rating
- Aluminum and steel structure with plastic covers
- Two side handles for transportation
- Device locking PAN and TILT mechanisms for transportation and maintenance WEIGHT
- 37.5 Kg (82,8 lbs)

CLF Poseidon Beam

The CLF Poseidon is a powerful outdoor beam fixture that has been developed for smooth CMY color mixing. The Poseidon comes with a fast and accurate feature set including a double prism, gobo wheel, animation section and frost.

Main Features include:

- Smooth CMY Color Mixing
- Ip65 Rating



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- Gobo Wheel with Animation Range
- Double Prism
- Frost
- 190mm Wide Lenss

Technical Specification:

- Power
- Input voltage: 100 240 VAC, 50/60HZ
- Standby power 550W
- Total power consumption 650W
- Typical current 2.83A
- Power plug type Seetronic Powercon TRUE
 Source
- Lamp Ushio 400W
- Lamp hours 4000
- Color temperature 7300K
- Optical
- Beam angle: 1.8°
- Photometric
- Output @10M" 564000 Lux
- Output @50M: 25400 Lux
- Effects
- Color: CMY
- 14 + open color wheel
- Gobo: 14 + open fixed gobo wheel
- Prism: 8-facet round, 16-facet round
- Frost: 6° wash
- Dimmer 0-100%
- Shutter: 12 hz/second, random
- Pan: 540°
- Tilt: 240°
- Heat Management
- Cooling type: Regulated Fans
- Max. ambient temp.: Ta max=40°C
- Min. ambient temp.: Ta min=-20°C
- Control
- Control protocol USITT DMX512/1990
- DMX channels: 17
- RDM: Yes
- WDMX: Yes
- DMX Input: 5-pin
- RDM: Yes

• IP rating: IP65

• Position lock: Tilt

• Length: 726mm

• Width:488mm

· Height: 312mm

Housing

Physical

- Hardware
- Interface: LCD Display
- Software upload DMX, via special box Installation

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• Mounting orientation : Any

• Safety attachment point: Yes

• Net product weight: 35kg

Spots are generally used for highlighting specific objects and spaces or to provide general texture.

ETC ColorSource Spot Jr

The ETC ColorSource Spot Jr brings a four-color light engine at a fraction of the cost and a fraction of the size. Using a mix of red, green, blue, and lime LED emitters, the Color-Source Spot Jr offers an amazing range of color.

Main Features include:

- ETC's RGB-L array (red, green, blue and lime)
 Also available in Deep Blue, which replaces the blue LEDs
- with indigo for rich, saturated blues and magentas
- Simple user interface with seven-segment display
- powerCON in and thru
- DMX/RDM in and thru (5-pin XLR)
- LED droop compensation
- Optically calibrated
- Built-in zoom

Technical Specifications (ARCS WIDE):

- LED details : 52 Lumileds LUXEON C LED
- Max lumens : Standard: 5,708; Deep Blue: 5,426
- Max lumens per watt : 44.8
- L70 rating (hours to 70% output) : >54,000 hours (both variants)

Color:

- Colors used : Standard: Red, green, blue, lime; Deep Blue: Red, green, indigo, lime
- Color temperature range : Color mixing
- Calibrated array : Yes
- Red shift : No

Optical:

- Beam angle range : Built in 25-50-degree zoom
- Gate size : 50 mm
- Aperture size : 6.25"-14"
- Pattern projection : Yes

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- Pattern size : M (OD 66 mm, ID 48 mm), up to 2.03 mm (0.080 in) thick
- Camera flicker control/Hz range : 1,200 Hz (default) and 25,000 Hz (via RDM)



Control:

- Input method : DMX512 via 5-pin XLR
- Protocols : DMX512/RDM
- Modes (footprint) : 4 modes, see page 10
- RDM configuration : Yes
- Ul type : Seven-segment, three-button interface
- Local control : Yes
- Onboard presets : Yes (12)
- Onboard sequences : Yes (5)
- Onboard effects : No
- Fixture-to-fixture control : Yes
- Notes : 15-bit virtual dimming engine

Elation Fuze SFX Spot

The FUZE SFX is a new concept LED Spot FX fixture designed for a variety of applications requiring a compact and powerful multi-purpose luminaire. The SFX is capable of projecting tight beams to wide washes using a highly efficient optical design while providing over 12,000 lumens of output from its 300W white LED engine.

Main Features include:

- 300W LED 6,600K White LED Engine
- 12,000 Total Lumen Fixture Output
- Spot and Effects Fixture
- Zoom Range from 4.5° to 38°
- Variable CMY and 7-Position Color Wheel
- High CRI and CTO Filter
- 8 Rotating and 10 Fixed Gobos
- Dual Independent Prisms for Layering
- Motorized Iris

Variable Wash Frost Filter

Technical Specification:

Source:

- 300W 6,600K Bright White LED Engine
- 20,000 Hour Average LED Life
- Photometric Data:
- 12,135 Total Lumen Output
- CRI 68+
- Zoom Range 4.5° 38°
- Beam Angle 4.6° 38.2°
- Field Angle 5.6° 42.2°

Effects:

- Motorized Zoom
- Remote Focus
- Variable Frost Filter
- Dual Independent Prisms (6 Facet linear & 6 Facet round)
- Motorized Iris
- Variable 16-bit Dimming Curve Modes
- High Speed Electronic Shutter and Strobe

36

Color:

- CMY Variable Color Mix
- 7 Position Color Wheel
- High CRI Filter, CRI 84
- CTO Filter, 3200K, CRI 77
- Gobos:

2 Gobo Wheels



- Wheel #1 with 8 Rotating / Interchangeable Glass Gobos
- Wheel #2 with 10 Static Gobos
- Control / Connections:
- 31 DMX Channels
- 16-bit Pan, Tilt, and Dimming Control
- DMX Adjustable LED Frequency
- DMX, RDM, E-FLY Wireless, Art-Net, sACN
 Protocol Support
- 4 Button Touch Control Panel
- Full Color 180° Reversible LCD Menu Display
- Locking 5pin XLR Connector In/Out
- Locking RJ45 Ethernet Connector In/Out
- IP65 Locking Power Connector In/Out
- USB Connection (Firmware Updates)
- With Wired Digital Communication Network

Chauvet Professional Maverick Storm 1 Spot

Maverick Storm 1 Spot is a IP65-rated Cool White LED moving head that features a compact and rugged die-cast aluminum housing built with marine grade stainless steel screws to withstand even the harshest elements.

Main Features include:

smooth control of fades

• Iris for total beam control

decreased shop setup time

Technical Specifications:

True 1 compatible power input

5 facet prism

beam control

not in use

Optical:

create a wide pallet of colors

• 480W LED yoke spot fixture including a color wheel, animation wheel, 6.5:1 zoom, a static and rotating gobo wheel

• Variable CMY + CTO color mixing system to

• Independent light and medium frosts for

• Animation wheel for enhanced visual effects

• RDM control over DMX for fixture reporting

• 7° to 45° zoom angle for variable beam sizes

• 3 menu presets and preset cross load for

• Battery backup display with auto-rotate

· Intergraded and controllable sunshield for

protecting optical system when fixture is

depending on fixture orientation

· 16-bit dimming of master dimmer for

- Light Source: 1 LEDs (CW) 480 W, 6604 K, 50,000 hours life expectancy
- Color Temperature (at full): 6604 K
- CRI: 69TLCI: 46.8
- Beam Angle: 7° to 42°
- Field Angle: 8° to 48°
- Zoom Angle: 8° to 48°
- Lumens Source: 32,000
- Lumens Output: 14,500
- Illuminance (8°): 28,829 lux @ 5 m
- Illuminance (48°): 1,528 lux @ 5 m
 Selectable PWM: 600 Hz, 1200 Hz, 2000 Hz, 4000 Hz, 6000 Hz, 15000 Hz

Dynamic Effects:

- Pan and Tilt: 540°/270°
- Pan and Tilt Ranges: 540°, 360°, 180° pan/270°, 180°, 90° tilt
- Colors: 7 + white, split colors, continuous scroll at variable speeds
- Colors: CMY flags, CTO flag
- Gobos (1): 7 + open (7 glass), rotating, interchangeable, indexing, slot-n-lock, continuous scroll at variable speeds
- Gobos (2): 8 + open (8 metal), rotating, continuous scroll at variable speeds
- Gobo Size (1): Gobo Wheel 1 (rotating): 30 mm (outside), 25 mm (image), 1.1 mm (max. thickness)
- Gobo Size (2): Gobo Wheel 2 (rotating): 160 mm (outside), 23 mm (image), 0.8 mm (max. thickness)
- Effect Wheel: 1 effect
- Dimmer: Electronic
- Shutter/Strobe: Electronic
- Zoom: Motorized
- Focus: Motorized
- Frost 1: Light Frost Motorized
- Frost 2: Medium Frost Motorized
- Iris: Motorized
- Prism: 3 Facets, motorized, rotating
- Strobe Rate: 0 to 20 Hz
- Move-in-Black: Yes
- Dim Curves: 4

Control:

 Control Protocol: Art-Net, DMX, W-DMX, RDM, sACN



- DMX Channels: 26 or 33
- Art-Net Channels: 26 or 33
- Modes/Personalities: 2 personalities (26, 33)

Robe Esprite FS Spot

The ESPRITE FS is equipped with a digital camera, mounted on the head, allowing it to be connected to the Robe RoboSpot Base Station for remote Follow Spot control.

Main Features include:

- Self-referencing, data capturing TE[™] 650W White LED engine
- 27.000 lm output producing a piercing 85.000 lux at 5 m
- Precision optics to produce crystal clear white light
- Flat field CMY mixing
- Variable CTO
- Remotely selectable CRI 70/80/90
- Two fast colour wheels
- One indexable and rotatable gobo wheel
- A fixed gobo wheel CTO filters
- 6-facet rotating prism
- 1° soft edge and 5° wash type frosts
- An animation wheel and spectacular multi-colour effects

Technical Specifications (ARCS WIDE): Source:

- Light source type: TE 650W White LED
 Engine
- LED life expectancy: min. 20.000 hours
- CRI: 70/80/90, remotely selectable
- Colour temperature: 6.700K
- Typical lumen maintenance: 70% @ 20.000
 hours
- Light source warranty: 4 years or 20.000 hours Optical System:
- High efficiency zoom optical system, ratio 9:1
- Zoom range: 5.5° 50°
- Output lens diameter: 150 mm
- High efficient component optics
- Fixture total lumen output: up to 27.000 lm
- Brightness: 85.000 lx @5m
- Dynamic Effects:

Cyan: 0 - 100%

- Magenta: 0 100%
- Yellow: 0 100%
- Variable CTO: 3.000K 6.700K
- Colour Wheel 1:5 fixed dichroic colours + white
- Colour Wheel 2: 5 fixed dichroic colours + white
- Framing shutters : Patented framing shutters module with 4 individually positionable blades plus rotation of the complete frame system +-60°
- Rotating gobo wheel: 7 rotating, indexable and replaceable breakup and aerial gobos + open, patented slot & lock system
- Static gobo wheel: 9 static and replaceable gobos + open
- Animation wheel: Aluminium animation wheel, used alone or in combination with gobos, rotating in both directions at variable speed
- Prism: 6 facet prism rotating in both direc-

tions at variable speed

- Iris: Motorized, stepless, pulse effects up to 3 Hz
- Frost: light 1° for instant softening of the projected gobo or framing shutters and medium 5° for even wash
- Hot-Spot: from flat field to 6:1 hot-spot
- Motorized zoom and focus
- Electronic strobe effect with variable speed up to 20 Hz
- High resolution electronic dimming: 0 100%
- L3 (Low Light Linearity) Imperceptible 18 bit dimming for ultra-smooth fade to black
- Cpulse special flicker free management for HD and UHD cameras, ready for 8K and 16K
 Control And Programming:

Control And Programming:

- Setting & Addressing: ROBE Navigation
 System 2 (RNS2)
- Protocols: USITT DMX-512, RDM, ArtNet, MA Net, MA Net2, sACN

• High temperature borofloat or better glass

• Zoom: 32x optical zoom; 16x digital zoom

• Streaming: H.264, MPEG dual codec, Multi-

• Vision: Day & Night (ICR), WDR (120dB)

Electrical Specification and Connections:

• Power supply: Electronic auto-ranging

• Input voltage range: 100-240 V, 50/60 Hz

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• Resolution: 1920 x 1080, 16:9 Full HD

(1080p) resolution support

• Minimum illumination: 0.3 Lux

- Wireless CRMX technology from Lumen Radio: On request
- DMX Protocol modes: 2
- Control channels: 49, 42
- Pan/Tilt resolution: 16 bit
- Movement:

Camera:

- Pan movement: 540°
- Tilt movement: 265°
- Rotating Gobos:
- 7x rotating glass gobos
- Outside diameter: 26.8 mm
- Image diameter: 23.5 mm

Max thickness: 3.5 mm

• Thickness: 1.1 mm

• Type: SNZ-6320

ple streaming

VIRTUAL EVENTS

NJSM-BNA set the ball rolling for Virtual Live Entertainment Events

in **India**

The advent of

the Covid-19 pandemic mandated the cancellation of most concerts, music festivals, performances and other live entertainment events, but what emerged from this adversity was a 'new virtual reality' with performers and musicians across the world taking to social media platforms to stream live for the audience.

Smooth-running, suave virtual content merged with cutting-edge tech and traversing with interesting raw live music and performances had the potential to shape something completely new, innovative and surprisingly engaging. It's clear that virtual events, tailor-made to best fit the audience requirement are the 'new normal' in the present scenario.

PT recently caught up with the trailblazers in the Virtual Entertainment Events space in India – NJSM and BNA Talents, who have also spearheaded the Concept and Production of the **IRAA 2020** virtual awards ceremony organised by PALM expo.

Nixon Johny - Director, NJSM, **Betson Carvalho** - Director, BNA Talent and **Sancheth Suvarna** of NJSM discuss how they took on the challenge of entering a relatively new domain and have till date embraced it with great success.

he Need of the Hour

Since the past six to seven months, the live event industry has all but come to a complete standstill. Understandably, content providers are doing what they can to stay afloat and have turned to the larger-thanlife virtual sets to fill the big stage live events space which the pandemic has brought to a near complete standstill. Going with the flow of adjusting to the 'new normal' is NJSM in association with

BNA Talent.

While NJSM have been in the event and entertainment industry for the past 16 years and who are regarded as one of the foremost players in the sound rental market, BNA Talent has been promoting Indian artists globally and dealing with all aspects of entertainment.

Nixon Johny, Director, NJSM, hit the nail on the head when he said, "In periods of adversity, a strong



From (left to right) Rahul More, Sancheth Suvarna, Nixon Johny and Betson Carvalho

person digs into his mind's deepest to realize his greatest strengths." Questioning the conceptualization of the NJSM-BNA studio, he went on to say, "During the Lockdown Phase of Covid-19, it was apparent that live shows were going to have to change and for us and the business to survive, we were going to have to pivot along with the current social and market conditions. After much brain storming, we realized we had all the ingredients ready with us, we just had to join the dots which ended up in one of the strongest collaborations between NJSM and BNA Talent giving us the first mover advantage with this virtual studio."

Seeing religion being streamed and watched online successfully, this gave them the idea of trying out a virtual studio. Nixon from NJSM and Betson from BNA Talent who are both well experienced in the industry and have worked together over the years, quickly realized that this must be the way forward for entertainment as well. A couple of phone calls, some late late-night extended conversations, a quick evaluation of inventory and requirements, and the NJSM-BNA partnership was born for virtual events.

"Covid-19 changed life as we know it, especially for the event and entertainment industry. As live entertainment was still in demand, clients approached us about the requirement being present, however the ability to introduce it to the audience, while maintaining safety, hygiene and social distancing as per Govt rules was a challenge. We at NJSM-BNA felt the need to overcome these challenges and fulfil the market requirement," explains Sancheth Suvarna, Audio Engineer, NJSM.

Creating a Virtual Event

While it may not be possible to do live and in-person events and shows, there is actually no reason to cancel them completely. Though temporary, the virtual event platform could be the answer to the question of where and how to host a live event?

NJSM had a team that believed in the virtual event platform concept. They had the concept of the studio, they put together the inventory, the idea and the space and the team was ready within a week to launch their first ever pilot virtual show. So, what does it take to create a virtual event? Betson Carvalho, Director, BNA Talent, explained, "A winning hand, a team that believed in the concept and idea, coupled with the availability of space, light and sound, inventory, access to the BEST technology and the willingness to learn. That is what is required to put together and launch a great virtual event."

Setting up a Virtual Platform

For NJSM finding a space to host a virtual event was never a concern. The NJSM-BNA Studio is an 1,800 Sq. ft facility, which is integrated with LED Walls, Trussing, Sound, Lights, Camera, Switchers, Chroma Lighting & Chroma Setup. The studio is also equipped with a Leased Line Internet with 3 redundancy connections and all other technical that is required to flawlessly execute Virtual concerts and events.

Nixon and Betson were the brains behind the entire operation with much needed support from Sancheth, who heads the entire audio division at NJSM and Rahul More who is the Tech Integrator with BNA Talents and leads the content creation, streaming and integration process.

Of course, they had to work within the government norms of social distancing etc., so the team stuck to a 2-person per department system where every department had to be optimized and shrunk down with some team members working remotely.

Technology, Duration, Equipment and Gear

The technology, and software used is an optimum mix to give the best results and output. Some of the software and technology used by NJSM include VMix, Resolume, OBS, Restream to name a few.

Cameras

For a live set-up, some of the cameras used are Sony A7III, Canon 80D, Canon 5D Mark IV, Sony PXW-Z190, gear like the Blackmagic, Hollyland Wireless Transmitters, and Field Monitors Lilliput. *Lights*

For lighting the stage up Softies, Sharpies, LED Bars and Blinders were used in different areas for the even spread of light.

Audio

The Audio solution was equipped by AVID Venue S6L -24c/E6L 192 Engine Mixing Consoles, Pro Tools 12 for multitrack recording, Sennheiser EM 6000 Series and Shure ULXD wireless microphones, DPA 4099 Instrument Microphones, Sennheiser MD421, Shure sm58/ sm57and CPA Sm8 near field monitors.

The NJSM-BNA Studio is a fully equipped facility. Trussing for light mounting and LED Walls are all available in-house. The range of equipment and setup can be customized and changed as per the artists' requirement.

The mixing for most of the shows was done by Sancheth. NJSM also had



Salim-Sulaiman during their virtual performance at NJSM Studio

14thedition



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Virtual stand-up comedy by Atul Khatri

guest engineers like Ashish Saxena, Tanay Gajjar, Saibu Simon, and Clifford D'Costa to create magic in the NJSM-BNA studio.

Ashish Saxena, Sound Engineer, who worked with NISM-BNA on two shows for KK, one with the full band and one as acoustic with the guitar, found working with the team highly professional and appreciates of the whole virtual environment setup. "NJSM is a fantastic company to work with. Sancheth, he knows his job very well. Before I could walk into the studio, he made sure everything was patched in and plugged in accordingly. So working with him has always been a superb experience, not just for these virtual live streams, but also for the live shows we have done before. It's really been a pleasure working with them," he said.

For Ashish, working on a virtual event was definitely different, "You had to mix more critically because it was going on a live stream rather than on big speakers or a big PA."

Each event is based on the requirement of the client. Performance of Multiple artists can extend up to over six hours, especially when the studio is hosting events like rewards and recognition nights, and dealer meets. Private events like wedding and parties focus on artists performances and can go up to 120 minutes.

Getting Artists on board

On asking if it was easy to convince artists to get on-board the virtual events platform, Nixon replies, "Artists and event companies were all looking for work. The primary concern was safety. Since the NJSM-BNA studios primary focus was safety, and hygiene, we had ample space for social distancing, and we were able to address any kind of concerns artists had. In terms of technology and deliverables, the names NJSM-BNA inspire trust and confidence. Armed with this two-pronged approach, we were able to address any obstacle and artists were more than happy

For NJSM finding a space to host a virtual event was never a concern.

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KEY SPECS

FREQ. 40HZ TO 20 KHZ DIGITEL PILOT TECHNOLOGY 200 FREQ. BANK ADJUSTABLE RF POWER BETWEEN 10MV & 30MV WORKING DISTANCE OF UPTO 200 M AUTO FREQ SCAN REALTIME DISPLAY OF RF , BATT. & AENTANA BATT. BACKUP OF 10 HOURS BALANCED & UNBALANCED OUTPUT HIGHQUALITY CAPSULE WITH ANTI FEEDBACK LICENCED BAND AND GOVT APPROVED AVAILABLE IN ENG SET FOR DSLR , & DUAL LAPEL MIC OPTIONS





H V & Company, In Front of Jain Balashram, Near Gandhi statue, Mahuva (364290), Gujarat, India.



+91-9409767676



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Team NJSM with Amit Trivedi

to work with us."

"We are open to working with all artists from all industries in a variety of formats," adds Betson. So far, the studio has worked with an extensive list of artists and has covered formats like music, stand-up comedy, and some influencer content. Singer Abhijeet Sawant was the very first artist to experiment with this format, followed by Music Composer Duo Salim-Suleiman, Singers like KK, Hariharan, Shaan, Akriti Kakkar, Mansheel Gujaral, Vishal Kothari, Umber Jafri, and comedians like Atul Khatri, Sunil Grover, etc.

So, what kind of events have NJSM-BNA done so far? Replying to the question Sancheth said, "The question now is, "what kind of event is not possible, virtually?" Tell us what you want, and we'll make it happen". This is the kind of spirit and attitude that the team of NJSM-BNA have maintained and encouraged. Putting in endless nights together as a team has helped them reach to this point of conviction.

The studio has covered anything and everything from weddings, sangeets, birthday parties, club nights, and DJ nights. For the corporate sector, they have done dealer meets, rewards & recognition nights, webinars, training sessions and much more.

Challenges

Seeing is believing. To surpass the challenge of believability and the quality of the final product, NJSM-BNA had to showcase the concept via a pilot, create a show reel, and display the technical and technological capacity of the studio.

The biggest challenge the team of NJSM-BNA faced was converting a sound studio into a live setup. "This was no easy feat", informed Nixon. "We had to build a space for maintaining social distancing,



Singer KK at the NJSM Studio

setup SOP's for hygiene, mask usage and sanitization", he added further. For NJSM-BNA, creating a safe and hospitable environment for not only artists but the entire team was of paramount importance. "Working with reduced team strength for setups and optimizing per unit deliverables have been some of the challenges that we have surpassed", he said.

According to Ashish, from the perspective of setting up and doing the prep work, he find virtual events much easier than the live events. "It is a more controlled and cleaner environment," he says "you just have to concentrate on the mix. Since it is live stream the quality of the sound is not very good," he added further. To make the sound quality audible and better for a live stream, the team did initial tests to check for delays and latency, the sound and the video sync and made appropriate changes in the mix.

Getting the Audience Involved

Shows are LIVE and INTERACTIVE, with a fancy new term, "Hybrid Events". Dedicated Internet connections for personal and corporate shows, hosted on strong platforms keep the audience in-tune with the artists. Artists talk to the audience and respond to their comments and requests.

"Our public concerts have high number of views and engagements and the private concerts consistently deliver on engagement with audience", says Betson. "The look and feel of the concerts involves 3D stages, with multiple artists and musicians from across the globe, performing together on one stage. For our audiences, this is no less than a LIVE Show, except it's now playing on your screen at home!", he further adds.

Marketing Virtual Events

They say, "The proof is in the pudding" and Nixon and Betson had the proof of concept with their very first show reel. Harnessing the power of social media, there were quickly able to spread the message within the industry of the NJSM-BNA Studio range and capabilities. "Word spread like wild-fire and clients and artists reached out to us to execute these events for us", informs Nixon. Besides, social media, relationship marketing is the key to pushing out new ideas and the credibility that Nixon and Betson bring to the table, gave people the confidence to venture into unchartered territories.

The Current Situation and the Future of Virtual Events

"The pandemic has affected the entertainment industry severely; however, it's up to us to keep our head above the water, and power through these unprecedented times. To move with changes in the socio-economic situations and provide solutions that meet current requirements. Flexibility and the ability to adapt learn and move quickly will be the industries key strengths", mentions Nixon.

"We've walked a path that was un-treaded. It's up to us to keep up with the first mover advantage and scale this format to reach more artists and audiences", says Betson.

NJSM-BNA Studios were one of the first movers in the virtual events space and they have helped artists and agencies experiment with various setups and hybrid formats; but the most motivating words from almost everyone they have worked with has been, "This facility and technology has given HOPE to all the artists and musicians."

Virtual events will become an additional model within the event industry. This model has the reach, scale and sustainability which is the trifecta for success and will be turned into a source of revenue for clients and artists, added Betson.

Conclusion

The new realm of virtual events, backed by impeccable technologies, has hands down become more prevalent in the year 2020. As more and more businesses, organizations and production houses come to terms with the impact of the COVID-19 pandemic on live entertainment, event companies like NJSM-BNA are busy hosting virtual events that are keeping the industry alive and bringing the people together.

Pictures credit: Suraj Uchil

An Unequal ic Music

MUSIC & E-GAMING COLLIDE

t comes as no surprise that the impacts of COVID-19 have changed the industry over the last few months. The impact of this pandemic across all industries has been unparalleled, and we have never really been through such a period of time before. The music industry was definitely not prepared for the fallout, yet thanks to internet streaming and websites such as Twitch, the industry has adapted and transformed to a new avatar in this post-covid world. One of the biggest sources of revenue and platforms for musicians, the stage, has been on hiatus for months now and live music as we have known it will only return sometime in 2021. When worldwide lockdowns were first rolled out in March, countless booking agencies, studios, music venues, production companies, labels and more had their income streams blocked off overnight. To add to this, all investments made into live gigs, upcoming artist tours and festivals were simply vaporised. Artists, management & booking agencies and all erticals of the industry were left puzzled as to how to act in order to minimise loss and keep moving forward. The first couple of weeks of the global lockdown was definitely a period of confusion which left everyone scrambling and reassessing their entire 2020 strategies. Luckily, the industry's free-fall was comparatively short lived (when compared to what it could have been) thanks to the innovation of gaming platforms.

The platform that lead the way, was Twitch. A massive component of the e-gaming industry, Twitch is an application that allows teams of users to broadcast or stream their live gaming sessions. Now the e-gaming sessions from the late 90s and early 2000s is not what the norm is anymore. Gone are the days when e-gaming meant a group of 4 teenagers huddled together in a small room playing counterstrike on their PCs. This multi billion dollar industry today is the new forefront in sport and entertainment. It has global tournaments and obscene amounts of money for the star athletes, as any other global sport. And since their "arena" is completed online and internet based the infrastructure needs be robust and be able to handle hundreds of thousands of streams, group chats and share bandwidth with the actual game being played! The infrastructure here is mostly software, streaming solutions and cloud based computing. Now here is where the music industry and the e-gaming industry meet. The need of the hour was for a platform which would allow an artist to stream a performance from their own home, and possibly to an audience of hundreds if not thousands (depending on the artist of course) Enter Twitch, a streaming application which handles hundreds of thousands of streams, and has the ability to scale it's bandwidth even when heavily congested. It became the perfect solution for artists of any calibre to reach their audiences, who were also stuck at home, eagerly looking for ways to adapt their lives to the new normal.

Musicians and audiences were ecstatic that they found a temporary home on the internet and many artists from DJs to bands started hosting shows, performances and even all out 2 day music festivals. The idea was simple, the DJ or performers would be broadcasted along with some creative visuals and

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by Abhimanyu Malhotra,

The Sonic Arts Co.

live music stream. Users could also join in with their webcams (depending on the platform of course and the size of the event) allowing the formation of a 'digital dancefloor' where you get to interact with live 2D broadcasted audiences. Most of these online events started off free, where one could just click on a link and view their favourite artist preforming a song live.

However, the guestion to monetise was always looming, but this was a no-brainer once sponsors saw the numbers that were flocking to these online streams. Suddenly the same names that you would see sponsoring a Sunburn or NH7 weekender would pop up on your screen as the sponsors for an event you are "e-attending". And once again, all seemed right in the world, with artists and audiences finding their place in the digital realm and adjusting to the new normal. That is until of course, users of apps such as Twitch, started getting hit with DMCA and copyright violation notices.

The DMCA or digital millennium copyright act is a law that "criminalizes production and dissemination of technology, devices, or services intended to circumvent measures that control access to copyrighted works", or in other words copyright infringement. Since the thousands of DJs that used to play in clubs were now streaming online, the copyright of tracks in their sets was put to question. Clubs and public venues have licenses that they can purchase that allow DJs to perform other's music in those venues. However, what is the venue online? Who has the license? All these questions were being encountered for the first time by the industry. And since the "host" or "venue" essentially was the platform itself, the case for a copyright infringement seemed ripe since these platforms were not covered under the same license as a club or venue (even though they served a similar function). This DMCA violation was a result of the shift of the music industry to such streaming platforms, however it hit the e-gaming industry too! Thousands of players, e-gaming influencers and star accounts were hit with violations for even streaming music in the background of their gaming sessions! The day was definitely bound to come when such e-gaming and



streaming platforms were hit with such notices, however the arrival of music live streaming definitely acted as a catalyst, and as a result affected not only DJs and musicians, but also a massive user base of e-gamers.

Another collision between gaming and music that was a result of this lockdown was on the online multiplayer game Fortnite (whose counterpart PUBG was recently banned in India). They organised digital concerts, which was like attending a concert, except with your third person avatar in a digital playground. Artists such as Travis Scott and Diplo had record shattering attendances.

And of course the performances themselves could defy the laws of physics since it was all digital.

You had instances of the artists just suddenly shooting up a 100 feet into the air, followed by you floating beside them in hyperspace. Oh the endless possibilities! Needless to say this requires a lot more work in setting up a digital concert as opposed to a live stream, but the experience is just something incredible. I had the opportunity to experience the Travis concert with VR glasses, and it was definitely something I would attend again. Oh the entry is free, you just need to have the game.

So as time progresses and we patiently await the day that venues will once again be open, audiences and musicians will always try and find a way to connect. Thanks to modern day technology and innovations there are plenty of solutions, however as we've seen the process of adapting does come with it's own set of hurdles and fallouts.



ACOUSTIC AND AUDIO SYSTEM DESIGN FOR SMALL ROOMS - PART 3

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



In <u>Part 2</u> of the series, Sarma elucidated about the importance of sound isolation and how background noise can adversely impact the dynamic range of the audio playback. In Part 3 of the series he dives deeper into small room design and the science behind absorption and diffusion.

e dive deeper into "small room" design, as we can now start to look closer at the science behind absorption and diffusion and how to effectively use both to achieve your desired targets for a particular space. For those of you who have a working knowledge of acoustics, this portion of the series will only be a refresher, but hopefully will still give you a more practical insight into the topic.

Overview

Familiarize yourself with the frequency content of various sound sources. This knowledge is vital to manage any expectations during the design phase of any project. Relate every frequency to its corresponding wavelength, and the picture starts to become clear. As you read further, you will be able to understand the range of frequencies that you can absorb/block and therefore the type of sound sources you can plan to accommodate in (or block from entering) a space.

Let us first look at what happens to an incident sound wave on a surface. The ability to understand this interaction will help you identify and understand acoustical issues in any space. It helps to visualize an incident source on a surface as multiple waves, each wave representing a different frequency in its spectrum. Each frequency treats the surface it encounters differently because of its wavelength. Some frequencies will be absorbed or reflected, and frequencies with larger wavelengths will pass through some barriers as if they don't exist. Understanding the frequency dependent behaviour of materials is vital to small room design, especially because not all materials perform in the way that you expect.



Fig.1: Interaction between wave and barrier

Frequency (Hz)	31	63	125	250	500	1000	2000	4000	8000	16000
Wavelength (m)	11.1	5.5	2.8	1.4	0.7	0.35	0.17	0.09	0.04	0.02

Glass is a perfect example of a material that is often misunderstood and hence misused. Being a hard and non-porous surface, one is perfectly within their rights to think of it as a reflective surface that can be detrimental to good room acoustics. However, it will only reflect down to a certain frequency, which is determined by the thickness of the glass. Below that frequency, sound will pass through the glass, essentially making it as effective as a bass trap! Unless sound leakage is a huge concern (which it often is) allowing low frequency energy to escape from a room is the easiest and most cost-effective way to deal with reverberation below 100Hz. It is often a good idea to use neighbouring spaces like equipment rooms or passageways to allow low frequency energy to escape, since it will lower the amount of absorption required in a space.

Porous Absorbers

Porous absorbers are the most commonly used type of absorber, mainly due to their predictable behaviour. Any porous material converts the mechanical energy of sound waves into heat through friction. The efficiency of the absorption is related to the flow resistivity of a material, but the range of frequencies absorbed is dependent on the depth or thickness of that material. The thickness of an absorber has to be at least a guarter of the wavelength of a frequency it intends to absorb effectively. If you were hoping for your plush 1inch thick carpet to improve the acoustic absorption of a space, you will be disappointed to know that its peak absorption is at 3.4kHz! This often ends up doing more harm than good in a small room, where over-absorption at high frequencies results in a space that appears "dead" while offering no control over troublesome lower frequencies. To put things in perspective, the wavelength of a 50Hz wave is almost 7 meters, and hence a porous absorber will need to be over 1.5m deep to effectively absorb it. This is expensive and impractical, and clearly demonstrates why porous absorbers are only effective at absorbing mid and high frequencies.

Diaphragmatic Absorbers

Diaphragmatic absorbers are the most effective solution to low frequency absorption in small rooms. When allowing these frequencies to leak out of a space is not an option, diaphragmatic absorbers provide a space-saving and efficient method of controlling reverberation below 100 Hz. Having spent the last few years testing and developing these devices for Menura Acoustic Labs, I can personally attest to their effectiveness. They work by mechanically dissipating sound energy using a weighted membrane stretched over a box whose volume has an effect on the range of frequencies absorbed. When used in combination with porous absorbers, an acoustic designer can use diaphragmatic absorbers to achieve broadband absorption in a space. When attempting to determine the amount of low frequency absorption in a 'small room', a good rule of thumb is that no amount is enough! The only limiting factors are cost and space, and diaphragmatic absorbers help alleviate both issues.

Resonators

Some rooms have issues at specific frequencies, and specialized solutions are required to address these problems. An absorber with a wider band of absorption will throw off the acoustical balance of your space, and this is where resonators can be the most effective solution. Ever tried driving on a highway at a decent speed, and someone in your car lowers their window just a little bit? A weird phenomenon occurs, an extremely distracting low frequency throbbing that makes your eardrums vibrate, best described as 'buffeting'. This is Helmholtz resonance in a nutshell, a fixed volume of air in a cavity (with a small exit) that absorbs sound at a resonant frequency determined by the volume of the cavity and the size of the exit. If you lower a second window, the 'buffeting' stops, since the opening is now large in relation to the cavity. Resonance theory is also commonly applied

to extend the absorption range of other types of absorbers.

Diffusers

Depending on the application, it is often important to preserve some high frequency reverberation in a space for it to sound as natural as possible. Diffusion (scattering) is the best way to achieve this while also taking care of harmful reflections in a space. Diffusers scatter and dissipate incident waves without removing their energy, preventing the listener from localizing reflected waves and psycho-acoustically creating a perception of being in a larger space. products are highly asymmetrical so that they randomly scatter incident waves, which is ultimately the goal of a good diffuser.

Practical Application

Armed with this theory, you now have to use these principles to maximize the acoustic performance of your space. Start by determining the optimum reverberation time for your space, which is easy enough to find online. Avoid single number averages and use a reference curve from Dolby (or anyone else) especially for critical listening and recording spaces. Visualize the interaction between different fre-



Fig.2: Reflection vs Diffusion

They are a good solution to the issues of comb-filtering that were introduced in part one of this series. As with most acoustic phenomena, it is often misunderstood and misused based on myths propagated by audio enthusiasts. Egg crates do not work as diffusers for multiple reasons; their symmetric design is conducive to diffusion only at one frequency, and their shallow depth mean that they will only diffuse the highest of frequencies. The depth and size of protruding shapes in a diffusor determine the frequencies that it can absorb. All commercially available quencies and the surfaces in your space, and plan accordingly to achieve your desired reverberation time curve, which needs to be relatively flat across the audible spectrum to achieve a transparent listening experience. Diffuse to prevent over-absorption in the high frequencies, absorb the mids with porous absorbers, and extend low frequency absorption with the help of diaphragmatic and resonant absorbers. If possible, also allow low frequencies to escape from a space into a nearby corridor or equipment room; this is the easiest way to tame unruly room modes.

KNOWLEDGE

THE EMERGING TRANSITION TO MID-SIZED COMPACT EVENTS

By PALM Expo team

This regular column on **Stage Sound & Tech** this issue brings you a collection of equipment offered in recent months. The accent of product reads 'portable'; 'compact'; aimed at the predictable emerging transition of events, to manageable levels in terms of crowds.

-Accoustic created the speaker array system and live stage sound was transformed. L-ISA patented immersive sound technology by L-Acoustics, very timely indeed, though mustn't have been designed for the transition live sound is experiencing presently, the idea of immersive sound in a decent sized polygon is attractive. When Roger Drego brought the first L-Acoustic array to Bombay probably in 2005, there was tremendous excitement in state-of-the-art, arriving in India, the big question was where is the act? To know more about L-ISA [https://www.pollstar.com/ article/is-immersive-sound-techthe-biggest-thing-in-soundin-2020-143324].

The Polygon set-up [see photo] will be a success in India. PALM expects investment in L-ISA type innovation to imaginatively energise live sound experiential events.

Take a quick look at what's new on the shelf:

JBL Professional IRX115S

powered subwoofer

tech

Harman Professional Solutions JBL IRX115S powered subwoofer. Latest in IRX Series range of portable P.A.s extends system low-frequency response to 35 Hz. The JBL IRX115S powered subwoofer, part of JBL IRX Series, pulls from JBL's top professional touring technologies.

Fulcrum's new coverage pattern for AH high-output coaxial horn

Fulcrum AH66 new coverage pattern for their AH series of High Output Coaxial Horns is a bi-amplified 2-way, high sensitivity, arrayable coaxial horn loudspeaker that provides a precise 60° x 60° pattern with control to below 400 Hz.

B&C largest horn

Innovation exploited with wide-bandwidth ring radiator drivers, B&C Speakers' ME464 extracts full capabilities. B&C's is the largest commercially available horn for professional audio. It features a 22" wide mouth loading an attached driver to 300 Hz, while the 1.4" throat stabilizes a 70° x 55° polar pattern to the upper limit of human hearing

Arista Alvista RS-124-A07 Dual HDBaseT transmitter/receiver system

Alvista RS-124-A07 1U rackmount dual HDBaseT transmitter/receiver system is in three configurations, depending on input requirements. RS-124-A07 offers flexibility for transmitting video and audio over long distances, such as in projection mapping environments. Alvista RS-124-A07 is the ideal solution for extending audio, video, IR control, Ethernet, and power over a single CATx cable.

Lectrosonics DCR822 dual channel portable digital receiver

Lectrosonics introduced the DCR822 digital, dual-channel portable receiver. The new receiver is compatible with all the current Lectrosonics mono and stereo digital transmitters and is backward compatible with any of the Digital Hybrid Wireless transmitters made in the past 18 years. More details from Lectrosonics (www.lectrosonics.com): The DCR822 provides two independent receiver channels at the

L-Acoustics compact, full-range K3 Line Source System

L-Acoustics K Series K3 is its smallest full-range enclosure, designed to deliver big sound for mid-size events with audiences ranging from 1,000 to 10,000. K3 provides full-range bandwidth, without the need for a flown companion subwoofer. Its design reduces amplification needs. These features make K3 economical. Fullrange L-Acoustics contour from an enclosure that is 33% smaller than K2 and weighing only 43 kg (95 lbs).

Beyer TG Instrument Mic Line

beyerdynamic two new microphones in its Touring Gear (TG) series-The dynamic kick-drum microphone TG D70 and the instrument microphone TG I51 crafted at their facility in Heilbronn, Germany. Both mics have rugged die-cast zinc housings and compact designs. M88 capsule in the second generation of the TG D70.

Telefunken TF11 FET Microphone

Telefunken's first large-diaphragm, phantom-powered condenser microphone, TF11 blends

STUDY



12 equidistant speaker arrays positioned on a 12-sided Polygon and a number of speaker points hanging directly above, allowing sounds to travel through a three-dimensional space. Sonic objects can be placed anywhere within the 3D soundscape as every speaker position is individually addressable.

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Austrian-inspired voicing similar to the legendary C12 with modern FET performance, achieving open and detailed 3D sonic image, with quick, accurate transient response, high SPL handling and low self-noise. TF11 circuit elements shared with other Telefunken designs. CK12style edge-terminated capsule is a single membrane version.

OWC Mercury Extreme Pro 6G SSD Drives

These universal fit, internal 2.5inch SATA 6Gb/s solid-state drives apt for production professionals and are offered in 240GB, 480GB, 1TB, 2TB and 4TB formats for laptop or desktop Macs/PCs. The Mercury Extreme Pro 6G SSD is ideal for pro audio and production applications.

Heil Sound PR 37 Vocal Mic

PR37 by Heil Sound designed with the vocalist in mind, the PR 37 produces sound over a wide frequency range. Its upper mid-range response designed to cut through a mix whether live or in the studio. It features a 1.5" diameter dynamic element that is mounted in a rugged housing to reduce handling noise. The PR 37 has a frequency response from 50 to 18,000 Hz and output level of -51 dB @ 1000 Hz.

Waves DSPRO StageGrid 1000

Waves Audio DSPRO StageGrid 1000, a Waves SoundGrid-compatible stagebox. The DSPRO StageGrid 1000 is a compact I/O device for Waves' eMotion LV1 live mixing systems, with eight mic/line ins, four analog out and AES/EBU ins/outs, all digitally controlled. Use this unit close to your mixing console to add more inputs and outputs at FOH or monitors, or on stage in order to add more inputs and outputs for stage performers

Outline's Stadia 28

Stadia 28 constant curvature array designed for outdoor applications. Stadia 28 is a medium-throw system for permanent outdoor installations, ideal for sound reinforcement in stadiums, theme parks. weight:power ratio, being a single enclosure, weighing just 21 kg (46.2 lb), able to reach 139 db SPL, by means of two 8" mid-woofers and a compression driver with a 3" diaphragm – all in neodymium. The system operates in bi-amp format.

Fir Audio IEM Cable Tester

Armed with Fir Audio's IEM Cable Tester, users can troubleshoot their IEM cables. This simple tester is designed to work universally to quickly and easily check for continuity in the wire, while also checking for shorts, to quickly determine whether the problem is caused by the cable or the earpieces.

Korg SoundLink MW1608 and MW2408 Mixers

Korg's SoundLink MW1608 (16 x 8 x 2) and MW2408 (24 x 8 x 2) hybrid analog/digital mixers. Both the 24- and 16-channel models offer instant analog control for live mixing with sound quality and ease-of-use features, combined with the power of a high-end approach to digital audio, such as the high-head-room, HiVolt mic preamps.

JBL Pro Tour Audio software suite update

The JBL Professional Tour Audio Software Suite has been updated to include new features, along with a few minor bug fixes. This update includes: Performance Manager v2.7.0 and Array-Link v1.3 for Android and iOS, and LAC

JBL Professional IRX115 Acou T



V3.5.0. It is recommended that users update these programs to maintain maximum compatibility. Performance Manager v2.70 now offers speaker preset

Firmware Update for Soundcraft Ui24R Digital Mixer

Soundcraft v3.3 firmware update for its Ui24R 24-channel digital console/ USB multi-track recorder with wireless control. Ui24R delivers flexible I/O, intuitive wireless control and roadworthy reliability.The system can double as a stagebox and can be controlled by up to 10 devices via Ethernet or built-in

JBL Pro's 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, delivering uncompromised low-frequency performance. Differential Drive technology endows the drivers' performance, while patented SlipStream[™] port technology offers improved airflow, reduced audible turbulence at any operating level.

Radial Engineering Acoustic Instrument Preamps

Acoustic Series preamps targets acoustic instrumentalists, from guitarists and stand-up bassists to orchestral string players. Acoustic Series family is comprised of four units, the PZ-Pro, PZ-Pre, AC-Driver and PZ-Deluxe. PZ-Pro, combines a two-channel instrument preamp, DI and switcher into a single unit.

Waves WRC-1 WiFi Stage Router

WRC-1 WiFi Stage Router, rack-mountable wireless router, designed specifically for pro audio applications such as on-stage IEM control. WRC-1 suitable for audio setups that require dBTechnologies VIO L1610

secure and robust WiFi connectivity, such as remote control of audio consoles and PA equipment in venues, stage productions, houses of worship, etc.

dBTechnologies VIO L1610

dBTechnologies ' VIO family adds VIO L1610, a powered, compact 3-way active line array system equipped with two 10" woofers and a coaxial MF/HF compression driver. Onboard DSP, 1,600 Watts (RMS) of DIGIPRO G4 amplification and versatile rigging options complete the package. Weight is 69 pounds.

ABSORE

Ray of LIGHT In Conversation with Becket Tundatil

The Coronavirus has disrupted industries from all sectors including Lighting. The outbreak has left a significant impact on the events industry with shows being postponed or cancelled. **PT** spoke to Lighting Designer **Becket Tundatil** to get his take on the current situation and the future of lighting design in the virtual space.

Becket Tundatil is a lighting designer with vast experience in the entertainment Industry. He has designed musicals, concerts, television reality shows, corporate events and award functions. He is currently focusing on setting up his designing firm Fireflies Architectural Lighting Company that will focus on the fundamental aspects of illumination of structures and spaces.



The kind of shows I have been associated with are generally large scale involving huge audiences so the impact of the pandemic has been quite hard. However, with extra time in hand, I got the opportunity to research lighting which I always longed to do. It is fascinating to learn about the evolvement of the lighting industry over the years specifically stage lighting. I also enrolled in some specialized lighting courses online to enhance my skills. We also got a chance to develop some plots and demos for our clients for the pre-visualization of their shows. Hence, though it has been productive in

Becket Tundatil



The latest MA3 console supplied on priority to Tundatil by Rajan Gupta of Hi-Tech Audio Systems Delhi - official distributors of MA Lighting in India. This full size console has been used by Tundatil for events like, Mirchi Music Awards 2019, Mirchi Top 20, Supersonic 2019 and various A R Rahman live concerts. The board currently sits pretty on Tundatil's workstation and is being used for virtual setups, giving Tundatil a massive opportunity to enhance his skills for live shows, television shows and virtual set ups

terms of knowledge but shows wise it has been a slowdown. Earlier with back to back shows and working on multiple shows at the same time, the current period has certainly given me some time off to rethink and realign to update my workflow.

Have you done any work during this lockdown? Were you in the process of doing something before the lockdown happened?

Just before the lockdown, I completed two award shows that were televised. I did the Mirchi Music Awards, Mirchi Top 20 Awards, and VH1 Supersonic in February. Then we did the A R Rahman Pune Show. We did all this just before the lockdown, so every week we had one show to do right up until the lockdown was announced.

How is the current environment affecting lighting design? What has been the hardest part for the industry and lighting designers in these past six months?

I have been in touch with other

lighting designers. Many of them have mentioned that there are a lot of safety norms that have been introduced in this pandemic. I think some of the lighting designers I know have started to work with corporate events, fashion shows, and the kind of shows where there is control over the audience and technical crew. Even though the televised shows have started, it is being done without the audience and everyone is working towards maintaining the quality of the shows as before. The budgets have also been cut down drastically for everyone but the references and expectations are as before. It is challenging for everyone to deliver in such situations.

Lighting designers always keep evolving and upgrading themselves - from show to show from season to season. What has slowed down is that we are not getting a chance to try new things. For example, the MA3 was launched and everyone was very excited about using it in the industry but we haven't got a proper chance to do so. Even Hi-Tech Audio in Delhi, who is the MA distributor in India, had provided me with the MA3 just before the lockdown and I was in touch with some clients to start using the MA3 in particular shows, but we couldn't try out the new gear to the fullest and upgrade our knowledge of the system. Also, every few months we would have new products launched in the international market and right now there is a slowdown on that front as well. Since there is no demand for new products, there is nothing new coming which is effecting the lighting designers as well.

If the Pandemic has seen a constraint on budgets, how do you manage to give your clients what they are looking for within these constrained budgets?

It's not new for us to deliver quality with constrained budgets. We are used to such scenarios where the expectations are very high as compared to the budgets proportioned for it. By reducing the gear and altering the types of lights, we work around the client's budget to give maximum output. For instance, there have been times when we have used moving heads for face lighting. The motive is to deliver the best quality and maintain a balance among all departments – production,



Resolume Arena the tool used by Tundatil for video control



Cubase software used by Tundatil for sending time code signals to the lighting consoles

lighting department, and the rental company.

How are lighting designers and the industry working in tandem to cope with the situation?

The current situation is tough for all. In the beginning, some of the key players of the entertainment industry organized some very well-curated online sessions where we got a chance to share our experiences and knowledge with others. A basic lighting training module was also shared for the in house managers of event companies. This was very motivating for us as well to keep our spirits high. I am also aware that lighting designers are being called upon for the smallest possible shows by the production houses and event management companies to keep the ball rolling so its all a teamwork

How do you see the future of the lighting industry post the lockdown?

The future of the lighting industry seems quite positive and I think that post the lockdown once the industry operates without restrictions, things will boom. I am certain that this time has helped lighting designers and production houses to come up with unique concepts and ideas which can be implemented in due course of time. As for me, I am also gearing to use new types of software and console to raise the bar.

What kind of future do you see for the Lighting industry in the virtual space?

Anything is possible in the virtual space. It is still being explored with various combinations and I am sure for the lighting industry it will open up a lot of creative boundaries. The visual experience a lighting designer can bring out in the virtual space is limitless and how intelligently and creatively it can be made be virtually real is what is exciting.

Have you done any virtual shows during the lockdown?

Currently, we are in the process of doing a few virtual shows for different clients. Initially, everyone believed that this wouldn't last too long but now the situation has changed. At the moment I am working on a virtual show for a renowned musician which is still in the design phase. I have also developed a recording and a live stream set up in my studio, which can handle any scale of virtual shows. It is a unique setup that gives a client the freedom to make changes on the go while keeping the overall experience very similar to a real show.

Can you please give us the knowhow of what goes into making a virtual show, what is the process involved and technicalities? How is doing a virtual show different from doing a live show? The technical process is quite similar to live or television shows. However, here we don't use actual fixtures during the set-up. It's all visualization done on software. We start with a venue and stage design which is made keeping the show flow and content in mind. Later the lighting design and video design comes into play, followed by the sound technicalities. Then we go through the preprogramming stage where the whole show detailing is checked from video, lighting, and sound point of view. And the final stage is either recorded or streamed as per the client's preference.

For large events, we already have software that we use for visualization, like Wysiwyg & Vision; these create a virtual environment. We call this the pre-visualization stage. The purpose of the pre-visualization stage is to show demos to clients, to pre-visualize a show for the artist before we go on the ground. So in that sense, these are all virtual environments that I was already working with in the live events space; we were always involved in a virtual shot, the props, the light, etc. We always worked in the virtual environment; it was a part of lighting for some of our shows as they demanded a virtual rig and pre-visualizations in the past.

But the virtual shows that happen nowadays require the artist to be merged in the same frame.

And how are you making sure that you still give the virtual events, that same feeling of being at a live concert or a live show?

A live concert is an experience that cannot be replaced by virtual. We can have the most magnificent set design with spectacular lights and video but the joy of being in a live concert is different. Sound also plays a very important role. What I feel is if the experts of different areas come together cohesively to create something it would work better. Right now for example, since I am a lighting designer I am

(Continued on page 58)



Live Video Streaming Software VMix



indian RECORDING ARTS ACADEMY AWARDS

Grateful Thanks to the Entire Sound Recording Fraternity for making the 14th IRAA a Great Success



Concept and Production by:



Organised by:





CLAYPAKY AXCOR PROFILE 600 TEATRO AVAILABLE IN TWO NEW SILENT VERSIONS

The **AXCOR PROFILE 600 TEATRO** is a special version of the Axcor Profile 600 ST that features an updated cooling system and mechanisms to significantly reduce the unit's acoustical footprint. Available in two different CRI versions, this fixture is ideal for applications where noise is a concern in venues such as theatres, television studios, opera houses, conference halls, and more.

Axcor Profile 600 TEATRO fixture offers a flat, uniform beam (no visi-

ble hotspots) and has the same physical features, size, and effects of the Axcor 600 family of fixtures making it another very versatile tool for lighting designers. The Axcor Profile 600 TEATRO offers a zoom range of 5.3° to 47.2°, CMY colour mixing, linear CTO, colour wheel with five colours, rotating gobo wheel with seven gobos, rotating 4-facet prism, interchangeable animation wheel, motorized framing system on 4 focal planes, variable frost filter, high-precision iris, electronic linear dimmer and electronic strobe.

The unit is available in two different CRI versions: the Axcor Profile 600 TEATRO, CRI of 70 with an output of 28,000 lumens at 6500K and the Axcor Profile 600 HC TEATRO, CRI of at least 90 with an output of 21,000 lumens at 5600K. Reduced noise and a strong feature set makes the Axcor Profile 600 TEATRO fixtures ideal for many applications.



ADJ'S PROFESSIONAL LED-POWERED ELLIPSOIDALS NOW AVAILABLE

ADJ has introduced its new range of Encore Profile Pro professional LED-powered Ellipsoidal fixtures, complete with a wide selection of lens options

Ideal for theatres and other performance spaces looking to embrace the power-saving and heat-reducing benefits of led, without compromising on performance or features, two models are available. The Encore Profile Pro WW has a powerful warm white led engine, while the Encore Profile Pro Color offers full color mixing from a 6-in-1 led source. The **Encore Profile Pro WW** features a potent 260W warm white LED light source with a color temperature of 3200K. It generates an even field of light, with no hot spot, and boasts a high CRI in excess of 97. When used with a 26° lens, it measures a total light output of 10,000 lumens, while the LED engine has an average lifespan of 50,000 hours.

The Encore Profile Pro Color utilizes a 250W 6-in-1 RGBWAL LED engine, which also boasts an impressive 50,000hour average operational life. Through



independent dimming control of the red, green, blue, white, amber and lime LED elements, this fixture can be used to generate a huge gamut of colors ranging from vibrant primaries to subtle hues. It can also be used to generate color-corrected white light, with a macro function providing easy selection of a range of different Kelvin color temperatures. It has a light output of 6,000 lumens (measured with a 26° lens) and offers a CRI in excess of 90.

These robust and reliable fixtures can be used with ADJ's range of

interchangeable lens tubes, however they have an industry-standard design and can therefore also be used with any existing ellipsoidal lenses and accessories that a theatre, production company or rental house may already own. Both models support B size metal or HT transparency GOBOs and feature a four-blade manual framing shutter system as well as manual focus adjustment. They offer smooth 0-100% digital dimming and variable speed strobing. The LED

refresh rate can also be adjusted for TV/ film work and a number of different dimming curves can be selected to suit varied applications.

"We are excited to extend ADJ's range of theatrical lighting products with the introduction of the new Encore Profile Pro ellipsoidals," comments ADJ USA's National Sales Manager, Alfred Gonzales. "They are ideal for theatres and other entertainment venues looking to upgrade their stage lighting with industry standard fixtures that offer all of the benefits of an LED light source. Not only do these units require significantly less power than comparable conventional fixtures and remove the need for regular lamp replacement, they generate less heat and have an even field with no gel/filter-damaging hot spots. The Encore Profile Pro WW and Encore Profile Pro Color offer a fantastic price-to-feature ratio and we expect them to prove extremely popular in both the theatrical and house of worship markets."

The Encore Profile Pro WW and Encore Profile Pro Color, as well as the EP range of lens tubes, are shipping now from ADJ distributors and dealers worldwide.

Coming Up The November-December 2020 Issue:

Theatre and Auditorium Special

www.palmtechnology.in

For Editorial: srai@palmexpo.in

For Advertising Queries: pshukla@palmexpo.in

lighting system also includes four

THRILL Multi-FX LED lights as well

as a JEM Compact Hazer Pro and

of their ability to deliver high

"We chose JBL Professional's AE and All-Weather speakers because

quality sound with directivity from

techniques," Ali said. "Smart Homes was very instrumental from the very

its design and full-range cardioid

beginning in terms of the output

and very confident with the design.

The entire process was very smooth

and they made sure everything was

"This is a very special project as it

gave us an opportunity to show-

DMX 5.3 Splitter.

setup on time."

HARMAN PROFESSIONAL'S AUDIO AND LIGHTING SOLUTIONS GO SKY HIGH

To enhance its venue and provide guests an unforgettable clubbing experience, **Sky High – The Club** hired integrators Smart Homes to design and install cutting-edge **HARMAN Professional** audio and lighting solutions.

Known as the best rooftop venue in Kharadi, Sky High – The Club, spans more than 5,000 square feet and offers guests a one-of-a-kind nightlife experience. The impressive facility features an indoor clubbing space with a DJ booth and dance floor as well as an outdoor terrace with a patio and bar. Looking to take the impressive venue to the next level and offer an even greater partying experience, Sky High -The Club upgraded its sound and lighting systems to top-notch HARMAN Professional audio and lighting solutions that feature JBL Professional loudspeakers, Martin Professional lighting and much more.

"For the club's sound, we were looking for control," said **Shaukat Ali** of Sky High – The Club. "Since the venue is located in an IT hub and surrounded by a residential neighborhood, we need to control the levels that we are sending to our audience and outside our facility. It's very important that we do not annoy our nearby residents."

Filling the bar's indoor club environment with crystal-clear sound, Smart Homes installed JBL AM7212/26 12" high power twoway loudspeakers as the main PA, while AM7212/95 speakers supply delay fills. Adding accurate, authoritative bass, the system features two ASB6128 dual 18" high powered subwoofers, which are positioned under the DJ booth and directed towards the dance floor for optimum performance. For the **8|600N eight-channel amplifiers** with BLU link to power the outdoor system.

While JBL Professional loudspeakers supply incredible sound, Smart Homes installed an array of Martin Professional fixtures to create dazzling lighting displays throughout the venue. **Eight**



DJ monitor, Smart Homes deployed a PRX812 full-range loudspeaker. The system is powered by Crown XTi 6002 and DCi 4|1250N amplifiers, while BSS BLU-100 signal processors with BLU Link ensure guests are treated to peak audio quality.

Creating an engaging, fun atmosphere in the outdoor terrace area, Sky High – The Club features 10 JBL AWC62 all-weather, compact two-way loudspeakers. In addition to delivering excellent sound, the speakers allow Sky High – The Club to direct the audio inside the venue and limit unwanted noise from spilling to the surrounding industrial and residential communities. Smart Homes selected **Crown DCi**



Martin THRILL Mini Profile moving heads allow the club to shine spotlights or add the dramatic effect of colors and "gobos" when and where they need them, while eight THRILL Compact Par 64 LED lights wash the venue with full, intense and saturated colors. The sound and lighting," said **Pratik Singhal** of Smart Homes. "We could design the outdoor sound, club sound and also use Martin lighting to create excellent effects. The client was very happy with the final outcome, and so were we."

ETC LAUNCHES SOURCE 4WRD COLOR

ETC has introduced Source 4WRD Color as the latest addition to the Source 4WRD fixture family. This new product offers a color-changing retrofit for existing full-size Source Four ellipsoidal/profile fixtures, bringing additive RGBA color-mixing, saturated washes, quick color changes and much more to Source Four.

As a non-destructive retrofit, Source 4WRD Color is the next generation of ETC's Source 4WRD LED line. Source Four ellipsoidal/profile fixtures can be transformed into RGBA LED luminaires with the Source 4WRD Color LED engine, while retaining all of the features of the Source Four including the lenses, accessories and its renowned reliability. Source 4WRD Color technology is also available in two complete wash light fixtures. The **Source 4WRD Color PAR** and **PARNel** deliver soft-edges and saturated color, no retrofit required. These luminaires incorporate the Source 4WRD Color LED engine into a custom housing, offering economical color washes, including zoom on the PARNel version.

As well as producing a homogenized beam and around 5000 lumens, all versions of the S4WRD Color features 12 built-in presets and 5 sequences in stand-alone mode. With the addition of FixtureLink, Source 4WRD Color is compatible with cable-connected fixtures (using the DMX port) including



ColorSource, Source Four LED, and Desire; allowing you to trigger presets and sequences without a console.

David Lincecum, Vice President of Marketing at ETC comments: "With Source 4WRD Color, you get a simple and cost-effective color-changing retrofit that can upgrade an existing lighting system quickly, allowing you to create even more stage looks than before. 4WRD Color will allow venues to move their existing equipment to LED, using less energy, lower maintenance and all this at a very compelling price point."

ELATION EXPANDS HIGH-VALUE FUZE SERIES WITH FUZE WASH FR LED FRESNEL

Designed as the perfect fusion of performance, features and value, **Elation's Fuze series** of LED fixtures has found a niche in the market whenever outstanding price: value is high on the list. Elation is expanding the series with the **Fuze Wash FR**, an automated LED Fresnel fixture with framing designed for a wide array of precision lighting applications and ideal for the refined performance required in theatrical venues.

The Fuze Wash FR features a new 480W (6,500K) 92 CRI engine that utilizes a 5-color homogenized LED array of Red, Green, Blue, Mint and Amber sources, the same color system found in the Fuze Profile and Fuze Spot for a perfectly calibrated color match. High color quality and color manipulation are central to the Fuze Wash FR. A virtual gel swatch book, virtual color correction, magenta/green adjustment plus CMY emulation give designers access to an impressive LED color array including a beautiful mixed white. The carefully-tuned RGBMA LEDs and extremely high native CRI ensure accurate color reproduction while delivering a powerful output up to 14,000 lumens.

The Fuze Wash FR features a specially designed Fresnel lens for a smooth and even wash and houses an 8.2° to 42.1° (beam) and 12.7° to 62.1° (field) motorized zoom for tight to wide coverage. A full blackout framing system with four rotating blades gives full control of the beam shape when required and can

index +/- 60-degrees. A variable frost filter can be added at any time for an extra layer of smoothing. The fixture dims seamlessly all the way to zero with 16-bit selectable dimming curves included. An iris for advanced beam control and high-speed electronic shutter and strobe round out its feature set.

The Fuze Wash FR is designed for any application where an automated Fresnel fixture with outstanding colors, a wide zoom range and framing beam control where a soft field is required. It is powerful enough to use in all sizes of rigs and because it is remarkably silent can be utilized in any noise sensitive environment. The Fuze Wash FR is fully optimized for broadcast



environments as well with LED frequency adjustment for flicker free operation. It is outfitted with all the professional control and connection features that designers should expect from a modern luminaire.

EOS GETS AUGMENT3D WITH THE RELEASE OF EOS V3.0

ETC officially released the Eos v3.0 software, bringing powerful three-dimensional programming and augmented-reality control to the Eos platform. This update marks the official integration of the much-anticipated Augment3d toolkit into Eos.

With Augment3d, users can program moving fixtures with unprecedented speed and ease, visualize their cues in an imported model of their space, and even position lights with a flick of an augmented-reality smartphone "focus wand."

The new software runs natively on all the latest Eos Family hardware and can be used with the ETC nomad software on Mac and PC.

Augment3d supports over 50 dif-

ferent 3D file extensions for importing venue or set models, and can easily import fixture plot using a Vectorworks plugin. Even without a pre-existing plot or model, users can use the Fixture Position Estimation tool to quickly reverse-engineer the spatial coordinates of their moving fixtures from as few as four focus palettes.

. The Graphical User

Interface (GUI) has undergone a major overhaul, including new display management features that let you drag and rearrange tabs. Additional information has also been added to the Faders, Palettes, Presets and Groups displays.



Users working in video applications can now toggle optional reference overlays on the Color Picker to assist in choosing camera-friendly colors.

The software also introduces new tools for working with effects, multi-cell

fixtures, fixture parameters, and more. New controls also let users add multiple mirrors to Offset selections, invert channel selection when using a jump offset, or to use the channel selection order from a group to create an offset pattern.

CLAYPAKY ANNOUNCES HY B-EYE K25 TEATRO

Claypaky adds to its HY B-EYE 25 series with the introduction of the HYB-EYE K25 TEATRO; a special version of the HY B-EYE K25 that is designed for venues that need silent operation without sacrificing bright colours. This fixture is ideal for theatres, television studios, conference halls, showrooms, corporate events, and more.

The HY B-EYE K25 TEATRO has all the same optical, electronic, and mechanical features of the HY B-EYE K25 with changes in the overall design to reduce the acoustical footprint. This luminaire has the same thirty-seven powerful 40-Watt Osram Ostar RGBW LEDs, a zoom range of 4° to 60°, uniform lightspread, a rotating front lens, an enhanced electronic engine for dynamic beam pattern design with digital accuracy and repeatability, individual control of each single LED to make spectacular kaleidoscopic projections and charming eye-catching effects.

The HY B-EYE K25 TEATRO is extremely bright thanks to its powerful lightsource and special optical unit with a truly amazing lumen/watt ratio. The built-in Kling-Net protocol



enhances the lighting designer's creativity, while making the manage-

ment and synchronization of LED light parameters and functions simpler.

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Lighting Console

ChamSys MagicQ MQ500M Stadium

MagicQ MQ500M Stadium offers the highest level of show control, supporting 256 universes directly from the console without need for external processors.

Main Features include:

- 256 universes direct from the console
- 15 fully motorised fader playbacks
- 15 encoder playback with RGB indicators
- 12 multi-purpose Macro/Executes/Playbacks
- keysRGB illumination of playbacks
- Backlit buttons
- Dual Inbuilt 15" Multi HD touch displays
- Up to 8 touch displays support (5 via remote
- network)
 Dual motorised 100mm crossfaders ideal for
- Dual motorised 100mm crossfaders ideal for Theatre
- Inbuilt MagicVis Visualiser with full rendering of beams and gobos

Technical Specification:

Hardware Specifications:

- Universes direct from the console (via Artnet/sACN/Pathport): 256
- Direct DMX Outputs: 4
- Motorised Playbacks: 15
- Encoder Playbacks: 15
- Macro/Execute/Playback Section keys: 12
- Total no of Playbacks: 42 (15+15+12)
- Dual Motorised Cross Faders: Yes
- Attribute Encoders: 8
- Backlit Keys: Yes
- Illuminated Playback/Encoders with RGB control: Yes
- Intensity Wheel: 1
- Network Ports: 4
- Inbuilt 15" HD Multi-Touch Displays: 2
- External Monitor up to 1920x1200 Resolution - DVI-D Port: 1
- USB Ports, including 2 High Power USBs: 6
- Audio Input (1 channel, 7 band): Yes
- Audio Output: Yes
- MIDI Ports 1 in and out: Yes
- LTC Timecode Ports in and out: Yes
- Remote Input: Yes

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- Inbuilt UPS: Yes, uses 12v Lead-Acid Battery
- Front Storage Pockets: 2

- Power Input, Neutrik powerCON TRUE1 110
 to 240 VAC
- Console Weights and Dimensions:
- Width: 860mm (33.8 inches)
- Depth: 585mm (23 inches)
- Height: 90mm high at front (3.5 inches), 175mm high at rear (screens stored) (6.9 inches)
- Weight: 32kg (70.5 lb)

Altman Genesis

The Genesis Lighting Control Console combines the ease of use of a fader-based lighting controller, with the power of a touch screen graphical user interface. A 7" capacitive touch screen provides a powerful user interface with the familiarity and comfort of today's smart phones, making it easy to control.

Main Features include:

- Control of up to 24 individual fixture group over 512 control channels
- cETLus listed for indoor use and CE marked
- Two-year warranty
- Ten (10) playback faders with ind. flash /GO buttons
- Ten (10) playback pages
- Two (2) master faders
- One (1) playback master & One (1) fixture master
- One-Hundred (100) Cue Lists with up to 1,000 Cues or effects.
- On-Board context sensitive help with multi-language support
- "Animate" feature create complex effects between two or more fixtures simply.
- Fixture template wizard
- 7" color capacitive touch screen
- Icon driven graphical user interface system
- Additional playback and DMX outputs available with Genesis Wing (Accessory)
- One (1) RJ45 Ethernet port for support of: SACN and ARTNET
- Low Voltage Power Jack with external power supply
- Dual USB for file storage and wing connectivity
- Multiple Undo / Redo Command

Technical Specification:

- Interface: Twenty-Four (24) Luminaire intensity faders; Ten (10) Playback Faders over 10 pages; One (1) Master Play back faderOne; (1) Master Luminaire intensity faderOne; (1) 7" Capacitive 5-point touch screen
- Storage: 4GB Flash Memory; 1,000 Cues /

55

Animations; 100 Cue Lists

- Data Connections: DMX 5 Pin XLR (1); USB 2.0 (2); RJ45 Ethernet (1)
- Data Protocols: DMX 512a, sCAN, Art-Net
- Input Voltage: 100 to 240 VAC, 50/60 Hz (Remote Power Supply)
- Power Input: 1.5A @12VDC 2.5mm Jack
- Environment: 0 to 40 degrees C (32 to 104 degrees F) with humidity of 5%-95% (non-condensing)
- Weight: 10.8 pounds (4.9kg)
- Dimensions: 19.3" x 12.99" x 3.2" (530 x 380 x 130mm)
- Compliance: cETLus listed and CE marked for indoor use

High End Systems HOG 4-18

Hog 4-18 is designed for the largest stadium shows, theme park installations and concert tours. Hog 4-18 shines in any environment requiring a multi console setup and networking.

Main Features include:

- Robust Hog 4 OS operating system
- 5 high-resolution parameter encoders
- Built-in tri-axis backlit trackball with cursor and parameter control functions
- 10 master playbacks with motorized faders and master control keys
- Dual 18.5" multi-touch screens, tilt adjustable
- Up to three external display port monitors, with touch or multi-touch
- 8,192 output channels, expandable with DP8K processors
- 8 Neutrik XLR-5 DMX outputs
- sACN and Art-Net
- MIDI In, Out and Thru
- Dual EtherCON connections for HogNet and FixtureNet
- Integral keyboard drawer and storage drawer
- Accessory arm mounts, one arm and VESA
- mount bracket includedTwo blue/white desk lamps included

Technical Specifications :

1GB/s Ethernet port

Connectivity:

Widgets

Local DMX-512 outputs: 8x Neutrik 5-pin XLR

• Expandable DMX-512 outputs via USB DMX

Local Art-Net and E1.31/sACN outputs: 1x

Local HogNet 1GB/s Ethernet port

Lighting Consoles allow lighting designers to control several light fixtures for live shows, performances, and various other events. In today's lighting industry there are many different consoles to choose from. *PT* has put together a list of Lighting Consoles to help make the choice easy.



- Unlimited DMX-512, Art-Net and E1.31/sACN universes via HogNet-connected DP8Ks
- LTC/SMPTE input via 3-pin XLR
- MIDI in/out/thru supporting MIDI messages, MIDI Show Control, and MIDI Time Code
- Expandable MIDI and LTC inputs via USB
 MIDI/LTC Widgets
- Unrestricted connectivity to visualizers via encrypted Fixture-Net Visualizer Stream. (Art-Net and sACN to visualizers also supported but restricted by system's total output capacity)
- OSC (Open Sound Control) for remote control and integration
- USB 2.0 ports: 6 rear / 2 drawer

Electrical:

- ETL, CETL and CE compliance
- Mains power: 100-250VAC, 50/60Hz, max 120W
- Mains connector: IEC320 C13
- Fuse: 1x 5x20mm 5AT fuse

Weights and Dimensions:

- Width: 994mm / 39.1"
- Depth: 746mm / 29.4"
- Height (Monitor Up): 430mm / 16.9"
- Height (Monitor Down): 169mm / 6.7"
- Weight: 42kg / 92lb

Obsidian Control Systems NX4

The NX4 is a comprehensive feature packed control surface. With a well-arranged combination of motorized and manual faders as well as an array of playback button the NX4 offers 44 total playbacks in a compact yet extremely powerful package.

Main Features include:

- Adjustable 15.6" Full HD multi touch screen, 2x external 4K Touch Displays
- 44 playbacks (10 Motorized, 12 Sub, 22 Playback Executors)
- 9 Encoders, Keypad, Trackball, 14 Function keys, assistive 3.5" touchscreen
- 64 Universe integrated processing
- Network, DMX, Timecode and Midi Connectivity
- CAPTURE Duet Edition License.

Technical Specifications :

Surface:

- 10 x 60 mm motorized playback faders, each with 4 xfunction-assignable buttons, digital backlit labels
- 12x 45mm Sub Playback Fader with Flash keys

- 22x Playback Executors
- 12 x customizable multi-function keys
- Playback Select button
- 2x Master Go section with Go, Pause, Snap and Release
- 4 x digital rotary encoders with push function and statusLED for fixture parameter control
- 4x screen mounted digital rotary encoders with push
- 1x digital intensity Encoder with push
- 3.5" RGB touchscreen for parameter groups, effectparameters, fanning and global timings
- 1x 60mm Grandmaster with Flash/DBO
- Blind/HighLight/Last/Next buttons
- Full numerical keypad and command keys
- Industrial Trackball

Hardware:

- Industrial 15.6" TFT 16:9 touchscreen (1920x1080px)
- 250 GB NVMe M.2 storage drive
- Industrial motherboard with Intel i5 Hexa-Core CPU
- Quiet thermal design using advanced copper heat pipe coolers
- 16 GB DDR4 RAM
- Integrated graphics processor
- Windows 10 IoT Embedded Operating
 System
- OS installation by USB 3.0 storage device
- Supports Windows USB touch screens

Connections:

- 4 x DMX / RDM Universe In/Out: 5-pin locking XLR
- External Display: 2x DisplayPort (up to 4k)
- External Display Power: 12V, 2x Molex 8pin
- Network: 2x Gigabit EtherCon for Art-Net, sACN and ONYXX-Net
- Storage and Peripherals: 3x USB 3.0, 3x USB 2.0
- Audio Out, Mic In: 2x 6.3mm Jack
- MIDI in/out/thru (MIDI show control, MIDI notes, MIDItimecode): 5pin DIN
- SMPTE Timecode In/Out: 3-pin XLR
- Seetronic Power In
- Desk lamp: 2x RGB LED, integrated

Electrical:

• 100-240 V nominal, 50/60 Hz, 140W





MA Lighting Grand MA3 onPC Command Wings

The grandMA3 onPC command wing is the ultimate grandMA3 mobile solution. In combination with the free of charge grandMA3 onPC software, the grandMA3 onPC command wing is a portable 2 048 parameter control solution that can be used in nearly any location.

Main Features include:

- Real-time control for 2 048 parameters in combination with grandMA3 onPC
- Expandable up to 4 096 parameters with onPC products and grandMA3 onPC
- Command section similar to grandMA3 compact layout
- 29 rotary RGB backlit encoder
- 5 Dual encoders
- 10 motorized 60mm faders
- 40 separate playbacks
- 16 assignable x-keys
- 2 motorized A/B faders 100mm
- 1 Level-wheel
- Individuality backlit and dimmable silent (clickless) keys
- Connect via USB to any PC running grand-MA3 onPC

Technical Specifications (ARCS WIDE):

- Parameters: 2 048 (HTP/LTP)Parameters Mode2: not applicable (no
- Mode2)
- Operating voltage/ Supply voltage: 100-240V, 50/60Hz
- Power: max. 50VA
- Operating Temperature: 0 °C up to 40 °C / 32 °F up to 104 °F
- Dimensions: 620 x 427 x 102 mm / 25 x 17 x 4 in; (width x depth x height)
- Net weight: 10 kg / 22 lbs
- Connectors: 1 x IEC-60320 C14 cord; 2
 x DMX512-A Out (5pin XLR female); 1 x
 DMX512-A In (5pin XLR male); 1 x MIDI In
 (5pin DIN female); 1 x MIDI Out (5pin DIN
 female); 1 x Linear Timecode In (3pin XLR
 female); 1 x GPI General Purpose Interface
 (D-SUB DE9 female) for remote control; 1 x
 USB 2.0 (type B); 1 x LED desk light (4pin XLR
 female)

TOO BRIGHT

don't understand what's going on any more. Does anybody?

All of us want to go back to a familiar Life. We want to work, we want to live and we want to go back to our struggle to be the best at what we do.

So many people and sources bombard us with how to navigate these days. What to wear, what to eat, where to stand and even what to think.

The economy is in smithereens. At least our industry is. We have to keep on running while our world is at a standstill. That is a leveller. The biggest, richest guys down to the most junior technician are worried about how to keep our families afloat. All of us are reviewing our commitments. How long can we hold on without having any idea when we can go back to work?

Fundamentally we are an energetic group of guys. We are always trying to do something new. Always pushing the envelope. Our sive transformation over the last few years. LED led. Pun intended.

I am old enough to remember switching on the First Par 64's in India. I was awestruck by its power.

Until that point my experience in lighting was centred in the theatre. Where mood and atmosphere are everything. I was constantly being yelled at 'can't see their faces'. Until the inevitable compromise. Set the mood in the first minute and then lift levels or (Some serious threat here depending on the director). Alyque would threaten to chop my hands off. Pearl would use a softer touch "....No meat in your curry tonight"

I'm not being racist or anything but the first time I was noticed as a Lighting Designer was doing a play in Max Muller Bhuvan. Normally a lecture hall with a no place for any fixtures at all. A low ceilinged White Painted room with a white floor. To make thing even more challenging. Pearl decided to do this play 'In the round 'so if we put up any stands – the light would fall into the

For me the greatest Challenge, excitement and horror all rolled into one stems from the coverage LED's offer. You can place the damn things anywhere and everywhere. AND control them with an immense level of exacting detail. Both Remote as well as wired.

Industry is based on everybody looking for the next big thing.

It's not in our DNA to sit and webcam all day. We want to use our hands. We think with our fingers. We don't talk. We 'do' stuff. Nobody listens to anybody in this crazy corner of the world. I've never been in a production meeting without somebody always jumping up and running around. The only thing that keeps us at a common table is food and drink.

So Guys – Grab a healthy titbit and let's talk Lighting. Let's forget our problems for a short while and let's talk about something that cheers us.

Lighting was undergoing a mas-

audiences eyes. That's not all. The two leading ladies were a White Skinned Parsi and a really dark skinned African lady. If you lit a match the Parsi lady's face would Glow. If you flooded the room with all the lights we had – the African ladies expressions would barely register.

I got permission to remove all the fans over the stage area and hang fittings pointing straight down (so no spill into the audience's eyes) and then fill in all the other areas with really low foot light. That was my first lesson in 'Shadows have no colour '.

I'm not saying all this to impress you. I'm trying to explain how low our lighting levels were just a few years ago. Into that world came the Par 64 and the Lee / Roscoe colour filter swatch book. The power of the Par allowed us to paint the stage in so many shades of blue or pink. Bathe the stage in warm tones or cool.

Viraf Pocha

The Qright Spark

The power of the Par allowed us build stages across stadiums. When we ran out of lighting stands, we brought in entire scaffolding structures. I remember being told off by an Art Director who said 'Bugger, if you have these bloody ugly scaffoldings in the audience nobody will believe my set is complete'. So he actually extended the set to incorporate the side lighting towers into his design.

The Generator industry Boomed as the demand for more and more Pars required more and more power. Bigger Brighter Everything.

Then moving Lights appeared. In theory now one light could do the job of ten and the light technician was freed from the hassle of climbing and focussing all those lights.

I personally was caught between two ideas. I loved the ability of moving lights changing colour and position; I missed the warmth of tungsten light. Sadly no manufacturer could bring the softness of tungsten light into a moving head. Apparently the Blues looked too muddy.

The Moving Light revolution did bring many youngsters into the world of lighting. Unfortunately they did not have the time or the patience to understand the subtlety of lighting. Their brashness and young blood combined with the rebellious music of the era made Lighting Design all about speed and flash of the moving lights. It became like the Wild West when the fastest shooter in town became the sheriff.

A Group of us old timers started a movement 'Why must you see the moving lights move ?' The premise was – Set up a position, colour effect on a light. Then fade off. Recalibrate the lights in the darkness and bring it up again in another place in another colour.

Watching lights move was far too exciting and an easy sell to sensation seeking producers. So our lot settled for smooth transitions and graded fading. Today most boards have earned their reputation delivering just that. That explains why a board designed to be used in German Opera houses is today the board of choice around the world, surpassing the cockpit looking boards designed by ex NASA scientists.

Now LED threatens to upend all of that. That humble diode that was designed to signal that an electrical circuit was functioning is now the centre of everyone's homes and shows.

The research and optics that have gone into harnessing its potential is immense. The Greens love the fact that LED's produce an even brightness at substantially lower electric consumption. So leading to a massive saving of costs.

I've seen too many artists bite the dust before statistic quoting bureaucrats.

But cost savings and environment savings are very real. In fact despite much opposition the EU has mandated that every entertainment fitting installed within the EU necessarily has to be LED based.



The Pright Spark

A set of road warriors are fighting it. But their two arguments sound increasingly hollow. They go somewhat like;

- 1. Would the Taj Mahal (Or any other great monument) be as Grand if Shah Jehan had tendered for the lowest bidder?
- A Famous Astronaut's comment 'Just as this incredible spaceship fired up for launch, I was not comforted by the fact that each piece in this complex machine was built by the lowest bidder that could be found.

I personally have mixed feelings about LED fixtures. I must admit that great technical leaps have lain to rest most fears of colour rendition and uneven fading. LED fixtures have replicated Tungsten lights in all but two important features that I am sure in time will be ironed out.

- 1. The Lit Surface does not glow like it would under tungsten light. Faces don't eat light as they used to.
- 2. Due to its multi-point surfaces LED's still don't do textures and shadows like tungsten did.

l am sure in time – some clever engineer will figure out how to bridge that.

For me the greatest Challenge, excitement and horror all rolled into one stems from the coverage LED's offer.

You can place the damn things anywhere and everywhere. AND control them with an immense level of exacting detail. Both Remote as well as wired.

This is the opportunity as well as danger of the technology. The scale means that to be effective we must work in ever enlarging teams, which may mean that spontaneity may be sacrificed especially in projects that have limited production schedules.

More people spending more sleepless nights.

And lastly – LED installations are becoming so vast that there is a constant fear of drowning out the performer. Already our concert experience is so removed that 90 per cent of the audience interacts with the performer only over lumbo Screens

That's an incredible opportunity for the technician, but takes away some power from the performers.

Will be interesting to see how this plays out after we get back on our feet.

And this is how I remain sane in these crazy times. Stay safe and Be Blessed everybody!



RAY OF LIGHT

focusing on a great visual experience enhanced with lights but even I know there is way more than my imagination. So the best way of getting closest to a live experience in a virtual show is to make it an overall visual delight for the viewer.

What kind of challenges do you face when you are doing a virtual event?

A virtual event is designed and executed technically with an amalgamation of sound, light, video, and content. For all these to come together seamlessly, the internet and digital communication play a pivot role. We have to ensure the internet and data is glitch-free.

What excites you about the lighting technology today?

It has been amazing to see the

(Continued from page 50)

changes in the lighting industry over the last decade in terms of the number and type of lights used in shows. Earlier there were availability issues, logistics, and extremely conservative budgets. Nowadays we get what we ask for. Even the clients are always ready for something new. The suppliers are moving with time and upgrading their gear and inventory. In terms of consoles as well, we have Avolites, Chamsys, MA Lighting, Chroma Q Vista & Wholehog, and many more options to work with these days and you can choose according to the show you are working on.

What development you would like to see for the lighting design industry in the next five years?

Remote operation and execution of shows. So years back I had done a show which was the Tamil adapta-

tion of the game show Kaun Banega Crorepati. Since I was the designer for Kaun Banega Crorepati for the Hindi version (this was 14 years ago), I was also called in to do the designing for all the other regions as well. I had already designed everything in the studio but the technical direction team was not very confident with me leaving before the shoot started, so I told them if they need any kind of help, I can reprogram the whole thing from wherever I am. I sat in Bombay and made changes to a lighting console in Chennai. We can control the lights of a venue from home, I think I want to someday get into space where we have designers who could sit in a studio and control the lighting of venues in other parts of the world. That is something that I am looking forward to. I want our industry to accept technology like this in the

future. Right now, it is possible but there is hesitation to accept it. This can bring down the costs remarkably as well. It could also bring in a great change in designing and execution of lighting.

What's the next project on your agenda?

I am in the process of putting together a design and inventory for an open-air concert venue in Uttrakhand. As a part of this, we are also doing architectural light installations for the same client . A similar project is being discussed in Coorg. Some high profile weddings are in talks. I have also been contacted for a televised reality show but the dates are unclear. I also feel the virtual shows in some form will continue post normalization.





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PIONEER DJ INTRODUCES HDJ-CUE1 HEADPHONES WITH BLUETOOTH

Available in four different models, these fresh units come with modest price tags and bold features

The **HDJ-CUE1** headphones are ideal for DJing. Each model features a professional look and feel, rich sound, foldable design, and a high-quality finish – all for a modest price.

Using the same drivers from the professional HDJ-X5 model, the HDJ-CUE1 headphones are specially tuned to make the most of the low frequencies in the bass and kick drums that are important for mixing.

There is an accessory pack available (HC-CP08 – sold separately) that comes in five different vibrant colors to customize the HDJ-CUE1 headphones by swapping the cable and earpads for the color that best reflects the users personality.

High-quality sound

Specially tuned to make the most of the low frequencies in the bass and kick drums, all HDJ-CUE1 models feature dynamic drivers to feel the bass in the low-end, as well as hear the clarity of the mids and high-end sounds. This is helpful for performing better mixes because users can EQ each track more effectively, get two tracks working perfectly together, and create a smoother overall sound.

Comfortable pro-style design



The HDJ-CUE1 DJ headphones have been designed to look and feel at home alongside the professional range. They're lightweight and they fold up neatly so users can easily fit them in their bag. The swivel mechanism enables to turn the ear cups a full 90 degrees, so users can easily listen with one ear while the other cup rests on the side or back of the head, or while the headphones are draped around the neck. The short, coiled cable is lightweight and keeps things tidy, but it stretches so DJs can move freely when playing music.

To match individual styles, the Bluetooth version comes in three different colors with a matte finish: black, white, or red.

Built to last

The HDJ-CUE1 models are designed to handle heavy use. Extra-strong metal sliders in the comfy headband bring reliability and extend the life of the DJ headphones, and the cable's bayonet connector prevents accidental disconnections while the L-type mini-jack at the other end means DJs won't knock it out of place when using. The cable can also be removed from the headphones when not in use, preventing stress on the contacts.

Customizable look

Whichever model users choose, they will be able to personalize their look by switching the cable and earpads on the headphones for one of five bright colors with an HC-CP08 accessory pack (available separately). Each pack includes two replacement ear pads and a detachable coiled cable in either orange, yellow, green, blue, or pink.

Bluetooth wireless technology (HDJ-CUE1 Bluetooth models only)

When users choose one of the HDJ-CUE1 Bluetooth models they can monitor their music wirelessly. Users can pair them with their device and can adjust the volume and take phone calls, all with the touch of a button on the earcup. The built-in microphone picks up the sound of the voice. When want to start DJing, all they need to do is connect the included cable to disable Bluetooth, the microphone, and all the buttons so they can concentrate on your mix.

ALGORIDDIM INTRODUCES AI MUSIC PLAYER & EDITOR ON NEURAL MIX PRO

Neural Mix Pro, the Al-powered music player

& editor for producers, DJs, and musicians, created by **Algoriddim**, provides an intuitive interface to isolate beats, instruments, and vocals of any song.

The Neural Mix AI software leverages Apple's Core ML technology to separate vocals, drums, and instruments in real-time, creating studio-quality stems that are ready for live editing or remixing.

Users can create beat-precise loops, change tempo, and transpose the key



.....

of a song, all while removing vocals, percussive, or harmonic parts in

real-time. The advanced offline export allows extracting acappellas and instru-

mentals in pristine sound quality, for use in their favorite DJ or music production software.

Neural Mix Pro's music browser allows for intuitive playback and search options, as well as it allows users to mute individual vocal and instrumental tracks of songs, time-stretch tempo, and even transpose to a different key in real-time.

Whether a professional or just someone who loves to play with music, Neural Mix Pro allows users to deconstruct songs into its original compo-

nents providing a unique tool to the creative workflow.

DENON DJ & VIRTUAL DJ ANNOUNCE PRIME SERIES INTEGRATIONS

Denon DJ has announced the official controller integration with Virtual DJ's desktop software. The integration features full-color moving waveforms, familiar touch screen gestures, OLED FX feedback, a multi-view interface and more. The unique Virtual DJ desktop experience is now controllable with Engine OS 1.5.1 and VirtualDJ 2021 (build 6067) on selected Denon DJ products.

Users of the SC5000, SC5000M, SC6000, SC6000M, X1850, X1800, Prime 2 and Prime 4 mixers, decks and consoles can plug in their laptops running



Virtual DJ 2021 and enjoy full-colour moving waveforms, familiar touchscreen gestures, OLED FX feedback, and a multi-view interface. One notable feature is direct hardware control of Virtual DJ's video effects.

This is the first official third-party DJ software integration with Denon DJ's Prime series since compatibility with the Prime 4, SC5000 and Serato was announced some time ago – but unlike that integration this is across the whole range (apart from the Prime Go).

RANE RELEASES REVITALIZED FLAGSHIP SEVENTY-TWO MIXER & TWELVE MOTORIZED CONTROLLER FOR 2020

The SEVENTY-TWO MKII adds external crossfader tension adjust and MAG FOUR faders, the TWELVE MKII now connects to more DJ software platforms.

Rane has announced the next evolution of DJ battle tools. The SEVENTY-TWO MKII adds a highly requested external crossfader tension adjust to personalize to each DJ's feel, while the TWELVE MKII expands DJ software platform controls to include Traktor and Virtual DJ as well as Serato DJ Pro, adding independent controls and a redesigned plunger-style Start/ Stop button.

SEVENTY-TWO MKII || Premium 2-Channel Serato Scratch Mixer

Having won a variety of World and regional titles across the globe the SEVENTY-TWO has proven itself time after time in extreme high-pressure performances giving DJs the winning edge. With its robust solid build and reliability, paired with its unrivalled integration into Serato DJ Pro, it's no surprise the SEVENTY-TWO is the champions' choice of mixer.

The SEVENTY-TWO MKII carries all the world-class performance capabilities and components as the original version, but adds more winning features to take it one step further. An external crossfader tension-adjust has been added, giving DJs full control over the feel of their crossfader. Additionally, the SEVENTY-TWO MKII is fitted with three new ultra-light MAG FOUR faders (link to MAG FOUR PDP). This new high-quality design is our lightest and smoothest fader yet. The SEVEN-TY-TWO MKII also allows DJs to customize the parameter controls to act as either Silent Cue,

Instant Doubles or Sync control, while the DVS input option has been expanded to include the Aux input as well as the Phono/CD input for more flexible set ups.

TWELVE MKII || Multi-Platform, Legacy Control

The TWELVE MKII is the next evolution in turntable controllers. A simple, yet hugely powerful motorized DJ control system, the TWELVE MKII has all the characteristics and simplicity of a traditional turntable, but without the hassle of fragile needles and skipping tone arms. The TWELVE MKII delivers a true vinyl-like experience to keep DJs grounded in the art of DJing while allowing them to take full advantage of the creative performance options available in today's digital world.

The TWELVE MKII expands its control possibilities to Traktor and Virtual DJ users via USB Midi or DVS Audio, or a hybrid of both, in addition to the previously supported Serato DJ Pro. It has added in more navigation, instant doubles control and a new plunger-style Start/ Stop button. The vinyl experience is also fully customizable. With the TWELVE MKII, DJs can scratch and play with all the direct spontaneity and creativity of a turntablist, but with the precision, repeatability and durability of digitally-based solutions. With its all-metal body, the TWELVE MKII has the agility needed to compete on world stages.

Rane SEVENTY-TWO MKII

Rane TWELVE MKII

RANG

PIONEER DJ UNVEILS CDJ-3000 FLAGSHIP MULTI PLAYER

Pioneer DJ has unveiled its brandnew flagship CDJ media player, the Pioneer DJ CDJ-3000. The CDJ-3000 is the first Pioneer CDJ to feature a touch screen, an exciting development that makes browsing options easier. The size, brightness and resolution of the screen have increased so there is more space for track information, waveform analysis and more.

Advanced MPU

The new MPU drives the unit, delivering stable performance and enabling advanced new features, and it works with the other parts of the player to create a smoother DJ experience.

Pro DJ Link with Gigabit Ethernet

With the Gigabit Ethernet connection for Pro DJ Link, users can share and play audio files from USB devices and SD cards on up to six CDJ-3000 units when they combine them with the 6-channel mixer such as the DJM-V10.

Better screen visibility

The maximum screen brightness has been improved by more

than 150% compared to that on the CDJ-2000NXS2, so depending on the environment users are playing in with improved visibility.

Tougher components

The high-quality aluminium top plate and redesigned play, cue, and Hot Cue buttons are stronger than ever and the lockable V-Lock power cable guards against accidental disconnections. The unit also comes with a high-quality digital cable that's easy to handle and perfect for use in clubs and professional setup.

Enhanced audio design

The CDJ-3000 unifies internal audio calculation processing to 96 kHz/32-bit floating in all playable audio formats. As a result, the unit can capture the subtleties of the original sound source, including its depth and ambience, and even the slight changes in the timbre of the low range. Advanced audio processing technology such as variable speed playback, master tempo, and the new Key Shift function, all help to create a more realistic representation.

9-inch high-resolution touch screen

The touch screen is bigger and clearer than on the CDJ-2000NXS2, to be able to add extra information, shortcuts, and buttons for frequently used categories and functions, such as Playlist and Search. Users can swipe on the screen to navigate and use the sort function to rearrange the track list by touching the display.

Touch Preview

Preview and Listen to any part of a track by simply touching its waveform in the relevant place in the browse section. If users have multiple CDJ-3000 players connected with the DJM-V10 or DJM-900NXS2 mixer via Pro DJ Link, they can even preview tracks from another player thanks to Link Cue.

Touch Cue

Listen to another part of the track that's currently playing by touching the waveform. This comes in handy when users need to familiarize themselves with the progression of a track to identify a mix point, especially during DJ handovers and back-to-back sets.

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Rebuilt Performance Interface



Eight Hot Cue but-

tons – a total of 8 hot cue buttons now live under the screen for ease of access.

Beat Jump buttons – jump forward or backward in your track in beat periods of 1/2, 1, 2, 4, 8, 16, 32, and 64.

Advanced Auto Beat Loop button – an upgrade from the NXS2's 4-Beat Loop control, the 8-Beat Loop button doubles your looping capabilities.

The CDJ-3000-W is an exclusive version of Pioneer DJ's new flagship multi player, the CDJ-3000. The brilliant white finish is perfect for venues such as restaurants and bars, and each unit is stamped with a distinctive plaque featuring a unique serial number.

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