

PALMTM technology

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

EXPO PROMOTION

PROJECT GALLERY

Studio Showcase

Pic Showcase of recording/mixing studios

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TAG Basics

A view from within Pg:10



Sonic Boom

*In Conversation with
Farhad K. DadyBurjor Pg:14*

TOP 30 PRODUCTS 2021

Pg:34



*Global Pro Sound & Light
Technology*



New Edge Studios Pg:28
**Transforms into an
Immersive Mix Room**

STUDIO ISSUE

JANUARY - FEBRUARY 2021

SLEEK DESIGN, ICONIC SOUND

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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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Rahul Sharma, CEO, Menura Acoustic Labs

Strong positive Market response to PALM AV-ICN Expo

That time of the year again, when we reflect on the year gone by and plan for the year ahead!

The theme for this issue (*as well as the next*) is **Studio!** Studio theme seems an anomaly in an age where studio recorded albums aren't on display on the shelf. Paid Digital downloads are still to gain momentum in India. A survey done last year indicated a 200 million strong streaming music market, but notwithstanding inspiring numbers, there are very few people in India who are actually ready to pay for the music.

No surprises then that project studios or home studios have gained popularity in the last decade. Big studios with big desks are few and far between and live recording floors are difficult to imagine. There was a time when albums sold on the recording engineer's excellence and the studio it was recorded in. Great studios had great engineers! Bombay boasted of iconic studios and great recording engineers, but today every artiste/engineer/music producer who has work has his own 'studio'.

Veera Desai continues to announce new music studios, the latest ones being that of the 365 day man – **Shadab Rayeen** who got **Aditya Modi** of Modi Digital and **Rolins T'Roy** of Rolins Arcoustics to redo his studio (*New Edge Studios*) and upgrade one of the rooms to a Dolby Atmos Music Room. This also happens to be India's first **Dolby Atmos Music Mixing Room**. More on *pg.28*.

The other new facility at Veera Desai is **TAG** – a modern day audio institute belonging to audio engineers **Jaykrishnan Nalinkumar**, **Omkar Tamhan** and **Anupam Sathe**. TAG has three studios replete with state-of-the-art gears, with one of them housing the mothership of all – the classic large format *SSL Origin*, which again happens to be the first Origin to be installed for educational purposes in all of Asia Pacific and currently the only one in India. More on *pg.10*.

Interview with 'the' **Farhad DadyBurjor** on *pg.14*. Enjoy! The interview was conducted before Farhad's appointment as National Business Head – Studios, for **Alphatec Audio Video** – sole authorized distributor in India for major audio and AV brands.

This issue also has the Buzz on **Studio Monitors** (*pg.46*) and **Consoles** (*pg.26*).

The **Studio Showcase** Pic Gallery on *pg.56* is where all the action is from leading brands offering their best tech for the studio.

Next issue the theme is **Studio** again, and it will also feature the preview to the **PALM AV-ICN Expo** scheduled to take place in Mumbai from **May 27 – May 29, 2021**.

EMERGING AS CATALYST

Of course there still is some worry about the business and market but positive response to PALM AV-ICN 2021 is the best news in a long time! This truly means the market is inching towards normalcy. Proof is in the pudding as PALM witnessed a surge in new online registrations since the time Visitor Registration went live on 4th Feb; a record 1500 registrations within 24 hours itself!

The range of products at the show this year would definitely reflect on where the Pro Sound, AV and Lighting industry is headed post-covid! As of today it sure looks like the mid-segment of the market is currently where the industry is witnessing the most action. What visitors are going to see and experience at PALM AV-ICN is what they will buy and use. There is going to be a churn and the market will evolve, attracting more manufacturers into the fray and PALM AV-ICN is definitely emerging as the catalyst for this evolution.

The cover story on **Top 30 products** in pro audio and lighting profiles new game changers, which shall work for the Indian market. All magazines and god knows how many other online portals might have their own choice, but these top 30 is what **PT** chose to feature on *pg.34*.

IRAA 2021

I am glad to announce already, it is our privilege and pleasure to host the 15th edition of the **IRAA awards** on 29th May 2021 at the PALM AV-ICN Expo venue. I call upon the engineering fraternity to send in their Nominations. Music producers and recording professionals must enter recordings released during the period January 2020 – December 2020. The entry form will be available on the IRAA website till 30th April 2020, which is the last date for submission.

Hope to see you all in strength at PALM AV-ICN Expo 2021!

Smita Rai

Smita Rai – Content Anchor

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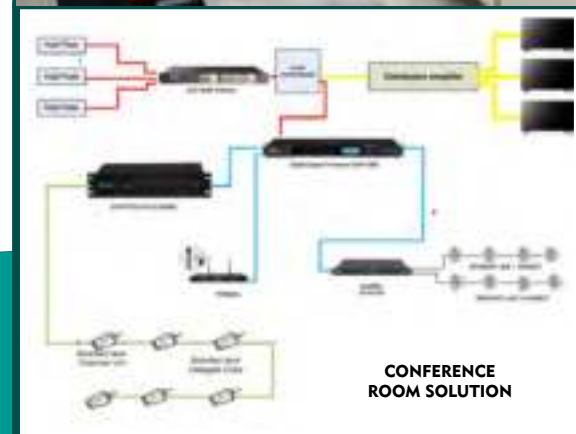
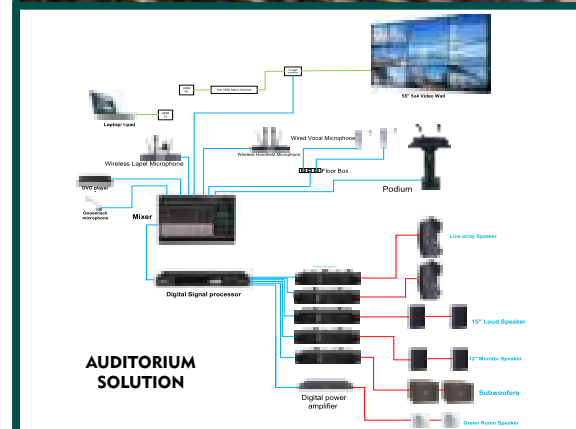
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- Rail Bhavan – Delhi
- NITI Aayog Delhi
- Income Tax Department - Jawaharlal Nehru Stadium Delhi
- NID Bhopal
- DRDO Chandigarh
- BPRD Headquarter New Delhi
- Shri Vishwakarma Skill University (SVSU)
- National Investigation Agency – Delhi, Hyderabad & Guwahati



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PALM AV-ICN TO BE HOSTED ON ORIGINAL DATES IN MAY 2021

May 27 - 29, 2021 Bombay Exhibition Centre, Nesco, Mumbai

PALM AV-ICN 2021 show dates once again to the last week of May. Show dates - May 27 - 29, 2021 - are free of any national holidays, allowing participation from all market segments from across all regions in India.

PALM AV-ICN is emerging as a catalyst. Keeping the original show dates guarantees robust attendance. With the show now on its original schedule, success of the PALM platform in 2021 is ensured with positive impact on trade and industry.

These dates are important for the entire market to firm up their product portfolio and it works perfectly



AV-ICN EXPO2021

AV INTEGRATION COMMUNICATION NETWORKING EXPO

to once again receive the largest gathering of professionals in the industry. In the last twenty years, the expo

has proved to be the ideal platform for delivering business to the pro sound & light market in India. Constant support

of exhibitors and their faith in PALM has motivated efforts in attracting more and more business to the trade floor.

Keeping in mind, the safety and security measures as mandated by the Government, PALM AV-ICN expo is ready to deliver exhibitors and visitors, a safe and motivated expo.

This will allow the pro audio, lighting and AV community to reconnect and showcase their products and solutions to an eager audience waiting to attend the show after a year of unanticipated interruption. See you soon!

MEYER SOUND EXTENDS FLEXIBILITY AND VERSATILITY WITH NEW LEOPARD SOLUTION

Meyer Sound has announced immediate availability of **LEOPARD-M80** narrow coverage linear line array, a new variant of the

LEOPARD loudspeaker designed for focused coverage and long-throw applications. LEOPARD-M80 is identical to the existing LEOPARD design

except that it provides a precisely controlled 80° horizontal pattern instead of the 110° coverage of the original model.

"LEOPARD has been one of the most successful loudspeakers in our company history and is by far the best selling member of our line arrays," notes Meyer Sound Vice President and Chief Loudspeaker Designer **Pablo Espinosa**. "With the introduction of LEOPARD-M80, we will extend this remarkable success by offering system designers more options for tailoring coverages to the exact requirements of the venue."

Because the vertical coverage and rigging hardware are identical to the original LEOPARD, the new LEOPARD-M80 may be configured in mixed arrays of both loudspeaker variants. LEOPARD-M80 loudspeakers in the upper array section provide focused long-throw coverage while LEOPARD loudspeakers below spread horizontal coverage for closer seating sections. Arrays configured with only LEOPARD-M80 loudspeakers can offer a long throw with reduced spill to the sides

of the array. This can be advantageous in narrow venues with reflective side walls as well as in outdoor applications where side spill into adjacent areas must be minimized to conform to noise regulations.

LEOPARD-M80 also affords additional system configuration options. LEOPARD enables tighter horizontal control across a broad spectrum of outfill, center fill and delay applications when used in large-scale systems with LEO and LYON main line array systems.

In both variants, LEOPARD's innovative amplifier, driver and horn designs ensure linear response over a wide dynamic range. LEOPARD also offers phase coherence, consistent coverage patterns, extremely low distortion and high power-to-size and weight ratios. Basic LEOPARD arrays can be quickly configured in Native Mode for optimum performance with minimal external processing. The narrow profile and limited weight make LEOPARD arrays an ideal choice for mid-sized touring acts and fixed installations where portability, scalability, and ease of rigging are

(Continued on page 08)

AHUJA LAUNCHES DM SERIES – VOCAL MICROPHONE

Ahuja has introduced the **DM series** professional microphones that delivers high end performance with amazing aesthetics and all that at pocket-friendly prices.

Two models in the range **DM-440** and **DM-740** offer cardioid pickup pattern that reduces feedback and allows users to open up the volume more than ever before. Both the microphones produce crisp & intelligible sound. They provide wide frequency response to cover all speech and music applications.

The microphones come with Die-cast zinc body in attractive finish and have anti-thump rubber ring on the

professional grade microphones for live stage performances at an affordable cost. AHUJA DM series microphones are bound to create a lot of excitement in the entry level professional microphone segment. Reach out to the nearest Ahuja dealer to grab one.

Box accessories include an ergonomically designed microphone holder and a pouch for safe storage.



Some key specifications:

	DM-440:	DM-770:
Type:	Dynamic	Dynamic
Frequency Response:	50 - 15,000 Hz	50 - 15,000 Hz
Impedance:	600 Ω	600 Ω
Sensitivity:	2.0 mV/Pa	2.5 mV/Pa

grill. New elegant on/off switch is ergonomically positioned and eliminates pop sounds during operation.

The thought process behind introduction of these models was to offer



JTS AND DYNATECH GEAR UP MAHARASHTRA ASSEMBLY FOR ITS WINTER SESSION

The winter session of the Maharashtra Legislative Assembly was held in Mumbai on December 14-15 instead of the traditional venue of Nagpur, in view of the ongoing pandemic. Helping them gear up while observing the various safety

measures such as physical distancing were the **JTS GM-5225L, GM-5218 gooseneck microphones & ST-5030 microphone base** along with the comprehensive **Dynatech HP-15A+ active loudspeakers**.

The installation at the assembly was

done by Mumbai based Chetna Sound – a trusted audio rental company that provides rental services for all kinds of events from small scale gatherings, conferences to music events, and more. The pro-audio equipment was purchased from Hira Sound which is an authorized

dealer of Dynatech, JTS, P.Audio, and Mackie, in Maharashtra.

Lalrin Fela of Music Home shares his views on the project saying, "This has been a key project for us, and we're really proud that we could fulfil the client's request of equipping the sessions with world class products that are not just efficient and easy to use, but also offer great versatility and unbeatable performance. The JTS gooseneck mics facilitate crystal clear audio pick-up which translates beautifully through the Dynatech HP-15A+ active loudspeakers. The HP-15A+ is powerful and clean with just the right balance of highs, mids and bass. While the JTS microphones have an outstanding build with phenomenal operation value and usability. There's absolutely no doubt that these are amazing products, and we're glad that we've invested in a system that will continue to deliver great quality for years to come. Extremely happy with our JTS and Dynatech inventory!"



Dynatech HP-15A+ active loudspeakers for Maharashtra Assembly winter session

AUDIX RELEASES TM2, AN INTEGRATED ACOUSTIC COUPLER FOR IN-EAR MONITORS

Audix, is now shipping the **TM2**, an Integrated Acoustic Coupler for In-Ear Monitors (IEMs).

Ear simulator "couplers" are the measurement devices used by manufacturers of IEMs during research & development, final produc-



tion and quality control of IEMs. Using patent-pending technology, the TM2 incorporates the functionality of lab-type testing equipment into an integrated compact package, ideal for live sound and studio engineers who want a simple, yet effective way to test IEM performance. Featuring precision-machined brass and aluminum components, the TM2 is built for the road and

includes adapters to fit a wide range of IEMs including custom molds.

Monitor engineers are often faced with questions from performers regarding the functionality of their IEMs with no reliably consistent method to test them in their environment. With the

TM2 and readily available measurement software such as Rational Acoustic's SMAART or Studio Six Digital's Audio Tools, a monitor engineer can easily confirm the functionality of each performer's IEMs before the show. It is also ideal for house of worship applications, where the TM2 can be used to check the performance of the IEMs of every member of the praise team on a regular basis.

"We saw a need for a tool that didn't really exist, and instead of waiting for one to come along, we just built it," says **Steve Young**, Director of US Sales at Audix. "Along with our new line of studio headphones and two new large-diaphragm studio microphones, the A131 and A133, the TM2 is just another example of how innovation is alive and well at Audix."

YORKVILLE SOUND INTRODUCES FIRST BATTERY POWERED PORTABLE SUBWOOFER

Yorkville Sound has announced a breakthrough in battery powered speaker technology. The **EXM Mobile Sub** is reportedly the first ever battery powered, portable, bass reflex subwoofer with Bluetooth technology.

Equipped with two 8-inch woofers, the EXM Mobile Sub delivers tremendous bass for Musician & DJ's mobile, wireless gigs anywhere without comprising the low end. The big sound of the club and concert hall can now be brought to the driveway gig, backyard party, or wedding tent.

Weighing in at only 30 lbs, the EXM Mobile Sub can be carried in one hand. The new sub is compatible with

all products in the EXM Mobile series including the EXM Mobile, EXM Mobile 12 and the newly announced EXM Mobile 8.

Jeff Cowling, Yorkville Sound's Vice President of Sales & Marketing notes Yorkville's role in improving the battery powered portable technology at large, "Since the concept of mobile, battery powered PA's was introduced, Yorkville was among the first out of the gate and the strongest to innovate the technology." Yorkville announced the EXM Mobile 8 in early December, the first 3-way mobile battery powered speaker with an 8-inch woofer. "With the EXM Mobile Sub, we are introducing a concept that

has never been done and is much needed in the world of live music today," says Cowling.

As musicians and DJ's continue to re-imagine gigs, the EXM Mobile Sub exceeds expectations of what sound professionals look for in a speaker design: maximum bass, lightweight, and versatile. The EXM Mobile Sub is a game changer in the portable battery powered PA format.



JBL PROFESSIONAL INTRODUCES EON ONE COMPACT USB POWER CABLE FOR EON ONE COMPACT PORTABLE PA

HARMAN Professional Solutions has announced the **JBL EON ONE USB Power Cable**, which expands the versatility of JBL EON ONE Compact battery-powered portable PAs by powering AKG WMS and DMS100 and DMS300 wireless systems and DigiTech and DOD guitar pedals directly from the sound system.

The 1-meter EON ONE USB Power Cable features a USB-A terminal that connects to an EON ONE Compact P.A. and a 5.5mm power terminal that connects to external devices. Two versions are available:

A 12V version powers AKG WMS wireless systems; a 9V version powers AKG DMS100 and DMS300 wireless systems as well as DigiTech and DOD effects pedals.

Perfect for musicians, DJs, presenters and entertainers who want freedom of movement, crystal-clear vocals and an easy way to enhance their sound with effects, the EON ONE USB Power Cable lets performers turn any space into a stage. "Battery-powered P.A.s already give performers the freedom to cut the cord," says **Brandon Knudsen**, Product Manager – Loudspeaker Professional Solutions at HARMAN. "When you

don't have to rely on a traditional power source to power your wireless system or pedal, now you truly have no limits on where you can perform. Whether you're busking at the beach or speaking at a corporate event, the EON ONE USB Power Cable lets you bring legendary JBL sound wherever your gigs take you."



JBL EON ONE Compact battery-powered portable PA

L-ACOUSTICS ANNOUNCES DEDICATED SALES AND APPLICATION TEAM

L-Acoustics has announced the appointment of two regional industry experts to support existing partners and grow the company's presence in key vertical markets, as well as with consultants, integrators, sound engineers, and end users in the region. Over the last decade, the region has been successfully supported by L-Acoustics Sales Manager, Peter Owen, who will now concentrate his expertise on developing key territories in Russia and Eastern Europe.

The appointment of a new, dedicated and locally based team will allow the company to nurture new and closer relationships in the Middle East, India and East Africa. **Chris Mead**, Sales Manager for the Middle East, India, and East Africa will build relationships and develop business in the region while **Rahul Samuel**, Application Engineer for the Middle East and India, will provide technical support, design assistance and training to partners and projects throughout the area.

"The Middle East and India regions are very diverse culturally yet share a common commitment to building innovative and technically advanced venues and entertainment experienc-

es," says **Cédric Montrezor**, Executive Director of Application at L-Acoustics. "This drive to excel and impress has led the region to dynamic growth – growth which remains resilient throughout the current difficult period."



Chris Mead, Sales Manager

Chris Mead is a recognized industry professional with over 15 years of experience in the UK and the Middle East. He began his career designing and imple-

menting AV solutions for end-users and most recently provided technical support and developed sales in the Middle East region for Meyer Sound. "L-Acoustics has achieved its leadership position in the market by developing outstand-



Rahul Samuel, Application Engineer

ing products and establishing a global system of standards via a robust partner network," expresses Mead. "The brand's rapid growth in the integration market

represents an exciting area of development. I look forward to contributing to the continued success of the company and our partners in the region."

Rahul Samuel is an award-winning live sound engineer with over 15 years of experience as an Acoustic Consultant, FOH/Monitor and System Engineer, System Designer and Educator. He has contributed to the production of some of India's most spectacular live performances, and latterly representing Meyer Sound, providing technical support in the region. "The Middle East is home to some of the world's biggest projects and they consistently surprise the world by exceeding known limitations," describes Samuel. "This type of work requires the best minds from around the world and L-Acoustics excels at accompanying people and projects to achieve their technical best. I'm excited to be working alongside our partners to turn their visions into reality."

Global Director of Business Development at L-Acoustics, **Jochen Frohn** concludes: "Clients and Partners in the Middle East and India have consistently shown an interest in premium products and a willingness to go the extra mile to achieve excellence and offer the most engaging audience experience. Having this locally based team, with Chris and Rahul's combined expertise, will allow us to build deeper relationships and offer outstanding support to clients in a region that continues to take a more central role to the strategic growth of L-Acoustics."

MEYER SOUND EXTENDS FLEXIBILITY AND VERSATILITY...

(Continued from page 07)

essential.

"With LEOPARD-M80 we are offering system designers and rental companies yet another option to create high-performance, cost-effective systems for

any application," says Espinosa, "from a small club with LINA arrays up to massive stadium and festival systems with LEO main arrays scaling down through LYON and LEOPARD fill and delay

systems. LEOPARD-M80 is an important new addition to the industry's largest and most widely adopted family of self-powered line arrays."

YAMAHA ANNOUNCES PREMIUM Y7 BRICASTI REVERB FOR RIVAGE PM SYSTEMS

Yamaha is expanding the capabilities of its **RIVAGE PM** series digital mixing systems with firmware version 4.7, adding the premium **Y7** reverb plug-in developed in collaboration with **Bricasti Design**. The free firmware, planned for release this month, continues the company's approach to enhancing its professional audio products through regular software updates.

Bricasti Design is recognized globally as a leading developer of audio technologies. Its M7 hardware reverb unit is among the most-requested touring and

studio technologies, known for its extremely rich-sounding reverb, exceptional sound quality and ease of use. The collaboration between Yamaha and Bricasti on the Y7/RIVAGE PM integration now gives audio engineers more flexibility in bringing the highest level of expressiveness, sound quality and operability to live sound performances.

The V4.7 update with the Y7 plug-in applies to the entire RIVAGE PM lineup, regardless of console model or DSP used in a system, from the small footprint PM3 to the flagship RIVAGE PM10. The addition of the Y7 reverb expands the list of proces-

sors available across the series. It adds significant value to the RIVAGE family by placing one of the most sought-after reverb algorithms at engineers' fingertips without the need for additional outboard gear.

"Together with Yamaha, we are pleased to announce the release of the Y7 reverb," said **Brian Zolner**, CEO of Bricasti Design. "By working closely with the Yamaha development team, the Y7 product was specifically designed for use in the Yamaha RIVAGE PM mixing systems. We're bringing to the live market a Bricasti product that is integrated in the console for simple, fast and

familiar operation and bringing the renowned 'Bricasti Sound' to users of the Yamaha products. We feel the Y7 will offer new art to sound engineers and fulfill their requests for a premium reverb product from us for their consoles."

"Yamaha pro audio products are designed to give sound engineers maximum freedom and flexibility in creating immersive sonic environments," said **Preston Gray**, director of marketing for Professional Audio, Yamaha Corporation of America. "The ability to easily add new capabilities through firmware updates and plug-ins is a key element of our total system solution approach, extending a product's life and protecting customers' investments. The addition of the Y7 reverb plug-in brings Bricasti's technology expertise to the RIVAGE series, creating new possibilities for creative sound expression."



ELECTRO-VOICE LAUNCHES NEW EVOLVE 50M COLUMN LOUDSPEAKER SYSTEM

Electro-Voice is expanding its industry-leading **EVOLVE** series with the launch of the **EVOLVE 50M** column loudspeaker system. The EVOLVE 50M features Electro-Voice's new QuickSmart Link digital audio and control technology, an onboard mixer, DSP and effects – all combined within the sleek EVOLVE 50 format. The EVOLVE 50M is the perfect choice for bands/musicians, AV rental companies, DJs and any application where true professional audio performance is required in a super-compact and portable package.

Available in black or white finishes, the EVOLVE 50M combines state-of-the-art industrial design, superior Electro-Voice-engineered components and premium materials to deliver best-in-class sound quality, power and reliability. The full-range column array and its eight lightweight 3.5" neodymium drivers provide ultra-wide, full-bandwidth 120° coverage via proprietary waveguides; array-formed 40° asymmetrical vertical coverage ensures acoustic output is directed towards both sitting and standing audience members. The array enclosure is constructed from a durable composite material and incorporates

an ergonomic aluminum handle. A 12" subwoofer is housed in a 15 mm wood enclosure with a high-efficiency laminar-flow vent design, for enhanced rigidity and acoustical performance. The array and sub are connected via a symmetrical aluminum pole with internal wiring and magnetically assisted latching. The speakers are protected by a black powder-coated 18-gauge steel grille, and an array/pole carry case is included. An advanced Class-D amplifier provides up to 1000 W of power.

The EVOLVE 50M's "M" designation refers to its integrated fully featured, fully configurable eight-channel digital mixer. Developed in collaboration with Dynacord, the mixer has multiple inputs (4x XLR/TRS combo mic/line inputs, 1x XLR/TRS combo stereo line input, 1x RCA, 1x 3.5 mm stereo, 1x Hi-Z instrument input) with professional-grade preamps and mix functions. High-resolution, low-latency Bluetooth streaming ensures excellent results for music playback or accompaniment. Independent channel aux sends and a foot switch input are also included, and a range of effects (30 presets, including chorus, delay, flange and reverb, via two

FX channels) add a myriad of options for musicians to fine-tune their tone. All of the above help to reduce load-in/out and setup/teardown time – and on-stage clutter – by minimizing the need for external equipment such as a mixer and effects pedals.

QuickSmart Link makes it easy to combine two EVOLVE 50Ms for use together with larger bands or gigs needing more inputs. For applications requiring fewer inputs, but still requiring a mixer and stereo output, the EVOLVE 50M can be matched with an EVOLVE 50 via the MIX OUT XLR connector.

The EVOLVE 50M's control panel features Electro-Voice's powerful QuickSmart DSP, which allows the navigation and adjustment of all audio, effects and mix functions via an LCD with single-knob control or via the QuickSmart Mobile app, as well as multiple options for signal routing and

inputs. Functions include four presets (Music, Live, Speech, Club), three-band system EQ (low, mid, high), seven-band graphic EQ (in Mixer mode), five user-programmable presets (Store and Recall settings), phantom power, visual monitoring of limiter status, input level control and meters, and a master volume control to optimize gain structure.

EVOLVE 50M is available in select countries.



TAG Basics

A view from within



The TAG Trio; L to R: Anupam Sathe, Omkar Tamhan and Jayakrishnan Nalinkumar

TAG is a modern day audio institute in India's fast evolving audio education segment. State-of-the-art technology in all three studio suites at the institute is ensuring that TAG is emerging as a front runner in this space. PT reports.

“Why does education for sound and music in India and abroad have such different standards and what is the root cause of a sub-par education quality in India?” – a question that kept echoing in the minds of **Omkar Tamhan, Anupam Sathe** and **Jayakrishnan Nalinkumar**, the trio behind **The Audio Guys Institute (TAG)**.

What do you do if you have a question that hits home? Either find the answers or blame it on the system? The 3 sound engineers opted for the first and started developing and building

a curriculum that aimed at imparting the best tutoring in audio engineering, while also attempting to be economically affordable. Driven by determination and their problem-solving attitude the three collaborated to make their vision a reality and thus was born TAG Studios.

Trained in Carnatic Classical Music and keyboards Jayakrishnan, JK, as he is more fondly known in the industry has worked with several legendary artistes like Ustad Zakir Hussain, Fazal Qureshi, Rakesh Chaurasia and Pete Lockett, among many others and has been



Studio A - Control Room features MIDAS-32 console. The room is designed for recording vocals, guitars and solo instruments

recording and mixing songs from the past 14 years. He has also won the coveted **IRAA (Indian Recording Arts and Academy)** Awards for two consecutive years in various categories including the 2018 IRAA for Dronacharya Award for Teachers in Audio Education.

He has lately been associated with leading media colleges in India pursuing his passion for teaching along with Anupam Sathe, an IT engineer, trained Hindustani Classical Vocalist with a masters' degree in Music. An ace in recording and mixing in the music and film industry, Anupam is also a Live Sound Engineer who has worked with popular bands across Mumbai.

Omkar, a drummer by origin is now a known name in the Sound Post industry and is a technical and business head for multiple studios and production houses in Mumbai. He has been associated with some of the big ticket Bollywood films like Laxmii, Sadak 2, Tanhaji, Kalank, Padmaavat and the upcoming Brahmastra to name a few.

Both JK and Omkar are Audio Production graduates from SAE Byron Bay, Australia.

THE CAMPUS

Located in the heart of Mumbai City, the team wanted to be in the vicinity of the industry to attract professionals to collaborate with their students. "We soon realized that to push the barriers of education, we will need to also integrate world-class facilities and a professional educational environment. That is how we decided and planned the Mumbai campus of TAG," says Jayakrishnan.

TAG was also looking for a place with adequate height as one of their studios was to host a large format console capable of recording large multitrack sessions like orchestras and a complete band. "We ended up placing ourselves in Shah Industrial Estate, which allowed us walking access to all major studios

and production houses while offering us 14ft clearance in our ceiling," informs Jayakrishnan.

The location and building of TAG awarded the guys with an industrial thick slab. What this meant for the guys is that they could incorporate much heavier construction without worrying too much about the load. Majority of the acoustic isolation from exterior noise has been achieved with thick double walls for all the rooms, isolation ceilings as well as semi floating floors. The internal treatment of TAG studios has been carefully designed as each room has been built for a specific purpose.

STUDIO SITEMAP

The TAG Institute has three studios on campus accessible to students at all times during the given time of the

course. The studios are equipped with over 50 microphones, and an assortment of outboard gears from the likes of Manley, Earthworks, Genelec, SPL, Focusrite and more. TAG Studios was designed by the trio with the expert technical guidance from the famous and esteemed duo of the Indian engineering fraternity in India - **Mujeeb Dadarkar** (former IRAA Director) and **Vijay Benegal** (IRAA Director for 2021). "Their company Odble has provided us the right team to execute the design into reality with pristine precision," informs Jayakrishnan.

Studio A

The room features a Midas M-32 mixing console, which is known for its digitally operated analog workflow with class electronics for both studio and sound reinforcement. "Students are introduced to the world of recording

studios here first. They also have access to exclusive outboard gear and almost a dozen small and large diaphragm condenser microphones as well as various dynamic and specialty microphones," informs Anupam. With the attached live room, students and professionals can track vocals, instruments or small groups/bands or even change this into a dubbing or foley setup along with high quality video reference. "Our Music Production students also use this space to learn the basics of recording and use of synthesis," he adds further.

Inventory

Studio A features a **MIDAS M-32 console**, 2 pairs of near field monitors, **Amphion 118s** and a pair of **Sonodyne SM 100s**. Preamps like the **Focusrite ISA 428** and **Manley Core**, **SPL transient designer**, **ART Pro VLA's for Dynamics** and couple of rack units from **TC electronics** for effects. "This room has the most balanced amount of outboard gear for the room duties which helps us explain students the different usage and quality of outboard gear in audio," says Omkar.

Acoustic Treatment

Since Studio A is the smallest out of the three studios, it has been designed to produce a tighter sound making it ideal for recording vocals, guitars and other solo instruments as well as small groups. TAG was able to achieve this with a large amount of absorptive surfaces with varying depths. The control room of Studio A is also a tight nearfield monitoring environment ideal for song mixing as well as for music production.

Studio B

Studio B is also known as the 'Post Room'. This is where two of the main courses are taught. The room is mainly



Studio B known as the Audio Post Mix room features the first Dolby 7.1.4 HE room for education purposes.

focused to help students of TAG Institute learn the core workflows of audio post production right from stereo to 7.1.4 ATMOS. "We have a couple of mic pres in the room and a cozy little recording booth attached to this studio. Here students can record ADR, foley and even some music cues if required for their projects," informs Jayakrishnan. The room is equipped to handle and teach all styles of post-production workflows. The Audio Post Mix Room is also the first Dolby 7.1.4 HE room for education in India.

Inventory

Studio B is a **Dolby 7.1.4 HE** room. JBL has provided the 7 series speakers for the screen and 3 series speakers for the top and back surrounds. There is a **3635 Subwoofer** for the LFE channel and all of it is powered by **DSI 1000 amps**. The main audio interface of the studio is a **Focusrite Red 8PRE**. The calibration of the speakers was done by JBL Intonato. The room also has the **AVID S1 controller** with the Avid Dock, making TAG one of the first Institutes in India to own the S1. The room also features **Protools Ultimate** with voice packs to help in heavy post-production sessions.

Being an ATMOS facility, Studio B became a challenge for TAG, as speakers were placed on the walls, and on the ceiling. For the room to achieve a great monitoring experience with superior intelligibility and imaging, the right amount of reverberation time and diffusion was crucial. The placements and angling of the speaker was first simulated and then installed as per Dolby recommendations.

Studio C

The Studio houses the mothership of all – **SSL Origin**. The classic large-format console-style recording studio has been mainly curated for students to learn and manage larger recording sessions like orchestras and large bands. "Having legacy processing on each individual channel also allows us to teach the tips and tricks of the trade using industry classic signal processors like the 4000 E series EQ or the SSL G Bus Compressor. This in turn also educates our students to optimize use of the all those awesome emulations for their in-the-box mixes," says Omkar.

Origin of a Better User Experience

Commenting on the massive 32 channel SSL Origin analog console, JK says, "The console allows us to have 32 inline channel strips with E Series EQ and the classic SSL center section with integrated bus compressor on the board itself. What makes it more special is that this is the first SSL Origin to be installed for educational purposes in all of Asia-Pacific and also currently the only one in India."



Studio C - Control Room houses the 32-channel SSL Origin - the first of its kind installed in Asia-Pacific for education purposes

"We were very clear on one thing from the beginning that in order to teach the modules we were planning, a large format console and a large recording room were mandatory requirements," he adds.

Since the SSL Origin had not been announced at that time by the company, the team was looking at other popular options in the large-format console segment that would meet their requirements as well as budget.

Almost at the brink of deciding on another console, a meeting was set up between the guys from TAG and **Anthony Gofton**, Vice President – Asia Pacific, SSL. All this happened a few days before

the SSL Origin was launched at NAMM.

Even though Anthony was being secretive about the details of the console, he was able to answer all questions raised by the TAG team. "Once we knew that the SSL was ticking all the right boxes we were looking for and was offering us additional features like the 4000 style EQ, integrated LF/SF workflows, it was only a matter of asking when we could expect the console," adds an elated Jayakrishnan.

The SSL Origin was delivered right before the world swindled down in a pandemic. However, **Shiv Sood** from Sound Team sorted most of the issues for the team. The overall experience

of getting the SSL was smooth and hassle-free for TAG.

SSL has been unique with their product design and the thought process behind the Origin. As companies around the world are rushing to integrate a hybrid workflow which has been a hit or miss integrating DAW's in consoles, SSL decided to go the 100% analog route while providing seamless integration in a hybrid environment. "The inline architecture also helps us expanding the workflow and adapt to a recording, mixing or summing environment easily. Things like 0dB fader are tiny buttons

(Continued on page 39)



Studio C - Live Room features a live-end dead-end scheme with more absorption

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Sonic Boom

In Conversation with Farhad K. DadyBurjor

*PT spoke to **Farhad DadyBurjor**, one of the most respected and sought after sound engineers in the country today. In a career spanning over 3 decades, Farhad has built an impressive discography of songs that he has recorded and/or mixed while also advocating many pioneering technologies in his workspace, including spearheading India's first studio to be approved for Dolby Atmos HE. Despite his primary endearment towards traditional engineering methods, his work also pushes the limits of what cutting-edge digital technology can enable.*

In this freewheeling interview with PT, Farhad talks about acquired learnings from his journey in the industry, relentless focus on creative and technical innovation, quality of engineering in India and much more.

You were associated with a studio for over 2 decades and now you have branched out on your own. What are the pros and cons of working for a big scale studio and working on

your own?

I'd been associated with that studio since 1993, so it's nearly 3 decades. Since specifying and building the original Studio A, I oversaw several landmark

changes - the introduction of Dolby Surround in 1997, Dolby 5.1 in 2002, the location change in 2014, and finally the massive upgrade to be the first Dolby Atmos HE certified studio in India with

simultaneous certification by Netflix and the MPAA, all of which I spearheaded in 2019. All of these were technically challenging, especially since they were retrofitted into the existing room. So

the pros of working in a big scale studio at that time was having the financial backing to realise a pioneering vision, build it, and upgrade it progressively, to remain at the cutting edge.

Over the years, with the availability of lower cost equipment, studio ownership became a financially viable possibility for anybody. As the competition increased, there was a steady reduction in our slice of the financial pie. Ultimately, no matter the gear and space advantage, a studio is about the people in it, from the support staff, the engineers, the musicians, to clients you attract. It's your people who make or break you. If you don't let your people grow with you, you're failing them. A family owned business cannot have corporate pretensions without stable financial backing to follow through on their vision of the future, and the ability to invest in good people and retain them, enjoying the bounty of good years, and riding out the bad financial periods. Freshly hired management "talent" forcibly imparting a corporate work culture onto a business built on personal relationships and goodwill does not work. It doesn't take anyone a special business degree to see that.

Working on my own has the advantage of complete independence. After 32 years, I am answerable to no one, and it allows me a better work/life balance, which is a huge plus. There are many who think that coming from being full time employed in a large equipment-laden studio, I would not be interested in working in a more modest setup. Nothing could be further from the truth than that. I truly enjoy visiting other studios as a freelance engineer,

and am happy to work there. You'd just have to call me and I'd be there. Of course, on the flip side, there is no regular take home income, you may be flush with work for an extended period, and then sitting and waiting for the phone to ring for a while. This is a regular part of the freelance life, but with 32 years of being an in-house engineer, it's taken me a while to adapt.

Tell us about your studio, The Sonic Laundry.

The Sonic Laundry was born out of my need to have a place where I had freedom from justifying purchasing gear I desired, working with people I desired to work with, at a pace that I was comfortable with. It was designed solely for mixing, as having a recording facility would have been a conflict of interest with my then employment. I think that it's well documented in several You Tube videos how it started with a simple idea of having a table with a computer, interface, and a pair of small speakers to be able to mix with. Of course, it grew to have a life of its own, and become an out-of-control monster, largely thanks to my (at the time unrealised) dream to own and use the very best of analogue gear. At its peak, I had 32 channels of analogue equalisers and 40 channels of analogue compression.

The studio was acoustically designed to very high standards by Munro Associates, my long time partners of choice for studio design and builds, using only the very finest of specified and available materials. Andy Munro often jokes that it is the highest specified and yet smallest room design that they've ever undertaken.

Over the years, to meet the challenges of fast delivery times, and the inability of clients who wanted that "analogue sound" to have the patience required to allow me to document and change settings, I started mixing in the box. I realised that the tools I used made no difference in the quality of output to clients. Somewhere in the back of my head over the last 3-4 years, there was a voice telling me that the days of analogue were numbered, and I would have to react accordingly, or be left with a massive amount of gear that I loved, but was not being allowed the opportunity to use.

Fate had other plans in store for me. On March 8th 2019, after overseeing and completing the build, specifying and installing the equipment, speakers and wiring, and attaining Dolby Atmos HE, Netflix and MPAA certification for the studio I was employed at, several financial assurances that were made to me by the owners before starting this upgrade were revoked, and I was told that I would "have to do what I had to do" Those very words became the sole driving focus of my life for the next year. I made a decision that day that I would eventually have to leave this toxic work environment and put my own interests first.

It took me one eventful year. I made the inevitably hard decision, and sold all my carefully curated analogue gear. With a now empty room, I used the opportunity to rebuild The Sonic Laundry from ground up. Mixing in the box was one thing, but I've always been lucky to be a console user, and I need physical faders to mix with. I chose to purchase and install an Avid S6 console, the only

privately owned such console in India. This was complemented with an array of different IO from Avid, Apogee, and Merging Technologies and a bountiful choice of plugins.

It gave me much pleasure to announce the all new Sonic Laundry to the world on March 8th, 2020, exactly a year to that fateful day that changed the course of my life. I had done what I had to do.

10 days later, India went into lockdown due to Covid-19, and my decision was vindicated. Since then, I've added a full Genelec 8341 DSP based immersive monitoring system for the ability to mix in Dolby Atmos at The Sonic Laundry. Having survived the lockdown working solely from The Sonic Laundry boosted my confidence to quit my employment on 12th August, 2020.

What drew you to sound engineering? How did you get started in the music and entertainment industry?

Music has always been a deeply abiding love of mine, coupled with an interest in things electronic. It began in my early teens with the takeover of my dad's music system and evolved from there. My start in the music industry is again well documented publicly with videos on You Tube, so I will not bore your readers with that long story. Suffice to say, it was all chance or karma - I happened to be in the right place at the right time at 2 crucial points in my life.

If you had to describe your mixing technique / style, how would you describe it?

I'd like to think that my mixing technique or style is whatever serves the purpose of the music I'm mixing. I'm



The Sonic Laundry equipped with the Avid S6 Console, Genelec 8341 DSP based immersive monitoring system

very comfortable with mixing many genres of music. I don't approach any mix with any set "template" for that genre of music. I simply try to adapt to the needs of that piece of music. If I had to put words to it, I'd like to think of my style of mixing as clean, wide and dynamic. I like to "produce" a mix.

I love using all the technology at my disposal wherever required, but respect for the music and artistes' vision for it always precede "mixing chops". I find that while mixing, too often there is a focus on unnecessarily complex workflows, flashy techniques, and usage of exotic gear and plugins that the mix may not even require. I prefer to un-complicate. It keeps the focus where it should be - on the music.

Can you describe your biggest challenge so far in your career? How did you overcome it?

Every day in a sound engineer's life is a new challenge. To continuously have the will to learn anew, reinvent who you are, and what you can do to be relevant in your field today.

For me, it was different - my biggest challenge was accepting that after building a brand from ground up, specifying and building over 11 studios, and largely sustaining them at the very top of the game for 28 years, at the end, my measure of worth to the organisation I was employed by was only the sum I earned for them monthly. It was a huge personal betrayal. I overcame it by setting myself the challenge of building a technically equivalent room like Studio A for myself. I'm proud to say I succeeded, and this is what The Sonic Laundry has evolved to become today.

In your opinion, what classifies as a good mix and a good master?

Mixing is an art form, and highly subjective to interpretation, and that makes it difficult to pigeonhole anyone's "style" and interpret it. There is no good or bad. There are only opinions. To quote - "There are only two kinds of people that understand Marines: Marines and the enemy. Everyone else has a second-hand opinion." - **General William Thomson.**

Similarly, I feel that there are only 2 people who can classify the mix as good or bad - the mixing engineer, and the person who created the music. Everyone else's opinion is irrelevant.

It's important to know the hierarchy of things. A great mastering job cannot save a bad mix. A great mix cannot salvage a poor recording. A great recording cannot compensate a poor performance.

While I don't necessarily subscribe to all anecdotes, there is one that is attributed to Joe Meek - "If it sounds good, it is good" I believe in that. However, sounding good never happens by chance. It is usually the result of hard work, knowledge, understanding, and experience.

Having said that, I'm a huge advocate of mixing to loudness specs and retaining dynamic range. I feel that a lot of our industry understand and champion the need for it, but judging from the hyper-crushed masters you hear, (and see the block-like waveforms of) very few actually implement it. I've long said that you don't need to make it loud, if it's good, your listener will. Yet, even after completely understanding the technicalities, some people never learn...

What are some of the most challenging and rewarding projects you've worked on?

The most challenging recording project I've worked on was a jazz

album called "Miles From India" which was nominated for a Grammy, for which I recorded the who's who of India's finest musicians, overseen and arranged by Louis Banks, over 7 days. The concept was recording the best known compositions of Miles Davis using a fusion of the best Indian musicians playing together with the original alumnus of Miles Davis' band, wonderfully produced by Bob Belden. With so many different ethnic instruments and percussion it was a challenge to mic up and tear down setups, often 4-5 times a day as per availability of the musicians.

In terms of mixing, it would be the songs for the movies "Kaminey" and "Ishqiya" composed by Vishal Bhardwaj and produced by my dear friends Clinton Cerejo and Hitesh Sonik. I'd followed these songs from their birth, as simple scratches, and knew even then that we were on the cusp of something very, very special in terms of production, and I'm proud to say that the mixes of those songs were the genesis of a new sound and set the bar higher for music mixes coming out of India. That was very rewarding.

How do you deal with creative differences and communicating this to your clients? Where do you draw the line?

I used to be a very brash person when I started engineering decades ago, and I was known to wear my heart (and my strong opinions) on my sleeve. I would make my case strongly and vocally about something I felt passionately about, even if it meant displaying a creative bent against the wishes of the client. People who know me understood that it's not about ego, but out of a desire to serve the project better, and are willing to at least try a different way, and then make a decision whether it works for them or not - we work better

together. My years of experience bring something to the table, and I appreciate that my point of view is accepted, and considered, even if not implemented.

Today, I'm not that person I was. Over the years, I've come to understand that with a certain kind of people, when they ask your opinion, they don't really want it, they just want validation for theirs. After 32 years, I've very little patience for this, so if asked, I'll give my honest opinion regardless of in whose favour the answer aligns, and then inevitably proceed to do exactly what the client wants, my opinion notwithstanding. You learn, you evolve. You conserve energy.

What is your favourite piece of go-to gear in the studio without which you cannot mix? Why?

Of all the hardware that I've ever had the pleasure of using, I'd say that the one thing I couldn't mix without would be the Manley VariMu Compressor. It imparted magic to any audio passing through it. Sadly, as part of my strategy to solely mix in the box, I parted with it. Today I'd say my most important go-to gear are my Genelec 8341 DSP monitors. I may be biased, but in my opinion, they are the finest monitors in the world, and I absolutely would have no other at The Sonic Laundry. I trust them so completely, that I bought more of the same for The Sonic Laundry's expansion to immersive audio.

What are the significant changes/differences that you have noticed in the industry in these past two decades? And how has the role of a sound engineer changed?

As I'd mentioned to you earlier, the greatest change that has occurred in the past 2 decades is the significantly lowered cost of entry to owning essential equipment that comprises a studio. That has democratised access to the

tools we use to record and mix music to anyone. It's a hugely complex dichotomy. Studios were built and became renowned for their gear and services, but today's paradigm is that it's no longer about the gear since everyone has access. Those studios who had the foresight to invest in good people and keep them while these changes were happening are the ones who are still at the top of the game today. I think that we will see the rise



Even after 34 years, Farhad still gets excited at the prospect of a new day in the studio

of many engineer-owned studios as a sustainable model, at least until a saturation point is reached.

Unfortunately, in India, we celebrate mediocrity, so the quality and standards of engineering has gone in a steadily downward spiral due to our "chalta hai" attitude. Everything is only about the lowest possible cost. At no point does anyone even mention quality. And so it goes....

Since so much music is done in home studios today, do you think big recording studios are a league away from home studios or do you think people can do as good a job in home studios?

That's a loaded question. Obviously, great work is being done out of home studios. I think we need to differentiate a "home studio" from a "studio at home". The Sonic Laundry is a zero compromise studio built into my home, and at its peak had enough equipment to lavishly outfit 3-4 commercial studios. In fact, I still have a lot in storage. Everything points to this as a growing trend all over the world, even the best engineers in residence at top studios are implementing this for themselves as the way forward.

The only place that a large professional commercial studio comes into its

own league is when you need to record a large number of live instruments together. Only a large studio has a console, microphone collection, inputs and space to enable that. Not to mention, highly professional and experienced staff who know how to use that gear and guarantee results. That is something very few home studios can match, especially in a crowded city where space is at an extremely expensive premium. But all over the world, more often than not, work is being done in home studios, affording both the artist and engineer the luxury of not having to be forcefully creative against the demands of an expensive ticking clock.

The common debate analog vs digital. What is your take?

Isn't it obvious?? Having been on both sides of the fence, and having been the first user in India of both a digital multitrack, Akai ADAM in 1989, as well as hard disk based recording system, Digidesign Sound Tools, also in 1989, I'd say digital all the way. But that is a simplistic answer. Why then, was the first iteration of The Sonic Laundry analogue?? (smiles) Because I love analogue. My take - if you have the luxury to be able to do so, capture through analogue, and process, edit and mix

digital. Best of both worlds.

Where do you see the future of Studio Engineering headed?

I really don't know. I often despair we may live to see a dystopian future where entire generations of engineers only get to mix sampled instruments delivered over the net, and never get to actually mic and record anything. That would be very bleak indeed. I think it is essential to record live instruments to understand sound. I hope to be able to teach and pass on these learnings to younger generations at some point in my life.

What advice would you give young people interested in mixing in the studios?

I'd rather advise young people to be interested in recording in studios! People assume that the mixing engineer is the glamorous lead singer of the band, but actually it is the recording engineer!

My advice? Never forget - In order of importance:

- Great writing is better than a great performance
- A great performance is better than a great recording
- A great recording is better than a great mix
- A great mix is better than great

mastering.

So, it's important to know the hierarchy of things. A great mastering job cannot save a bad mix. A great mix cannot salvage a poor recording. A great recording cannot compensate a poor performance. And nothing can help bad songwriting, not even a flawless performance! As an engineer you're largely not in control of the music or its performance, so recording well is the best way to contribute to all the processes that follow in making music. A well recorded performance almost mixes itself, and there's not much that mastering has to do to help such a mix.

What is the driving force which keeps you motivated?

I truly love what I do!! That people are willing to pay me to do it is a wonderful side effect!! Even after 34 years, I still get excited at the prospect of a new day in the studio, even more so if it means getting to interact with musicians, and getting to record a performance!! This is the truth, and not rhetoric. If you love what you do, you'll never have to work a day in your life! If the goal is to make money, or earn a living, there are many far less stressful jobs enabling one to do that.

Have passion. The rest will follow.



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SHURE MV7 PODCAST MICROPHONE TAKES RECORDING AND STREAMING TO NEXT LEVEL

For podcasters, gamers, and vocalists, professional-level audio production is paramount. To answer the increasing demand for audio streaming and recording solutions at home, in the studio, or anywhere, Shure has unveiled the **MV7 Podcast Microphone** – the Company's first hybrid XLR/USB microphone. Ideal for both entry level and experienced creators, the MV7's intuitive design makes it incredibly user friendly and simple to set up and control.

Harnessing the Company's engineering prowess that developed its iconic SM7B Vocal Microphone—the MV7 dynamic microphone delivers versatility and control, flexible connectivity options, and high-quality audio in a sleek, compact design.

"This year, we've witnessed a significant uptick in the demand for tools and accessories that support live streaming and podcasting – especially as many continue to broadcast their talents from home," said **Soren Pedersen**, Associate Manager, Global Product Management, at Shure. "Regardless

of the application, creators understand the importance of clear and intelligible audio. We've designed the MV7 to be laser focused on the user's voice, so the audience always gets a clear and rich reproduction no matter the type of room they record in, so their audiences can focus on the content."

A Virtual Audio Engineer in Every Box

Shure's Voice Isolation Technology elevates the user's voice to help take podcasts or live streams to the next level. No matter the environment, the microphone's pick-up pattern focuses solely on the vocals by bringing it to the forefront of the recording, for uninterrupted audio every time.

A user's vocal level and mic position are always fluctuating. Auto Level Mode sets gains perfectly in real time, so the output levels stay consistent. This enables creators to focus on the content, and not on their mic technique, resulting in less time editing post-recording, and more time creating. Auto Level Mode also acts as a virtual audio engineer and adjusts audio levels on the fly, giving audiences a more consistent listening experience.

User-Friendly Customization Shortens Set-Up Time

An integrated touch panel optimizes control for quick, convenient adjustments. With just a few taps, the touch panel control lets the user adjust the gain, headphone volume, monitor mix, and mute/unmute, with an option to lock customized settings.

Complemented by the new, free Shure MOTIV App for desktop, the MV7 offers the flexibility to control audio functions with the convenience of various preset modes. Users can select their tone (Dark, Natural, or Bright), depending on if they want a deep "radio" voice, or a crisp and clean sound. These settings are available in Auto Level Mode and can be selected with one click in the MOTIV app. Similarly, users may select their mic distance from the MV7 (Near or Far), depending on how they are positioned. For podcasters and streamers who like to be up close and personal with the mic, near mode is ideal. For those who need a little more breathing room, far mode offers a consistent level up to 18 inches. The MV7 is also certified by popular VoIP solution, TeamSpeak.

Elevated Compatibility

Compatible with virtually any device or hardware, the MV7 is easy to integrate into an existing technology setup, whether creating content in a home studio or recording on-the-go. The mic offers a professional XLR output for use with interfaces, mixers, and professional audio equipment—making it an ideal multi-purpose solution for podcasting, radio, gaming, voiceovers, and recording studios. It also supports a USB-A and USB-C output for Mac and PC. When mobility and on-the-go recordings are needed, the MV7 works with select Android devices. A Lightning cable is available separately for use with iPhones and iPads.



LAWO ANNOUNCES NEXT-GENERATION CONSOLE CORE AND MOST COMPACT MC² MIXING CONSOLE

Lawo has unveiled the Phase II of its powerful **A__UHD Core audio engine**, and the next generation of Lawo's most compact, feature-filled all-in-one mixer: the **mc²36 audio production console**.

Both products are designed to deliver maximum output using minimal space, weight and power requirements. The native-IP A__UHD Core has just become Lawo's new console core for mc² consoles and takes a decisive lead in processing power per cubic centimeter by delivering 1,024 channels of mc²-quality audio processing in just 1RU, while dramatically cutting power consumption. The new mc²36 mixer raises the audio production bar by more than doubling the DSP channel count of the original, as well as introducing an ultra-compact 16-fader version that delivers big performance in the smallest mc² footprint ever. And a major new feature, IP Easy, makes managing IP net-

work devices simpler and more intuitive than ever before.

"UHD stands for ultra-high density," explains **Christian Struck**, Lawo's Senior Product Manager, Audio Production.

"And it lives up to its name. A__UHD Core combines minimum size with maximum performance. It has everything a live production console needs, including 1,024 channels of mc²-grade processing algorithms, multiple sets of monitoring matrices, downmixing and upmixing, and is ready for next-generation audio formats such as Dolby Atmos and MPEG-H. It packs the power of systems formerly requiring 7 to 10 RU into just one rack space; weighs only 7 kg versus the 20 to 25 kg of a traditional console core. Even more astounding: it consumes only 220 watts of power."



Lawo's new A__UHD Core is a native IP device, designed from the start to work within IP networks and manage networked devices. As such, it is based fully on open standards such as ST2110-30/-31, AES67, RAVENNA, Ember+ and NMOS. And it's designed for both 48 kHz and 96 kHz operation.

"New capabilities in the mc²36 provide customers who need a small console something they've never had

before — an IP-native mixer, with outstanding DSP power and comprehensive I/O connectivity. Furthermore, the new console does not only provide best in class IP connectivity, but also Lawo-grade microphone inputs and line outs, and also AES3 and a built-in MADI port for legacy equipment," says **Lucas Zwicker**, Senior Technical Product Manager, Audio Production.

GENELEC UNVEILS NEW FEATURES AND UNRIVALLED USER EXPERIENCE WITH GLM 4

Genelec has announced a free upgrade to its hugely popular **GLM software** for audio monitor system setup, calibration and control.

The next-generation **GLM 4** now gives users of Genelec Smart Active Monitors the benefits of Mac Catalina compatibility, an elegant

ing mixes that translate consistently to other rooms and playback systems.

GLM 4 integrates seamlessly with the intelligent DSP hardware within each Smart Active Monitor, allowing each monitor and subwoofer to be networked, configured and individually calibrated for the user's specific

the user has many options for further manual adjustment, thereby achieving complete personalization if required.

Compatible with Windows and Mac OS, including 10.15 Catalina, GLM 4 comes with a brand new user interface for faster, more intuitive and easier navigation. Created in conjunction with leading industrial designer Harri Koskinen, the new user interface fuses clean, attractive aesthetics with a unique character. The hexagonal design also supports the idea of natural growth, developing the user's listening skills and allows a monitoring system to be easily expanded from mono to complex immersive as the user's needs evolve.

GLM 4 offers new features including dedicated setup and control functions for immersive monitoring, and excellent compatibility with the increasing number of audio monitoring standards in international mastering, broadcast, OTT and film. GLM 4 supports Cloud-based and local storage of settings, giving the user options for complete mobility, with the Cloud helpdesk always on hand to provide remote consultancy via a team of Genelec audio experts.

In conjunction with the cutting-edge DSP hardware GLM 4 supports fully scalable systems from mono and stereo to more than 80 channels of immersive reproduction. The tight integration of hardware and software also ensures the best possible system performance and dynamic range, and allows the user to

switch between monitor setups without having to use extra DAW outputs or invest in costly external hardware.

Additionally, GLM 4 users can benefit from fixed and low latency performance without having to bypass any monitoring software sitting on the master audio buss. This eases the creative process by avoiding the need to switch between 'record' and 'mix' modes, and once calibrated, GLM 4 settings can also be stored within the monitor or subwoofer itself, avoiding the possibility of accidental changes.

Genelec Managing Director **Siamak Naghian** comments: "GLM 4 is the distillation of many years of continuous research into the effects of room acoustics on monitoring system performance, and will help to streamline the user's workflow and elevate the quality of their mixes. In line with our design philosophy on sustainability, GLM 4 is also completely backwards-compatible with all generations of Smart Active Monitors. This means that professional users can not only be confident that GLM 4 is the most advanced, efficient and intuitive room calibration system on the market, but it also guarantees that Genelec Smart Active Monitors are an extremely secure, scalable and future-proof long-term investment."



GLM 4 offers new features including dedicated setup and control functions for immersive monitoring

new user interface, and a host of valuable new features. By minimizing the room's distractive acoustic influence on the sound quality, GLM 4 provides an unrivalled and truthful sonic reference - wherever the user chooses to work. GLM 4 therefore powers creativity, produc-

acoustic environment. GLM's reference microphone kit allows the user's room acoustics to be accurately analyzed, after which GLM's AutoCal feature automatically optimizes each monitor and subwoofer for level, distance delay, subwoofer crossover phase and room response equalization. At that point

PRESONUS AVB-D16 BRINGS DANTE COMPATIBILITY TO STUDIO LIVE SERIES III ECOSYSTEM

The first plug-and-play endpoint that bridges AVB and Dante networks, the **PreSonus AVB-D16** 16x16 AVB-to-Dante Bridge enables users to send and receive up to 16 audio channels between PreSonus StudioLive Series III mixers and a Dante network.

With one or more AVB-D16s, users can easily integrate PreSonus StudioLive Series III mixers, NSB-series stage boxes, and EarMix 16M personal monitor mixers with Dante-enabled DSPs and other Dante-enabled products, such as PreSonus CDL-12 constant directivity loudspeakers.

The AVB-D16 supports AVB audio at 44.1 and 48 kHz and Dante audio at 44.1, 48, 88.2, and 96 kHz. Built-in asynchronous sample-rate conversion ensures that the AVB-D16 provides precision clock isolation between the AVB and Dante networks for pristine, clear

audio with no dropouts or artifacts. This also allows users to run different sample rates on the AVB and Dante networks.

Users get one AVB port on a locking etherCON connector and two Dante ports on etherCON for redundant networking. Network Link/Activity Monitor indicators enable users to monitor the data flow.

Whether looking at Dante network setup from Audinate's Dante Control software or managing a StudioLive Series III AVB ecosystem from PreSonus UC Surface control software or a StudioLive Series III console touchscreen, each AVB-D16 presents itself as a simple 16x16 network device. The result is a truly cohesive networking experience between the two protocols.



ELECTRO-VOICE ANNOUNCES RE20-BLACK

Electro-Voice has announced the introduction of the **RE20-BLACK** – a new color option for the classic RE20 broadcast microphone, sporting an elegant, low-reflection dark charcoal finish.

The RE20 has continued to be a firm favorite of broadcasters, musicians and sound engineers around the world since its introduction more than 50 years ago. The RE20-BLACK offers users

an aesthetic alternative to the iconic original finish, while being acoustically, electrically and mechanically identical.

Beyond providing the industry-standard sound of FM radio voices, the RE20's popularity has surged in recent years with the rapid growth of podcasting and home recording/production. It also remains a trusted tool in professional recording studios, and

a mainstay mic on live-performance stages everywhere.

A key to the RE20's enduring popularity is its unique Variable-D design. Variable-D minimizes proximity effect, giving users the confidence that their tone will remain full, pure and accurate while they enjoy the freedom to work naturally around the mic at varying distances. Additional features include a

mid-bass tone-shaping switch, a substantial integrated pop filter, and a humbucking coil to guard against line hum – all of which combine to provide a supremely smooth, natural and controlled sonic character.



HEDD AUDIO ANNOUNCES NEW GENERATION OF STUDIO MONITORS AND SUBWOOFERS

HEDD Audio have announced the **MK II series** of professional active loudspeakers. The new range includes **TYPE 05 MK2, TYPE 07 MK2, TYPE 20 MK2, and TYPE 30 MK2** models and powerful **BASS 08** and **BASS 12 subwoofers**.

As before they all are handcrafted in Berlin Germany and will be available from January 2021.

HEDD's new models are equipped with a powerful DSP board that enables 3 powerful features:

1. **On-board Lineariser:** Implemented in the MK2 and subwoofer models is the well-known Lineariser, a phase linearisation tool that leads to perfect impulse response and an audibly improved spatial reproduction.

2. **CoP Technology (Closed or Ported):** The MK2 series makes it possible to use the speakers with or without bass-ports. Users can now choose between the energy and bass-capacities of a modern bass-port design and the painstaking preci-

sion and control of a closed cabinet approach.

3. **Phase Linear Sub-Satellite System:** HEDD is introducing a completely phase linear Sat-Sub system. These are the first Satellite Sub systems that are completely "...right in time" by applying switchable group delay at the satellite output. The potential listener distances between subwoofers and satellites can be compensated in a ± 2 m range.

The MK2 Monitors have a new and improved lacquer for higher durability and better looks. The monitors will also be available in white.

In addition to the new studio monitor models, HEDD is debuting two unique subwoofers called **BASS 08** (8" woofer) and **BASS 12** (12" woofer). These subwoofers can be combined with HEDD's previous models as well as any other active speaker system. However, their full potential lies in the seamless integration with our new HEDD MK2 models.



"The new HEDD product line demonstrates what can be achieved today both in audio quality and control versatility. We believe that we are about to set a new benchmark within

MI / Pro Audio whilst increasing the company's potential to be successful in both the Broadcast- and Consumer Audio realm." - **Klaus Heinz**, CTO HEDD Audio.

CAD AUDIO UNVEILS GXL1800SP STUDIO PACK AND PODMASTER SERIES

The renowned **GXL Series** of Microphones deliver world-class performance and flexibility for creative projects. With their high sensitivity, low noise, low distortion and affordability, they are perfect for Podcast, Vlog, Audio for Video, Gaming, Home Recording, Voice-Over or Live Sound Reinforcement project.

GXL1800SP Studio Pack

The **GXL1800SP Studio Pack** contains the GXL1800 & GXL800. The **GXL1800** Large Format Side Address

Microphone captures the performance with a smooth and articulate profile. The GXL1800's high sensitivity allows for distance miking techniques and combined with a well behaved cardioid polar pattern, helps to eliminate off axis environmental noise. The **GXL800** small diaphragm condenser delivers class-leading transient response while supplying a true representation of voice or instrument. Includes studio grade shock

mount, mic clip, 2 XLR cables and foam windscreen.

PodMaster series

CAD Audio introduces 3 New Broadcast/Podcast mic bundles for the expanding Content Creation and Podcast markets. The **PodMaster D** usb, **PodMaster SuperD** usb are plug and play usb microphones while the **PodMaster SuperD** is an XLR microphone.

The 3 are outfitted with broadcast quality dynamic capsules - The SuperD varieties receiving an upgraded 35mm Large Diaphragm broadcast capsule supplying VOG performance while delivering a smooth and articulate

profile.

PodMaster bundles are studio ready – supplied with PodMaster Boom mic stands, mount, shock mounts, screen and usb clips/wind-cables.



GXL1800SP Studio Pack



PodMaster Series

ANTELOPE AUDIO LAUNCHES BUS-POWERED, PORTABLE AUDIO INTERFACE - ZEN GO SYNERGY CORE

Antelope Audio has launched its first bus-powered, portable (4 x 8 USB-C) audio interface, the **Zen Go Synergy Core**, at NAMM Believe in Music Week.

The Zen Go Synergy Core is a portable desktop interface that allows self-recording artists to create from virtually anywhere with technology used by award-winning producers. The device's sound quality and processing capabilities are in a class of their own with Antelope Audio's renowned 64-bit AFC clocking technology and the powerful, effects-packed Synergy Core onboard platform.

The Zen Go Synergy Core shrinks the gap in sound quality between artists with access to premium studios and home creators. The pristine sound is due to a combination of professional-grade AD/DA converters and Discrete ultra-linear preamps and the 64-bit AFC

clocking technology. Zen Go Synergy Core comes with 37 of the finest analog-modeled effects that will help create stunning, sonically rich productions. Aside from the exclusive compressors, EQs and preamps, with the interface users get 22 guitar amps & cabs, a guitar tuner and a signature reverb that are ready to be applied in real time to tracking and mixing sessions. The Synergy Core effects processing allows to stack up chain with many effects instances while monitoring through the interface without fear of overloading.

Antelope Audio's first bus-powered interface is optimized for ultra-low latency recording, high-resolution playback, creative beat making and podcasting from virtually anywhere. With just a USB-C cable user can power the Zen Go Synergy Core from their computer and use it to its full potential without having to carry a dedicated power supply. The interface can also be powered with any USB-C charger.



Since DAW monitoring inevitably adds latency, users can monitor directly through the interface to reduce delay to the absolute minimum. With the routing options users can easily set-up a near-zero latency mix and stack it with their favorite Synergy Core effects without fear of overloading the onboard platform. Dedicated signal metering is available for both input and output levels on the front panel display and in the software Control Panel.

The two combo XLR jacks give the

flexibility to choose between custom Discrete mic preamps, line and Hi-Z inputs, and are easily configurable via the control panel. The two TRS balanced outputs, mirrored with the two RCAs, allow to send the signal from the professional-grade D/A converter to two separate sound systems.

AHUJA LAUNCHES PLUG-N-PLAY LAVALIER MICROPHONE FOR SMART DEVICES

The all new **Ahuja MTP-20** was introduced keeping in mind content creators who are just starting out in the YouTube space and want a better audio quality than they get from their smartphones. The MTP-20 gives their audience an amazing audio experience along with the video.

The MTP-20 Lavalier Microphone comes with a TRRS 4-pole connector which is compatible with most recording devices. For the rest of the devices, it comes with a TRRS-to-TRS connector in the box. This makes it compatible with an iPhone or an android smartphone, laptop or PC, DSLR or your GoPro.

Cardioid Unidirectional Pickup gives users a much better passive noise rejection as compared to the standard Omni Directional microphones available. It has a metal body to ensure great build quality for rugged usage. It also comes with a 5-meter-long cable to make sure



that everything

One of the most interesting feature of this microphone is that it comes with a Neck Band, which can be used for hanging the mic over the neck. This is particularly useful for people who find it difficult to clip the microphone onto their clothing like t-shirts or sarees.

The Ahuja MTP-20 has users covered, whether a content creator or a vlogger, a trainer or an interviewer, storyteller or a podcaster. Available all over India with the nearest Ahuja dealer.

MACKIE INTRODUCES NEW ONYX SERIES ANALOG MIXERS

Mackie has announced its new line of Onyx Mixers. Including four variations, **Onyx8**, **Onyx12**, **Onyx16**, and **Onyx24**, each feature 24-Bit/96kHz multitrack USB recording, award-winning high-gain Onyx mic preamps, and an end-to-end ultra-low-noise design. Mackie's Onyx Series delivers the sound quality professionals demand and is the ultimate solution for live audio, home recording, and content creation at a competitive price and in a compact design.

Mackie's Onyx line-up features:

- Mackie's legendary Onyx mic preamps and analog circuitry deliver professional studio-quality sound and ultra-low noise. The unique Perkins "British Style" EQ with sweepable midrange offers classic EQ sounds of consoles from the 60's and 70's.
- Onyx provides the ability to easily record and playback from a Mac or PC via USB, or users can record a main mix directly to an SD card.
- Every Onyx model is equipped with Studio Command, a full-color display and single knob interface for managing the built-in FX and SD



Mackie Onyx8

card file for browsing, recording, and playback.

"Mackie Onyx has become synonymous with excellent, professional sound," said **Matt Herrin**, Product Manager at Mackie. "And we are excited to bring these brand-new analog mixers under the renowned Onyx name that are built for the needs of modern musicians and content creators."

Product Details

The **Mackie Onyx8** 8-Channel Premi-

(Continued on page 22)

SENNHEISER MD 445 AND MD 435 VOCAL MICS DEBUT IN INDIA

Sennheiser has announced the launch of four innovative products under the range of two microphone categories in India - **Sennheiser MD 445, MM 445 and MD 435, MM 435**. The purpose behind launching these two range of microphones is to cater to professional artists to make their voices heard clearly with a better sound quality.

According to **Vipin Pungalia**, Director, Professional Segment, Sennheiser India, "We are excited to announce the launch of four innovative products under the range of two microphone categories in India- the MD 445, MM 445, MD 435 and MM 435. As the world is gradually trying to recover from the pandemic, many artists are looking for solutions that will enhance their vocal performance to engage with the audience even in the loudest environment. For this, we have launched four microphones to cater to the diverse needs of our consumers. The MD 445 is the most powerful microphone in our MD range as it effortlessly cuts through loud stage sound and establishes an audibly greater proximity to the vocals. It additionally comes with MM 445 which can be used with Sennheiser wireless series. With the MD 435, soft voices will effortlessly assert themselves which will make the presence felt of the artists. It additionally comes with MM 435 microphone head which can be used with Sennheiser wireless series. We are looking forward to seeing how our customers respond to this."

Sennheiser MD 445 and MM 445:

The stage is incredibly loud, with the instruments seeming to acoustically close in on the vocalist – these are challenging environments for which the new MD 445 from Sennheiser was created. The audio specialist's large-diaphragm, dynamic stage microphone

combines a direct, head-on sound with a tight super-cardioid pick pattern, providing not only maximum isolation from other on-stage sound sources but also an extremely high level of feedback resistance. With the high-rejection MD 445, vocalists can effortlessly assert their presence even in the loudest of environments.

The acoustics of the MD 445 have been tailored to modern stage set-ups with B stages and runways in front of the PA. At the core of the acoustic design is a newly developed voice coil made of lightweight aluminium-copper. Its fast-transient response ensures a very detailed, nuanced and transparent sound that is complemented by rich mid-range and bass. The sound is acoustically close, intimate and open, irrespective of how loud the instrument

The outstanding acoustics come with a mechanical design that's built to withstand a life on tour: The MD 445 features a metal casing and has a shock-mounted capsule to protect it from structure-borne noise. A hum compensating coil protects the microphone against electromagnetic interference.

For use with Sennheiser's wireless transmitters, the capsule of the MD 445 is also available as MM 445 microphone head. Fitted with Sennheiser's standard capsule interface, the MM 445 can be used with Sennheiser wireless series ranging from the evolution wireless G4 and 2000 series to Digital 6000 and Digital 9000.

Sennheiser MD 435 and MM 435:

Until now, this outstanding sound has been exclusively reserved for top-

ium-copper voice coil ensures fast transient response, resulting in a very detailed, nuanced and transparent sound, especially in the treble. The large-diaphragm microphone features very wide dynamics of 146 dB(A) and can handle sound pressure levels of up to 163 dB/1 kHz. The outstanding acoustics come with a mechanical design created to take on the rigors of life on tour: The MD 435 features a metal casing and has a shock-mounted capsule to protect it from structure-borne noise. A hum-compensating coil protects the microphone against electromagnetic interference.

The cardioid MD 435 features a very pleasant proximity effect and the microphone is very tolerant of sound hitting the capsule at different angles. It reproduces vocals clearly and confidently even in loud live settings.

For use with Sennheiser's wireless transmitters, the capsule of the MD 435 is also available as the MM 435 microphone head. Benefitting from an improved production process, it will soon replace the existing MD 9235 capsule. The MM 435 features Sennheiser's standard capsule interface, ready for use with Sennheiser wireless series ranging from the evolution wireless G4 and 2000 series to Digital 6000 and Digital 9000.

Priced at INR 59,900, MD 445 and MM 445 microphones are now available via offline trade at Dealer & Distributor outlet.

Priced at INR 49,900 MD 435 and MM 435 microphones are now available via offline trade at Dealer & Distributor outlet.

The MD 445 and MM 445 was featured in the Nov-Dec issue of PALM Technology. *Click on the link to read about it.* http://palmtechnology.in/Magazine_Pdf/NovemberDecember2020.pdf



Sennheiser MD 445

Sennheiser MD 435

soundscape may be.

Thanks to its high-rejection, super-cardioid pick-up pattern, the MD 445 has enormous gain before feedback. Dynamics are wide at 146 dB(A) and the microphone can handle sound pressure levels of up to 163 dB/1 kHz.

end live sound and broadcast productions – now, Sennheiser is bringing the sound of its dynamic MD 9235 capsule to a wired vocal microphone. The new MD 435 large-diaphragm microphone brings accentuated presence, sparkle and pleasant detail to every voice.

The MD 435's lightweight alumin-

MACKIE INTRODUCES NEW ONYX SERIES...

(Continued from page 21)

um Analog Mixer with USB is the ultimate compact, affordable solution for live audio, home recording, and content creation. Packed with features including high-resolution 24-bit/96kHz record-

ing, powerful DSP, and more. Users can expect to capture the best performance at home or on the go with Onyx8.

The **Mackie Onyx12** Premium Analog Mixer with USB features the standout

features of the Onyx8 with an expanded 12-channel offering.

The **Mackie Onyx16** Premium Analog Mixer with USB features the standout features of the Onyx8 with an expanded

16-channel offering.

The **Mackie Onyx24** Premium Analog Mixer with USB features the standout features of the Onyx8 with an expanded 24-channel offering.

STEINBERG ENDS YEAR WITH NEW NUENDO 11

Steinberg has announced the immediate availability of its much-anticipated premium media production system, **Nuendo 11**.

Nuendo 11 delivers new and enhanced features, including dedicated tools for Dolby Atmos and Netflix productions along with new design tools and exclusive content.

ADM authoring for Dolby Atmos is one of the highlights included in Nuendo 11. With this module and its integrated Renderer for Dolby Atmos, content can easily be created according to Dolby Atmos specifications, allowing producers to work within Nuendo while eliminating the need for further software or external hardware.

Senior Product Manager, Content

Creation, at Dolby Laboratories, **Jordan Glasgow** commented: "Nuendo 11 is a huge step forward for Dolby Atmos content creation. Having all this functionality inside of Nuendo really streamlines the workflow, as you no longer need to toggle between applications or wait for your final output file to print in real time. I think this release is definitely going to make a lot of Dolby Atmos content creators very happy."

Nuendo now includes an entire metering plug-in suite with SuperVision. Providing more than 20 different display modules for level metering, loudness measurement and analysis, SuperVision is extremely flexible and offers customizable settings and layouts for up to nine module slots.

More metering options are integrated with the Netflix Loudness Meter and Intelligibility Meter. To ensure consistency of content production, the Netflix Loudness Meter in Nuendo 11 is calibrated to the official Sound Mix Specifications and Best Practices, measuring the dialog-gated loudness as required by Netflix.

Nuendo 11 also adds enhancements to its sound design tools. The MultiTap Delay now supports up to 7.1 surround sound. Frequency 2 offers dynamic EQ, with the filter nodes of the eight available bands responding to the input signal and also offering independent side-chaining. The new Multiband Imager places up to four bands in different locations within the stereo

image. The new Squasher compresses the input signal in up to three bands, with an individual gate, saturation effect and independent side-chaining. The enhanced Sampler Track now slices samples and includes two global LFOs.

SpectraLayers One offers a spectrogram view of the audio tracks in Nuendo, including selection, editing and display tools that allow intricate editing to improve dialog and location audio.

Nuendo 11 also has several new tools for musicians. The Scale Assistant lets users set the scale of the music, which is then adjusted accordingly within the newly enhanced Key Editor, which now displays Global Tracks. Along with other improvements, the Score Editor includes Note Length and Velocity Overlays to edit notes, the new Property tab for easy access to notation settings and support for Dorico's Bravura and Petaluma fonts.

Rounding out the extended feature set, Nuendo 11 comes with a wealth of new sound content: over 750 game sound effects by Soundbits, six loop and sound sets, more than 200 plug-in and track presets, and the seamless integration with the Soundly cloud library of sound effects, allowing users to tap into a variety of premium sounds.

Steinberg's Marketing Manager for Nuendo, **Luis Dongo**, commented: "We're delighted to be launching Nuendo 11 during its twentieth anniversary year. It's a major update and it has a lot to offer. Offering the ability to create content for Dolby Atmos, Netflix approved loudness metering, studio-grade instruments as well as the many other additions and improvements, Version 11 is a giant leap forward that provides new opportunities for producers and engineers working on commercial audio productions."



Steinberg Nuendo 11 in use at Tonik Studios Hamburg

TASCAM INTRODUCES THE TM-82 DYNAMIC MICROPHONE

TASCAM has announced the debut of the **TM-82** Dynamic Microphone. Featuring a unidirectional cardioid design specifically engineered for stunning voice and instrument capture, the TM-82 Dynamic Microphone makes an exceptional choice for both recording and live performance applications.

Designed as a vocal / instrument microphone for the working performer's budget, the TM-82 is the perfect all-around microphone for natural, accurate vocal and instrument audio. With its unidirectional cardioid polar

pattern and a frequency response of 50Hz~20kHz, the new TM-82 is specifically engineered to capture the character and nuances of performances without introducing room sound into the mix. The TM-82 captures exactly what is intended—for a mix-ready track or performance.

With its unidirectional cardioid polar pattern that is resistant to ambient noise, the TM-82 captures exactly what it is given—highlighting the performance, be it live or recording. And like everything that bears the TASCAM



name, the microphone's rugged, detail oriented design encompassing a metal housing and components ensures the TM-82 is engineered to withstand the rigors of everyday use. Simply stated, the TM-82 Dynamic Microphone accurately captures both vocals and instruments—making this microphone a terrific choice for performers and

studio users alike.

The new TASCAM TM-82 Dynamic Microphone ships with a mic holder that is compatible with all standard microphone stands.

The TASCAM TM-82 Dynamic Microphone is expected to be available Q1, 2021 and by April 2021 in India.

Summing Up with Consoles

Avid S1

For artists, bands, and producers, Pro Tools | Carbon is a new breed of audio interface—built to capture brilliance. It's a hybrid audio production system that features incredible sound quality and combines the power of the native CPU with onboard HDX DSP acceleration.

Main Features include:

- Hands-on access to audio or video project
- With Avid Control on connected iPad or Android tablet
- Jump to a track by selecting it in Tracks View
- Swipe through multiple channels in Mix View
- Open and close Pro Tools Folder Tracks from the surface, speeding up session navigation
- Motorized, touch-sensitive faders and touch-sensitive knobs
- Customizable Soft Keys to speed up tedious tasks
- Deep integration with Pro Tools and Media Composer, plus native support for Logic Pro, Cubase, Premiere Pro
- Assign and manage source selections, cue mixes, talkback, listenback, speaker cuts, to speed up workflow.

Technical Specification:

- Faders: Eight motorized, touch-sensitive, 100 mm long-throw faders
- Knobs: Eight push-top, touch-sensitive rotary encoders
- Additional Controls: Assorted hardware buttons/keys for various functions and mode selections, including Mute, Solo, Record-enable, Bank, Nudge, and more
- Software Interface: Supports the free Avid Control app running on iPad or Android tablet (tablet not included)



- Displays: Eight high-resolution OLED displays, plus multiple status LEDs and multicolor track buttons; channel metering, monitoring, processing, track status, automation modes, and other views provided by Avid Control on your tablet
- Height (front, rear): 1.2 inches, 3.8 inches (29 mm, 97 mm)
- Width: 12.3 inches (312 mm)
- Depth: 14.9 inches (377 mm)
- Scalability: Connect up to four S1 controllers together, plus Avid Dock, to create an extended, fully integrated surface

AMS - Neve 8424

The 8424 console is designed to fit the needs of the modern hybrid studio where the speed of in-the-box workflow is enhanced with the ultimate sound quality of analogue outboard gear.

Main Features include:

- 24 Mono channels with source selections and 100mm faders
- 24 Channel Direct Outputs
- 4 Groups with 100mm faders
- 3 Mono Auxiliary sends
- 1 Stereo Cue send
- 2 Stereo Reverb Returns
- Marinair Transformer coupled Stereo Mix bus
- 2 1073 Microphone Pre-amplifiers
- 2 Hi-z DI inputs
- 2 500 Series Slots
- 4 Mono, 1 Stereo 2-band shelving EQ
- 1 Stereo Width control
- 2 stereo External inputs
- 3 Loudspeaker Outputs
- 2 engineers' headphone outputs
- 30 Balanced Inserts on Channels, Groups & Stereo mix
- 48 Input Capability
- 8 Stage LED Channel Input Meters
- Assignable Backlit VU meters
- Global channel A/B input switch
- Oscillator
- Smart routing



- Comprehensive connectivity on console rear
- Internal Power Supply

Technical Specification:**1073 to Channels 17 & 18**

- Headroom: +27.7dBu @ 1kHz (<0.5% THD+N)
- Frequency Response: Typically +/-0.1dBu, 20Hz to 20kHz
- Distortion (THD+N): Typically 0.003% @ 1kHz (measured at +20dBu, 10Hz to 80kHz filter)
- Noise: <-87dBu(20Hz to 22kHz filter)

DI to Channels 19 & 20

- Headroom: >+27.7dBu @ 1kHz (<0.5% THD+N)
- Frequency Response: Typically +/-0.1dBu, 20Hz to 20kHz
- Distortion (THD+N): Typically 0.004% @ 1kHz (measured at +20dBu, 10Hz to 80kHz filter)
- Noise: <-87dBu(20Hz to 22kHz filter)

Control Room Output feed from Main Mix

- Headroom: >+26.5dBu @ 1kHz (<0.5% THD+N)
- Frequency Response: Typically +/-0.1dBu, 20Hz to 20kHz
- Distortion (THD+N): Typically 0.002% @ 1kHz (measured at +20dBu, 10Hz to 80kHz filter)
- Noise: <-87dBu (20Hz to 22kHz filter)

Crosstalk

- Inter-channel Crosstalk: <100dBu @ 1kHz
- Mix bus Crosstalk: <100dBu @ 1kHz
- Groupbus Crosstalk: <100dBu @ 1kHz
- Aux Mix bus Crosstalk: <100dBu @ 1kHz

Dimensions & Power Requirements

- Height - To top of LS Shelf (No Stand): 500mm/19.68 inches
- Height - To top of LS Shelf (With Stand): 990mm/38.98 inches
- Width (24 Channel): 1190mm/46.85 inches
- Depth (24 Channel): 850mm/33.46 inches
- Weight (no stand): 53kg
- Weight (with stand): 64kg
- Power factor: >0.87
- Voltage: Input Voltage Range 90-240v AC Only

Regardless of the engineering style, the console is at the heart of sound recordings and mixes. No surprises then that this being the **Studio** special issue, the **Studio Console** features as the main product focus. This lineup serves as a guide to help readers make informed decisions while buying one for their studio.

Mackie - Onyx Mixer

Mackie Onyx Premium Analog Mixers with USB are the ultimate compact, affordable solution for live audio, home recording, and content creation. Packed with features including high-resolution 24-bit/96kHz recording, powerful DSP, and more.

Main Features include (Onyx24):

- 18 award-winning Onyx mic preamps provide up to 60dB of gain
- Premium analog circuitry delivers studio-quality sound and keeps noise to a minimum
- Analog/USB channel strips with flexible routing
- Legendary Perkins "British style" EQ with sweepable midrange offers classic sounds of the 60's and 70's
- Robust digital effect engine, including user-customizable reverbs, delays, and more, with a dedicated FX EQ
- High-resolution 96kHz / 24-bit multi-track recording to Mac/PC via USB
- Direct to SD card stereo recording and playback
- Channel-assignable 4-track USB return (2 stereo pairs)
- Easy navigation of FX parameters, onboard SD recording and playback
- Visually browse files on the SD card via the built-in display
- Dedicated physical buttons for Previous, Next, Record, and Play/Pause
- Store up to 6 user FX presets for easy recall

Technical Specifications (Onyx24):

Input Channels

- Mono Mic/Line - 14
- Mic/Stereo Line - 4
- Stereo Line - 1
- Mic Preamp Type: Onyx Mic Pre w/ up to 60dB of gain
- 48v Phantom Power: Global, switchable
- 100Hz Channel Low Cut: Switchable per channel
- Channel EQ: Perkins "British style" 3-band EQ with sweepable midrange and On/Oswitch
- Channel Inserts: Ch. 11 - 14
- Aux Sends: 2 + FX Send
- Bluetooth and Stereo 1/8": Ch. 23/24

- Main Outputs: L/R TRS and XLR
- Main Meters: 12-Segment LED
- Channel Solo: AFL / PFL
- Internal FX: Adjustable Delay, Reverb, Chorus, and more Built-In Display: Full-Color Display and Single-Knob Interface. Adjust FX parameters, recall presets, manage and play recordings/music
- USB Recording: 96 kHz / 24-Bit 24×4 on Mac/PC
- Weight: 21.5 lb / 9.7 kg
- Dimensions (L × W × H): 25.2 × 14 × 5.4 in/639 × 356 × 136 mm
- Power Supply: Internal Universal 100 – 240 VAC

State Solid Logic - Origin

ORIGIN has a traditional analogue studio workflow while providing a modern DAW-driven 'hybrid' production studio. Its classic design looks back to the origin of in-line consoles for signal flow inspiration, incorporating cutting-edge analogue developments to deliver a unique sonic signature that's still unmistakably SSL.

Main Features include:

- SSL Bus Compressor - Offering new compression ratios, insert return and built-in side chain filter.
- Bus Trim Masters and Routing - Central track bus routing matrix, featuring sixteen +/- 10dB Trims for the track buses, with a routing assign switches for each bus.
- Auto Sleep - Auto Sleep mode enables automatic detection of prolonged inactivity to put the console in stand-by, reducing power consumption.
- Solo Master Section - Solo controls provide Solo-In-Front with Mix balance, Solo-In-Place for Large, Small & Group faders and PFL options. Solo Level, Solo Clear and Red Light Switch complete options.
- Mix Bus - The mix bus features a high-quality



100mm fader, with fully balanced switched Insert for external bus processing.

- Monitoring - The monitoring section features independent Trims for Alternate Monitors 1 & 2, variable DIM level, MONO plus Left & Right MUTES and øL polarity switch. Returns - Four Stereo Return Inputs enable ORIGIN to route to Mix and Track Buses with level controlled feeds to Stereo Foldback Outputs A & B.

Technical Specifications :

- Gain: Mic Amp Gain Variable from +5 dB to +70 dB; Line Amp Gain Variable from -10 dB to +55 dB
- Input Impedance: 1.4 kΩ
- Output Headroom: >+26.5 dBu at onset of clipping
- Frequency Response: 20 Hz to 20 kHz/ +0/- 0.02 dB
- THD + Noise: (-10 dBu applied, +30 dB gain) @ 1 kHz/<0.004% at 1 kHz (20 Hz to 20 kHz); (-10 dBu applied, +30 dB gain) @ 10 kHz/<0.018% at 10 kHz (20 Hz to 40 kHz)

Crosstalk

- Channel Muting: 20 Hz to 20 kHz <-100 dB
- Maximum Fader Attenuation: 20 Hz to 20 kHz <-89 dB Pan pot Isolation: 20 Hz to 20 kHz <-55 dB
- Routing Channel to Main Mix: <-94 dB from 20 Hz to 20 kHz
- Mic Input: -50 dBu applied to Mic Input at maximum gain, measured at Direct Output, Monitor path selected/<-95 dB



PreSonus - StudioLive AR16c

The StudioLive AR16c audio interface and analog mixer is tightly integrated with state-of-the-art recording software to help realize the creative vision. Record multitrack live performances with one click thanks to PreSonus' Capture live-recording software.

Main Features include:

Recording

- 18x4 24-bit/96 kHz, USB 2.0 (over USB-C connection) audio recording interface
- Record every channel plus the main mix
- 2x2 SD recorder to capture the main mix
- Supports SD and SDHD formats up to 32 GB

Mixing

- 18-channel analog mixer
- 12 balanced microphone inputs with XMAX mic preamps
- 2 insert points
- 2 instrument/line inputs
- 16 balanced line level inputs:
 - 8 mono
 - 4 stereo pairs
- Stereo Super Channel (Ch. 17/18) with Bluetooth 5.0 input, RCA inputs, 1/8-inch stereo input, and switchable SD/USB stereo playback
- 8 mono and 4 stereo channels, each with level knob, pan, mute, PFL solo, highpass filter, and 3-band semi-parametric EQ
- 2 monitor buses with dedicated channel sends, AFL solo, and balanced TRS output
- L/R Control Room outputs with level control
- Headphone output with level control

Signal Processing

- Highpass filter on every channel
- 3-band quasi-parametric EQ with sweepable mid-band on each mono channel
- 3-band semi-parametric EQ on each stereo channel
- Stereo effects processor with 16 presets, dedicated send and return, and bypass footswitch jack
- Mic/line boost on stereo channels for low-level input sources and consumer devices



Included Software

- Capture live multitrack recording software
- Studio One Artist recording and production software (DAW)
- Studio Magic plug-in suite

Power

- Internal power supply
- Standard IEC power connector

Physical

- Sturdy metal construction
- 60 mm faders
- Rackmount kit included

Technical Specifications:

Microphone Preamp

- Type: XLR Female, Class A XMAX
- Maximum Input level (unity gain): +9 dBu ± 1.0 dB
- Gain Control Range: 43 dB (+12 to +55 dB)
- Frequency Response to Analog Outputs: 20 Hz to 20 kHz, +0.5/-1.5 dB
- Frequency Response to USB (Direct): 20 Hz to 20 kHz, +0.5/-1.5 dB
- S/N Ratio to Outputs (+4 dBu): 94 dB
- THD+N (min. gain, A-wtd): < 0.01%
- Input Impedance: 1 k Ω
- EIN (+55 dB gain, 150 Ω input, 20 Hz-22 kHz, A-wtd): Mono Channels: < 128 dBu
- Common Mode Rejection Ratio (1 kHz, +55 dB gain): 65 dB
- Phantom Power: +48V, ± 3 V, Global

Line Inputs

- Type: 1/4" TRS Female, Balanced
- Maximum Input Level (min. gain, 1 kHz@0.5% THD+N): +26 dBu ± 1.0 dB
- Gain Control Range: Mono Channels: 40 dB, ± 1 dB (-5 to +35 dB); Stereo Channels: 0 dB or +10 dB (+10 dB Boost)
- Frequency Response to Analog Outputs: 20 Hz to 20 kHz, +0.5/-1.5 dB
- Frequency Response to USB (Direct): 20 Hz to 20 kHz, +0.5/-1.5 dB
- S/N Ratio to Analog Outputs (+4 dBu): 85 dB
- THD+N (1 kHz, -1 dBFS, A-wtd): < 0.01%
- Input Impedance (Balanced): 10 k Ω

Main, Control Room, Monitor, and FX Outputs

- Type (Main Outputs): XLR Male, Impedance Balanced
- Type (Control Room, Monitor, FX Outputs): 1/4" TRS Female, Balanced
- Rated Output Level (Main Outputs): +24 dBu, ± 1.0 dB
- Rated Outputs Level (Control Room, Monitor, FX Outputs): +18 dBu
- Frequency Response: 20 Hz to 20 kHz, +0.5/-1.5 dB
- Dynamic Range (A-wtd): > 108 dB
- THD+N (Bandwidth 20 Hz - 20 kHz, -1 dBFS, unwt'd): < 0.01%
- Output Impedance: 100 Ω

Physical

- Height: 3.5" (89 mm)
- Width (Chassis only): 18.9" (480 mm)
- Depth: 15.6" (397 mm)
- Weight: 14.1 lbs (6.4 kg)



Studiomaster Professional - D.Mix 20

Studiomaster Professional brings the D.Mix 20 - a 20 channel digital mixer that combines the best of what an LCD touchscreen can offer with an intuitive interface for speed and precision in live mixing scenarios. While the console is digital, using the unit is as simple as an analogue one, making the learning curve remarkably quick.

Main Features include:

- 16 mono Input channels with assignable controls.
- 2 Stereo input channels.
- Full duplex USB port for reproduction of digital audio data from a PC & recording mixing onto a PC.
- 4 Aux Send outs & 4 Subgroup outs or 8 Aux outputs.
- 100mm motor-driven fader.
- User definable presets.
- LCD touch screen for settings, routing and navigation.
- 8 Channels Inserts.
- 1 USB audio channels.
- 2 integrated DSP's with EQ, Noise Gate, Compressor / Limiter & Delay.
- 6 DCA groups.
- 24 bits/48kHz sampling rate.
- XLR & Jack Main outputs & Stereo Control Room output.

Technical Specifications:

- Gain (Mic/Line/Stereo Line): 50dB / 50 dB
- Max Gain (Mic/Line): 70dB / 70 dB
- Mic (Gain Min/Gain Max): 0 dBu / -50 dBu
- Line (Gain Min /Gain Max): +8 dBu / -40 dBu
- Mic Input: 5K Balanced
- Line input: 19K Unbalanced
- Main Output level (Nominal / Max): 0 dBu (0.775 V RMS) / +20 dBu (8V RMS)
- Main Output Impedance: 120 Ω
- Frequency Response: 20Hz to 20KHz (+0dB ± 1.5 dB)
- Total Harmonic Distortion: <0.05%
- Signal to Noise Ratio: 85dB
- Mono Mic (Treble/Mid with Sweep/Bass): ± 24 dB (21 Hz - 19.2 KHz)
- Stereo Line (Treble/Mid-Hi/Mid-low/Bass): ± 24 dB (21 Hz - 19.2 KHz)
- EFX: 32 - Bit EFX Processor
- Phantom Supply: +48V
- Dimensions (W x D x H) mm: 445 x 355 x 140
- Net Weight (Kgs.): 7.25



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New Edge Studios Transforms into an Immersive Mix Room

Shadab Rayeen unveils India's first Dolby Atmos Music Mixing Room

*Founded in 2015 by sought-after sound engineer **Shadab Rayeen**, New Edge Studios has been a preferred destination for many acclaimed Indian music directors, producers and artistes. In order to remain on the cutting-edge of audio production technology, Shadab recently decided to renovate and upgrade New Edge with an immersive mixing room, for which he partnered with Modi Digital and Rolins Arcoustics on the AV-install, acoustic-design and supply of gear.*

PT recently had the pleasure of visiting the studio to find out how Shadab's new Dolby Atmos room is being used to reimagine music mixes in a new, immersive format.

Shadab Rayeen's, New Edge Studio strategically located in the midst of Bollywood's studio hub in Andheri West, recently organized a walk-through for PT of the facility's new Dolby Atmos 7.1.4 music mixing room. On hand were also members of the team that made Rayeen's vision a reality – **Aditya Modi** and **Rolins T'Roy**. The studio conceptualized by Shadab and Aditya Modi has been designed and integrated by **Modi Digital** and **Rolins Arcoustics**.

In 2019 when Rayeen was moving to a new apartment in the same complex,



L-R: Rolins T'Roy, Aditya Modi, Alok Punjani, Nitish Kumar, Shadab Rayeen and Remesh Kevalia

he decided that it was time to fast-track the renovation of the room (which had hitherto served as a bedroom for Rayeen) into a working studio.

"I just wanted Aditya to make a replica of my current mix room, but between Aditya and me, we kept improvising on the idea, moving from stereo to 5.1, until we decided that Dolby Atmos is what we wanted," says Shadab.

It took close to two years for Shadab and Aditya to complete the studio, with the pandemic and ensuing lockdown orders contributing to the delay. The silver lining was that the slowdown allowed Shadab time to research and educate himself further on the Atmos format and its future in India.

Vibrant Decor

When you walk into Rayeen's newly renovated studio it gives you a feel of home, a stark distinction from most other studios with dark, grim wooden interiors. The PT team was guided in through an open balcony with beautiful Bougainvillea and other plants and flowers arranged in colourful ceramic pots.



Blueprint Floor Plan of New Edge Studio



Dolby ATMOS music room is a fully immersive room with an intelligent rack system and 7.1.4 speakers

The balcony's white full frame glass doors and windows open into a colorful lobby-cum-waiting area. The white walls of the lobby with bright upholstery in contrasting hues of green, blue and yellow arranged in a systematic pattern, complement the adjoining porch area perfectly. On one wall, the room boasts of a 110-inch ALR screen and the new **SONOS Arc** premium smart soundbar and playback system

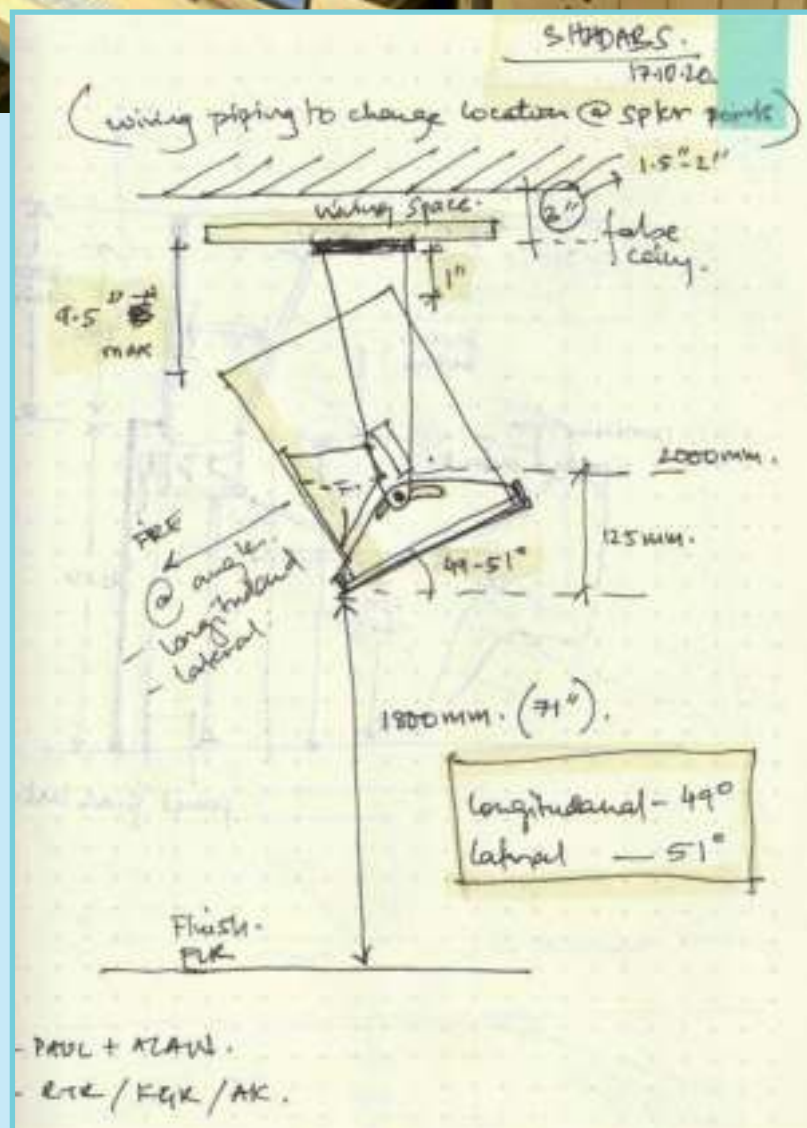
with Dolby Atmos suited for TV, films, music and gaming needs.

Stacked neatly against the wall at the entry of the corridor leading up to the Atmos Studio at the end of the hallway is a Yamaha Digital Piano.

On the left of the corridor is a neatly done up pre-production room installed with **Eve Audio SC205 SilverCone** two-way system, a Dangerous dual-channel compressor, a **SPL Rackpack 2710**



Pre-Production Room installed with EVE Audio, SPL Rackpack, Manley Stereo Variable MU and LG Screen



Rough sketch of the Speaker Monitoring System of the Dolby ATMOS Music Room

modular Rack System and a **Manley Stereo Variable MU** Limiter compressor connected to an LG screen.

A neatly done up pantry space with bunk-beds opposite the pre-production room is ideal for crashing out after a late night session.

"A lot of the design ideas were dis-

cussed over food and drinks. Shadab's wife Rupali was also quite involved in the designing and chose the colors for the studio. I would take all these ideas and go to Rolin's office, draw up the mock-ups and show them to Shadab," recalls Aditya.

Generally, surround mixing rooms

Transmission Loss

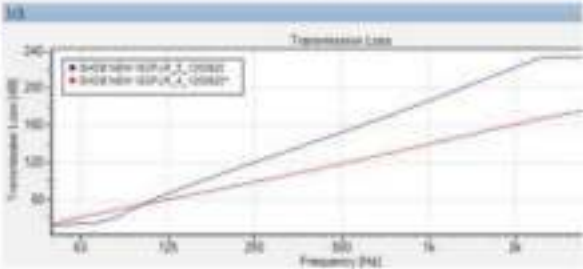
1/3 Octave Band Data	
Frequency (Hz)	SHDB NEW ISOFLR_5_1200920
50	51.49
63	54.63
80	58.35
100	72.83
125	86.39
160	98.25
200	109.38
250	120.19
315	130.87
400	141.58
500	152.42
630	163.49
800	174.85
1000	186.52
1250	198.47
1600	210.57
2000	222.66
2500	233.08
3150	233.98
4000	233.98
5000	233.98

DEAD LOAD ON SLAB : APPROX 105 Kg/sq.m
Total thickness : 177 mm

COMPARISON : FLOOR OPTION 4 & 5 : 120920

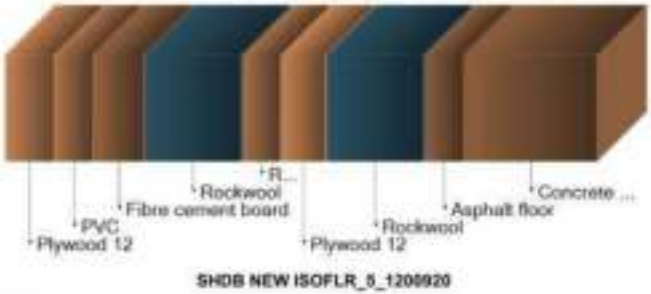
Frequency (Hz)	SHDB NEW ISOFLR_5_1200920	SHDB NEW ISOFLR_4_1200920
50	51.49	53.963
63	54.63	60.987
80	58.35	67.920
100	72.83	74.051
125	86.39	80.251
160	98.25	86.542
200	109.38	92.796
250	120.19	99.132
315	130.87	105.498
400	141.577	112.026
500	152.418	118.730
630	163.488	125.599
800	174.847	132.640
1000	186.521	139.870
1250	198.467	147.025
1600	210.570	154.190
2000	222.659	161.190
2500	233.078	167.879

Broadband Quantities								
Structure	ALPHAw	NRC	Rw	C	Ctr	C 50-5000	Ctr 50-5000	STC
SHDB NEW ISOFLR_5_1200920	0.99	0.99	81	-6	-14	-15	-29	89
SHDB NEW ISOFLR_4_1200920	0.99	0.99	85	-8	-11	-6	-18	89



Diffuse field incidence: 0° - 60°

Structure	ALPHAw	NRC	Rw	C	Ctr	C 50-5000	Ctr 50-5000	STC
SHDB NEW ISOFLR_5_1200920	0.99	0.99	81	-6	-14	-15	-29	89



Overview

Layer No.	Material	Thickness [mm]	Material Type
1	Plywood 12	18.0	Plate
2	PVC	5.0	Plate
3	Fibre cement board	18.0	Plate
4	Rockwool	75.0	Absorber
5	Rubber, 55 sh	5.0	Plate
6	Plywood 12	12.0	Plate
7	Rockwool	75.0	Absorber
8	Asphalt floor	6.0	Plate
9	Concrete heavy 40	120.0	Plate

Acoustics

Room modelling software and analytic simulations were used to design and calculate the technical details of the construction

are dark, claustrophobic rooms, but Shadab did not want that for his new workspace. “I told Aditya, when you enter the room it should feel open, with natural sunlight, a place which is bright and vibrant. I cannot live in a place where there is no sunlight or fresh air.”
The natural sunlight that flows into the Atmos suite through the wide

windows keeps Shadab energized and the windows have been acoustically designed to keep the room isolated from the loud external environment.
Setting Up the Dolby Atmos Music Room
The new Dolby Atmos music room at New Edge isn't the typical large control

room. Though it is a not a directive that a big room is needed to mix in Dolby Atmos (for music), one needs to meet minimum requirements. “There is a standard we have to maintain, otherwise anybody can start putting speakers anywhere and calling it Dolby Atmos and dilute the technology and the end-product which reaches the

audience,” says Aditya. “Dolby does not define the room size, what is defined by them are the angles and ratios, however the angles and ratios defined by Dolby are only achievable at a certain minimum room size,” he adds.
For the measurements, Aditya and his team stringently followed the guidelines provided by Dolby. Reference monitor specifications and speaker placement angles are mandatory to follow when setting up a Dolby Atmos music mix room.
Aditya and his team kept going back to the drawing board to get every angle right and making sure the changes were not affecting the aesthetics of the room. “It's like a jigsaw puzzle, trying to put everything together and trying to make everything work together and make it comfortable for the engineer. The main challenge was to figure out how to mount everything to achieve the angles that Dolby wanted. There is a lot of engineering that goes on to achieve those angles in a tight space. We have to think of how to place the equipment, at the same time remain ergonomic and comfortable for long hours of work. Those design choices were quite critical. We took quite some time to achieve all this,” added Aditya.
The new Dolby Atmos room undoubtedly opens up for Rayeen, an entirely new palette for creative exploration, as the fully-immersive, next-generation multichannel playback system has the backing of major content providers.
With streaming channels like Netflix



The vibrant waiting area boasts a 110 inch ALR Screen and SONOS Arc

and Amazon Prime already giving a choice of stereo, 5.1 and Atmos for movies, in the future the same options will be given for music. "The delivery format in the future is going to be in a way that the distribution labels will ask for a stereo master and Atmos master. They will possibly release multiple formats on music streaming services, and depending on the device capabilities, one can choose stereo, 5.1 or Dolby Atmos" says Shadab.

According to Shadab, "It's the future. Dolby Atmos Music is going to change the way people are going to make music. From two speakers, we are now moving to 7.1.4, we have more channels, more space and this is how music is going to evolve."

"Dolby has been very intelligent in their technology. What we mix when using so many speakers can now be delivered on headphones or on dock speakers. The accessibility has become easy and this is why it will become the standard format in the future," adds Aditya.

Dolby Atmos Music Room – Gear

On the ceiling, the suite has four **Eve-Audio SC 207** models. The front LCR's are **Eve-Audio SC 305's** and all the ear level surrounds are again four more **Eve-Audio SC 207's**. To reproduce low frequencies faithfully in the room, there is a **Genelec 7370A**.

The studio also features a curved Samsung screen, the latest version of Pro Tools running on an Apple Mac Pro, plus a good range of outboard equipment, including an a **DigiTech S100**, **Bettermaker EQ 232P**, **MX30-Pro - Dual Gated Compressor Limiter**. The I/O is being handled by a **Pro Tools | MTRX Studio** audio interface.

The rack itself is a very intelligent design, it is actually suspended on a rail system. One can move the entire fully loaded rack, with a single finger push to reveal a hidden room behind it. The cables have enough slack on pulleys, that move along with the racks movement, so that they don't snap away from the equipment they are connected to.

Once the equipment was set up, the Dolby team paid a visit to check the room and calibrate it.

The custom-made height-adjustable table allows Shadab to program his sit and stand preferences. "I have been having back problems since a long time, so I asked Aditya to give me a table that rises if I want to stand and work," says Shadab. "I would always challenge them with vague ideas and they would come up with something fantastic all the time," he adds in jest.

Dolby Atmos Music Room – Acoustic Layout

The design intent here was to have a fully equipped studio that could function throughout the 24 hour time span. This meant that high sound pressure levels would be generated within the compact shell, transmitting the impact into the structural framework of the residential tower where the space is located. On the external front, ambient noise levels averaged at 85-87dB(A) considering the busy street junction, a public sports complex, and multiple places of worship. On the other hand, it was essential to get in enough sunlight into the space and reduce work induced fatigue due to the long hours within. The room needed precise analysis to restrict the outdoor ambient noise and to ensure that the neighbors were not bothered by the sound reproduction.

The Dolby Atmos Music Room has been designed keeping in mind 2 important factors – one being the ideal reverberation time required within the space despite all the reflecting planes & openings, secondly - isolating any kind of noise transmission inward and outward. Isolation was key because the number of speakers have increased,

mainly the heavy low frequency content being generated within the floated shell. "Given the scenario where there is a specific music being made which is going to be utilizing all the speakers at the same time, it means much more impact subjectively. So we had to focus upon our isolation details and keep it compact as it would eat up into the volume of the space," says Aditya.

With the increase in number of speakers from 2 to 5.1 and then 7.1.4, the job of the acoustic consultant was further put to the test considering the reflective planes internally. "Earlier it was conceptualized to be a 2-channel stereo monitoring space, but the internal arrangements were organically building up to accommodate a powerful 7.1.4 immersive layout with multiple reflective tv monitors and equipment located anthropometrically close to the user. As soon as we thought most construction details were okay to be executed, we certainly had to restructure the isolation & internal treatment halfway through. It's certainly been a milestone for the team to try new methods, learn and overcome the technical challenges," adds Rolins.

Rolins and the team ensured physical room acoustic assessments periodically

during the stages of construction. Room modelling software and analytic simulations were used to design & calculate the technical details for construction. Even before building the studio and placing the gear, simulations were created by placing the sound sources in the virtual room model along with the treatment materials. The team made revisions with each room modification and added sources to simulate and understand the room parameters and isolation requirements.

A few years ago Shadab developed an allergic reaction to several materials. For Aditya, he had to take Shadab's health into consideration and design the acoustics without using materials that would be cause for concern.

With New Edge studios, like most other spaces in Mumbai, height limitation posed an obstruction to install the central air-conditioning system as there was no space for placing the ducts and connected machine units. "Until it is in a double-height commercial space we are fine, but for spaces with ceiling slabs at 9-10ft height is very difficult to get central air-conditioning done," informs Aditya.

Conclusion

Shadab is no stranger to the workings of Dolby Atmos having mixed almost 200 to 300 songs and about 30 to 40 movie scores already in Atmos. "It is fantastic to work with Atmos Music. You have more area to play with. You are not limited to a certain area. I now have a wide space. The 7.1.4 is actually a sum of 128 channels. I have got 128 channels with me to throw my sound sources anywhere and wherever I want. So you can create a different aura of a sound," says Shadab ecstatically.

"We are completely equipped for everything. If there are composers making music for games, we can completely mix it here," concludes Aditya.

New Edge Studio is a benchmark of the hard work that has been put in by Shadab Rayeen and Aditya Modi. It is a beacon of friendship, brotherhood and their common love for creating soulful music; an emotional journey that has bonded them.

Shadab and New Edge Studios are staying ahead of the curve by anticipating new industry trends.

In the near future Shadab also plans to build a weekend studio. "I have a place which is very scenic and I am planning to build my next studio there. We can go there as a team, the director, the composer, and work together for a week or so and come back when the work is complete," he enthuses.



The rack features a range of outboard equipment like DigiTech S100, Bettermaker EQ 232P, MX30-Pro - Dual Gated Compressor Limiter and Pro Tools | MTRX Studio



FOR STUDIO SOUND THAT SPEAKS VOLUME

SM7B

Studio Microphone

Having wide-range frequency response, bass roll off, mid-range control and internal suspensions shock isolation, The SM7B Cardioid Microphone delivers warm and smooth audio reproduction in close proximity studio and vocal applications.



Ideal for Broadcast Studio /Home-Project Studio/Recording Studio

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The year 2020 has taken all of us on a topsy-turvy ride. The COVID-19 pandemic completely shut down the world impacting every industry. The unexpected turn of events left the pro-audio, installation, lighting and DJ industry to re-invent and re-discover themselves. However, all was not lost. The industry found new and unconventional ways to launch their products making sure the market kept going on. We have put the trials of 2020 behind us and have entered a brand new year, with new beginnings and a new hope and new ways of working. Though the PT team could not zero in on the top 50, 2020 did see quite a few noticeable launches. Here is a list of the Top 30 products launched in 2020 in no particular order.

TOP 30 PRODUCTS 2021

PALM technology

Global Pro Sound & Light Technology

DPA Microphone 4097 Interview Kit

The DPA Microphone 4097 Interview Kit was designed keeping mind the pandemic and social distancing. The 4097 CORE Interview Kit delivers great sound in challenging situations. It's a professional solution for professional broadcasters or for a team doing on-location interviews or when doing

distance interviewing. It is a lightweight, easy-to-use, multi-purpose problem solver for a range of broadcasting situations – including interviewing as well as voice over work.

With its super cardioid polar plot, the 4097 CORE Micro Shotgun Mic offers a highly-directional pick-up pattern as well as low self-noise and high sensitivity. The mic is capable of handling high SPLs, allowing it to deliver undistorted

natural sound, even when users speak loudly. With a linear response, low distortion and an extremely large dynamic range, it sounds great no matter how challenging the environment. Increased directionality, combined with good off-axis rejection, allows the microphone to isolate what should be picked up while attenuating sounds from the sides and rear.

The 4097 Plant Mic has been built to the IP58 certification and can withstand harsh use as well as water, wind, dust, heat, cold and many other tough conditions.

Avid VENUE | S6L-48D Control Surface

When working with a large number of performers and channel inputs that require complex routing, S6L-48D provides the extended control and ease needed in a large-format control surface. It's ideal for dual-operator workflows to handle large broadcast events and theater productions.

For live sound productions where quick access is paramount and sounds may be coming from any of thousands of sources, the 48D offers unmatched



visual feedback and control. Broadcasters and theater programmers in particular will appreciate the sheer scope of channels that they can view and tweak. The 48D features 48+2 faders, and over 160 encoders making it the most hands-on digital live sound console in the industry.

Yamaha RIVAGE PM5

The RIVAGE PM5 Mixing System packs undiluted RIVAGE PM power and performance into a lightweight, intuitive console that is surprisingly slim. The addition of a third display screen has made it possible to offer a more touch-centric interface in a compact, significantly lighter console that is easier to transport, setup, and operate in a wide range of venues.

The RIVAGE PM5 has a slim design that brings the touch-sensitive displays closer to the operator for incredibly smooth, comfortable control. This evolved console design also provides



a closer connection to the performers on stage with improved sight lines that give the engineer a broader, more comprehensive view of the action.

The three 15-inch large, high-visibility displays present essential controls and information in one place in a clear, well-organized format, so the engineer can read and react to situations with

maximum speed and efficiency.

Although it offers heavy-duty performance and features, plus a comfortably spacious interface, the RIVAGE PM5 weighs only 42 kilograms it can be easily carried and positioned by just two people.

Nexo ID14 & IDS108

The super-compact ID14 is available in touring and installation versions. The ID14 features a new powerful coaxial 4" speaker making it unique in its category. The ID14 enclosure uses a homemade Polyurethane shell resulting in a robust enclosure with exceptionally good sound quality and outdoor resistance.

The super compact ID14 measures 130mm wide, 130mm high and 120mm front to back, and uses a single coaxial 4-inch driver with 1.4-inch Neodymium HF. The Touring version is available in black, white or custom RAL colors and features a Magnelis steel grille and Speakon connectivity.

The he Installation version is available in black, white or custom RAL colors and features an acoustic cloth over the front of the grille and captive 2-core



cable connectivity.

The ID S108 sub measures 305mm x 305mm (12.0" x 12.0" x 12.0") and weighs 8 kg (17.6 lbs), the partner sub for the ID14 uses a high efficiency bass-reflex design employing a long excursion 8-inch Neodymium driver.

The Touring version features one connection plate with two Speakon connectors and a front Magnelis steel grill. The Installation version is available in black, white or custom colors on request. Connectivity is made through cable gland and captive two core cables, ensuring IP54 protection, while the front grill is covered by an acoustic cloth.

Steinberg Cubase 11

Steinberg Cubase 11 brings endless number of new features and enhancements to its studio-grade audio and MIDI tools for composing, recording, editing and mixing. The Sampler Track



in Cubase 11 has a new slicing mode that chops up the loops so they're ready to play with just a click. There are two global LFOs available to add motion and a catch to sounds. The Scale Assistant is an excellent addition to the songwriting toolkit. All that needs to be done is set the song's scale in the Key Editor and follow its lead, quantize a solo to the scale or play live. The Scale Assistant can also analyze the MIDI recording and suggest the right scale. Cubase 11 allows to set a different side-chain for each band by making use of the multiple side-chain architecture of VST 3. Cubase 11 makes life easier with Global Tracks now able to be displayed in the Key Editor. With no need to leave the Key Editor anymore, this great visual reference will keep compositions moving along quickly and creatively.

JBL 104BT

The JBL Professional 104 Bluetooth Studio monitors draw inspiration from JBL's legendary acoustic performance. They are acoustically optimized for desktop placement and feature a smooth off-axis response that allows for a wide sweet spot. This, in turn, helps create soundtracks with a confidence. The Bluetooth feature allows to stream compositions wirelessly and listen to mixes like any music-lover.

JBL Professional monitors are used by professional recording studios and musicians alike across the world. This Bluetooth Reference monitor comes with an innovative coaxial driver design that comes with a high-frequency driver aligned to a conical shaped woofer. The speaker cabinet's well-moulded low-frequency port works well in conjunction with the driver and delivers impactful bass at any volume level.



The JBL Professional 104 comes with Bluetooth capabilities. This gives audio engineers the advantage of listening to their soundtracks over Bluetooth and simulate a scene that is similar to common listening situations. This helps them fix any issues and make their composition flawless.

Soundcraft Nano Series

NANO Series multi-channel analog mixing console is designed to meet various application requirements from live performance, studio recording and fixed installations. NANO Series has two models in its product portfolio: M16 (16 channels) and M24 (24 channels).

M16 and M24 offer all the functionalities required for live mixing and studio recording: 8/16 mono input channels with ultra-low noise discrete MIC preamp and +48V phantom power; 4 stereo input channels; each mono input channel equipped with 3-band EQ and sweepable MID; each stereo input channel equipped with 4-band EQ; 4 auxiliary controls; 12-segment output level meter; 2-track input routable to main mix, control room /headphones.



The built-in USB player supports MP3 playback and recording. 24-bit DSP processor provides up to 100 effect presets. Main mix out comes with a 7-band GEQ and an insert point.

M16 and M24 accommodate all the control and connection elements in a robust steel case and install connectors built from metallic materials of highest industrial standards. Compact and ultra-light build, cutting-edge design, and acclaimed SOUNDCRAFT artisan-ship make NANO an optimal choice for band gigging, studio recording or fixed installation.

Mackie SRM V Class

SRM | V-Class High-Performance Powered Loudspeakers are a whole new tier of SRM portable loudspeakers that aren't just made to get the job done, but to get it done better than anything else with unmatched clarity, output, and control packaged into sleek, rugged enclosures.

The SRM | V-Class Speakers comes in



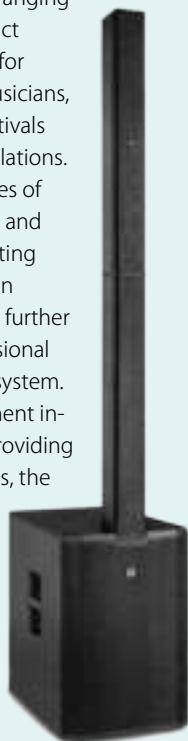
10", 12" and 15" sizes. Mackie's V-Class 2000W Class-D amplifier, Advanced Impulse DSP tuning, Intelligent Bass Management, high-performance transducers and custom SymX Horn gives the best performance and sound quality.

It comes with a SRM Mix Control built-in 4-channel digital mixer with Bluetooth, offers complete wireless control via the SRM Connect App. Users can also wirelessly link SRM V-Class speakers together for music streaming applications. Within the SRM Mix Control there are 5 different voicing modes that will each apply a preset response curve making the speaker optimized for that use. There are also indoor and outdoor modes that are applied alongside the application specific modes.

Ultra-efficient power combined with sophisticated protection and monitoring means the loudspeakers sound better and have unrivaled reliability.

Adam Hall Maui 44 G2 Cardioid Column Loudspeaker

The MAUI 44 G2 is the flagship of the MAUI series column PAs and offers a 1,500 watts of total output (RMS) with a frequency response of 37 Hz to 20 kHz and a sound-level pressure of 132 dB (peak). With its outstanding sound properties and wide-ranging functions, this compact column PA is perfect for rental companies, musicians, small clubs, street festivals and permanent installations. The cardioid properties of the column elements and the possibility of creating a cardioid bass with an additional subwoofer further highlights the professional nature of this sound system. In the case of permanent installations or when providing sound for conferences, the TrueWireless stereo function enables two systems to be wirelessly connected for stereo reproduction. Bluetooth streaming in HD quality is



no problem thanks to aptX and AAC Codec, while DynX DSP technology ensures distortion-free sound reproduction even at the very highest volumes. Another particularly user-friendly feature of the MAUI 44 G2 is automatic set-up recognition.

The MAUI 44 G2 is top-class when it comes to transportation and mobile use, assembly is quick and simple with no need for cables or stands.

Adamson CS Series

Expanding on the performance of the S-Series, the CS-Series provides a combination of onboard amplification and DSP, built-in networking with redundancy, and Milan-ready AVB connectivity. CS-Series loudspeakers share the same form factor and sonic signature as the S-Series, and all S-Series enclosures can easily be user-upgraded



to CS-Series.

CS Rack products include Gateway, Bridge, Network Distribution System, and Power Distribution System. And CS software upgrades the ability to design, deploy, control, and monitor in both mobile and installation environments. The new suite is designed with a professional audio workflow in mind: move from design & simulation, through patch, control, metering, optimization, and system diagnostics without ever leaving the system.

The CS-Series consists of five full-range loudspeakers (CS7, CS7p, CS10, CS10n, CS10p) and two subwoofers (CS118, CS119), all using Class D amplification.

Shure MV7 Podcast Microphone

The MV7 Podcast Microphone is a hybrid XLR/USB microphone ideal for both entry level and experienced creators. The all-metal design of the Shure MV7 XLR/ USB mic is well constructed and it comes with a black foam windscreen to prevent plosives and gives it that "pro" feel. The only plastic on the unit are the touch controls for gain, headphone volume, and mute. With just a few taps, the touch panel control lets the user adjust the gain, headphone volume, monitor mix, and mute/unmute, with an option to lock customized settings.

On the undercarriage of the Shure



MV7, is an XLR input, a micro USB port, and a 3.5mm headphone monitor input. The option of using XLR or USB gives the MV7 an edge since using more than one USB mic on a computer can get a bit tricky.

The MV7 dynamic microphone delivers versatility and control, flexible connectivity options, and high-quality audio in a sleek, compact design. Compatible with virtually any device or hardware, the MV7 is easy to integrate into an existing technology setup, whether creating content in a home studio or recording on-the-go.

Eve Audio SC3070

SC3070 is a high-resolution, tri-amplified near / mid field monitor optimized for precise midrange and powerful bass response, making it especially well-suited for applications where the complete skill set of a fully-fledged 3-way system is required, but where space is at a premium.

EVE Audio's own Air Motion Transformer RS3.1 is combined with 4" mid-range driver to give the SC3070 accurate and un-hyped transmission of high and mid frequencies. A 7" woofer driver rounds out the SC3070 by providing precise and powerful low frequencies. A high-quality analog/digital converter from BurrBrown (24bit/192kHz) converts the analog input signal supplied via RCA or XLR. The DSP ensures latency-free filtering and simultaneously protects the entire frequency range from overload.

This 3-way model achieves the outstanding mid-range reproduction of the SC407's mid-high section with exceptional balance and low distortion over the entire frequency range, but



in a much more compact cabinet. The SC3070 is the ideal solution for recording, mastering and home studios.

RME 12Mic

The RME 12Mic is a twelve channel remote controllable microphone preamplifier with no-compromise A/D conversion, integrated AVB and MADI connectivity, and a multitude of features designed to make it a perfect companion for any professional recording. Studio-quality conversion; remote controllable gains plus a multitude of additional functionality, makes it a perfect companion for any professional recording setup.

The 12Mic shines with an outstanding signal-to-noise ratio on all channels. All twelve front-facing XLR connections



accept microphone and line level signals, whilst the first four connections also accept TRS connectors, with switchable high impedance (Hi-Z) for instruments.

Three optical ADAT outputs provide up to 24 channels of audio at single speed, or 12 output channels at 96 kHz sampling rate, ensuring compatibility with a wide range of audio interfaces. Any signal reaching the 12Mic can be routed and streamed over a network with fixed latency and guaranteed band-width - no switch configuration is required.

Waves FIT Controller for eMotion LV1

FIT is the ultimate hands-on control unit for the Waves eMotion LV1 live software mixer. This device has been co-engineered by Waves Audio and



expert MIDI control manufacturer MIDIPLUS to offer live sound engineers intuitive tactile control of the world's best live software mixer.

Waves FIT's quick and efficient operation is made possible with 16+1 motorized faders, each featuring a bright display, as well as common controls like Mute, Solo, Select, and a multi-function rotary control.

Fader layers offer dedicated 1-8 layer

switches for toggling between the 8 factory or custom layers in the Waves eMotion LV1 Live Mixer. 16 rotary controls can be set to control preamp gain or pan per channel with their label shown in the display, and the 16 Select channel toggles can be set to 'USER' mode to provide easy access to Mute Groups and user-assignable keys with their text labels displayed.

JTS USB Microphone JS-1USB

The JS-1USB provides excellent performance to both live and studio application. A one inch super thin 24K golden plated diaphragm together with a solid brass machined capsule assembly assures precise polar pattern,

full range frequency response and high SPL capability. Advanced circuit design and finest available components offer low self-noise, exceptional transient response and transparent reproduction of an acoustic characteristic. Double brass wind-screen prevents pop/EMI effectively.

The JS-1USB can be used for most general-purpose applications in studios, for broadcasting, film and television as well as it can be used as a main microphone for orchestra recordings, as a spot mic for single instruments, and extensively as a vocal mic for all types of music and speech. The microphone can also be used as a classical studio mic for soloists and background vocals, as an announcer's mic for broadcasting, dubbing and voicer-over, for overhead miking drums or percussions and as a spot mic for wind instruments, brass and woodwind, strings (especially cello and double bass), piano, and percussion.

Telefunken TF11 Microphone

Designed and assembled by hand in the USA, the TF11 is a compact, cardioid only microphone that is versatile, portable, and dependable for all recording environments from home to studio to stage. The phantom-powered TF11 exhibits a beautifully open and detailed frequency response with exceptionally fast transient response, high SPL handling, and low self-noise.

The TF11 features a unique combination of circuit elements shared with other TELEFUNKEN Elektroakustik designs.

The CK12-style edge terminated capsule is a single membrane version of the capsule featured in the TF51. The amplifier is a unique proprietary take on the classic FET microphone amplifier similar to the M60, coupled with a custom large format nickel-iron core transformer made in the UK by OEP/Carnhill. Premium through-hole components include UK-made polystyrene film capacitors, Nichicon Fine Gold electrolytic capacitors, and a high-performance, ultra-low-noise JFET amplifier.

The TF11 FET microphone system has a deep and aesthetically blue color and comes with a Microphone Case, Shock Mount, Stand Mount, and Microphone Sleeve.

Austrian Audio Hi-X55 Headphone

The Austrian Audio Hi-X55 Headphones are designed for today's contemporary music production. The Hi-X55 circum-aural closed-back headphones provide over-the-ear comfort as well as portability with the foldable hinge design. The metal parts guarantee long durability even under rough conditions be it on tour buses or studio.

The 44mm Hi-X driver features a ring magnet system that allows improved air-flow and the strongest magnetic field in its class. A double acoustic wall has been designed to achieve



best damping results, and to support this and increase the comfort levels, the form factor of the ear pads has been rethought giving more room for the ears without enlarging the ear cups, thereby reducing fatigue from long listening sessions.

MX Peavey Versarray VK112 MKII Line Array

The Versarray 112 MKII Ribbon Driver Line Source Array module consists of



a new 12" Neo Black Widow woofer combined a neodymium-based Peavey RD 2.6 ribbon driver in a cabinet with a highly flexible rigging system. Designed to provide modular coverage of small to medium venues, and intended for use with the companion Versarray Sub models, the Versarray 112 MKII offers extreme versatility and high-performance capability.

The flexibility of the Versarray system allows the use of 1 to 8 or more Versarray 112 modules in conjunction with anything from one Versarray 118 Sub to a pair of Versarray 218 Subs.

DiGiCo Quantum 338

Quantum 338 is based on seventh generation FPGAs with an entirely new system architecture. The console merges tried and tested workflows with immense processing muscle and bold innovation including a new dark mode.

The Quantum 338 is the next step in the DiGiCo Quantum range of consoles. Delivering 128 Input channels into 64 busses, with additional processing for



Master busses and Matrices. The Quantum 338 brings advanced processing functions and an ultimately flexible workflow to a wider user base.

Quantum 338 puts a trio of 17-inch, 1000 nit, high brightness multi-touch screens, with both the meter bridge and soft quick select buttons displayed on each screen for quick, intuitive operation. In addition, 70 individual TFT channel displays join the floating Quantum chassis with 38 100mm touch sensitive faders laid out in three blocks of 12 fader banks plus two dedicated user-assignable faders, each with high resolution metering. The Quantum 338 has all the features needed for every scale of production.

DMI Klang

DMI-KLANG is the first hardware product after KLANG and DiGiCO joined forces. The FPGA architecture enables

16 immersive in-ear mixes for 16 musicians of 64 input channels single and double speed sampling rates at latency of a quarter of a millisecond.

Integrated into a DMI card it connects directly to the SDs internal audio stream without any additional hardware IO or overhead. Route any audio channel from the console to DMI-KLANG and return the mix to the Aux merge input. Mounted into



a DiGiCo OrangeBox the DMI-KLANG can be connected to any console with e.g. MADI (Optical, TP, BNC), Optocore, Dante and many other available DMI expansion cards.

This unrivaled mixing capability makes DMI-KLANG the perfect companion for any monitor engineer who needs to deliver better mixes with lower levels to their artist.

L-Acoustics Contour XO IEMs

Contour XO in-ear monitors provide the perfect reference IEM for the L-Acoustics sonic signature on stage, at the mixing desk, in studio, or on the move. These highly-detailed high end in-ear monitors bring users intimately inside the music. Users will hear accurate, distortion-free reproduction of sound thanks to advanced technologies built to handle extreme dynamics and deliver the intense emotional impact of live music.

To mimic the contour and the dynamics of a concert, Contour XO integrates Soundrive, the latest technology from JH Audio. Both bass and treble elements are a cluster of four balanced armature drivers wired in parallel allowing high power, even in the very low and very high end of the spectrum without distortion.

Contour XO is made of premium



milled resin shell offering pro comfort for frequent to intensive use. The L-Acoustics gold logo adorns Contour XO. A mesh design and shell in Pantone 426 C dark grey brown, matches the color of loudspeakers flown at prestigious live events around the world.

Neumann V402 Microphone Preamplifier

The V 402 is a state-of-the-art dual channel microphone preamplifier with an integrated studio grade headphone amplifier. Its transformerless circuitry is designed for maximum transparency and sonic purity. The V 402 is thus the perfect compliment to all Neumann microphones in order to unveil the true character of voices and instruments.



The V 402 is Neumann's first-ever stand-alone microphone preamp, designed to preserve the integrity of the microphone's sound image. It is designed for the highest degree of linearity and sonic purity and will capture the sound of electric guitars and bass guitars as well as other instruments without coloration or loss of detail. For easy monitoring the V 402 is equipped with a studio grade headphone amplifier ensuring superb monitoring quality at the recording stage.

Sennheiser MKE 200 on Camera Directional Microphone Capsule

The Sennheiser MKE 200 is an on-camera directional microphone capsule that brings presence to the voice with features like built-in wind screen and shock mount keep recordings sounding cleaner than ever before. Ideal for vloggers and videographers alike, this directional microphone will enhance the in-camera audio and bring clarity to recordings. The MKE 200's integrated wind protection and shock absorption ensure the cleanest audio



recordings possible while shooting videos on the move.

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 crisp audio and gives that professional touch to video clips. The MKE 200 features a compact, sleek design with a stylish finish thanks to a fully integrated shock-mount and built-in windscreen. Battery-free operation and a lightweight design allow for optimal gimbal performance.

Behringer Flow 8

The Behringer Flow 8 is an 8-Input Digital Mixer with Bluetooth Audio and App Control, with 60 mm Channel Faders, 2 FX Processors and USB/Audio Interface.

The new FLOW 8 EZ-GAIN function can monitor signals on one or all channels at the same time. FLOW 8 mixers offer full remote control from any Android or iOS device, giving users the freedom to go exactly where the sound is ideal for making any sort of adjustment.

All channels offer 4-band EQ, com-



pression, as well as 2 FX and 2 monitor sends. All the monitor and main buses feature 9-band EQ and a limiter for preventing unexpected volume peaks on the speakers. FLOW 8 features two independent studio-grade effects engines, each with 16 presets for refining instruments and vocals with breathtaking effects sounds and depth. It also doubles as a 10 x 2 channel USB audio interface for capturing live performances, cutting tracks in your home studio, or hosting a podcast.

AMS Neve 8424

The 8424 console is designed to fit the needs of the modern hybrid studio where the speed of in-the-box workflow is enhanced with the ultimate sound quality of analogue outboard gear. Designed to be straightforward and accessible to all, this versatile and powerful desk provides a centralized platform with unparalleled connectivity, facilitating an ergonomic link between



the linear analogue processing world of outboard gear, analogue synths and instruments, to the digital world of DAW workflow, software plugins and session recall.

The 8424 fits perfectly into many different applications. Whether a music producer or an artist with their own project studio, an owner of a small professional audio facility or a person in charge of an educational facility, this compact, budget-conscious desk delivers everything needed to record, mix, monitor and master music.

Alcons Audio CRMSC-SRIW/120 Loudspeaker

The CRMSC-SRIW/120 system is a 2-way passive-filtered full range loudspeaker, designed to meet all requirements of current and future immersive sound formats. Featuring the patented Alcons pro-ribbon driver technology, the CRMSC-SRIW/120 surround combines an exceptional clarity and intelligibility with an unusually high dynamic range, offering the most realistic linear sound reproduction possible at any SPL.

The CRMSC-SRIW/120 system, available with 4 or 8 ohms impedance, consists of one RBN202 pro-ribbon driver for HF and a vented 6.5" mid-bass for LF reproduction; the HF section has a 500 W peak power input, enabling a 1:16 dynamic range with up to 90% less distortion from 1 kHz to beyond 20 kHz.

The CRMSC-SRIW/120 is developed as an ultra-compact reference main / screen system or compact surround system in immersive sound-for-picture applications. It can also be used as full-range sound system in any installed audio application, where a very high-quality sound reproduction with inconspicuous in-wall or on-wall mounting is required.



JBL BRX300 Series

The BRX300 Series is a versatile line array for bands, DJs, rental firms, houses of worship and anyone who needs a compact, portable system that provides superior fidelity, high output and consistent coverage in a range of sound-reinforcement scenarios.

The BRX300 Series' plug-and-play simplicity, built-in corrective signal processing, smart transport system and hassle-free rigging hardware makes the power of line array technology accessible to customers who are not trained audio engineers.

The BRX308-LA Line Array Element and BRX325SP Powered Subwoofer draw from JBL's touring technologies to deliver wide coverage and class-leading SPLs while reproducing every sonic detail with superior depth and clarity, thanks to proprietary drivers that are engineered for maximum performance matched with the built-in amplifier.



NX Audio PX Speakers

The PX series is a compact speaker system comprising of 3 models, PX112 a 125W RMS single 12" Full Range Dual Cone speaker and a Piezo Horn Tweeter, PX212 which is a 250W RMS Dual 12"



and PX115 250W RMS single 15" Speaker. The system is outstanding for its ability to handle the power at continuous loads with undistorted response and is ideal for small PA applications to complement the Rock Series of amplifiers.

The cabinets are fitted with heavy-duty handles to allow ease of transportation and a strong steel grille

for speaker protection. A stand adapter is provided at the bottom for pole mounting. The speakers are housed in a Rugged Closed Box Enclosure made of 18mm Plywood with a premium Paint finish. The speaker system is ideal for small live music programmers, DJ's and general PA applications.

Austrian Audio OC18 Microphone

The OC18 is Austrian Audio's affordable large diaphragm microphone; a classic cardioid directional pattern with identical acoustic characteristics as the OC818.

The OC18 incorporates a pad with -10 and -20 dB settings and is implemented by reducing the polarisation voltage

to the capsule, to protect the internal electronics from overload.

Engineered and manufactured in Austria, its high sensitivity and incredibly low self-noise means it can handle everything from a whisper to extreme SPLs without distortion, making it the perfect choice for studio, live and broadcast applications. As the unique



ceramic capsule design is so consistent, the OC18 can be match-paired pair with ANY other OC18 or paired with ANY OC818 set in cardioid mode.

N-Labs X8D

The X8D is a 2-Channel 8000W power amplifier with DSP. It is ideal for Mid and High frequency, stage monitors, sub-woofers, cinema and FOH. The amplifier has a tunnel design to keep it cool from the inside with

a special auto cutout feature in each channel which shuts down the audio in case of a short-circuit or wrong wiring. It automatically restarts again without resetting. The unique TITR Circuit design is loaded with four special variable speed coil fans with high-density Radiator design used in Aviation which helps the amplifier to stay cool and stable for long-term usage.

The X8D can be used for a range of applications like Live sound, DJ system, road shows and rallies, installations and line arrays.



TAG Basics

(Continued from page 12)

on the console but it's the thought that has made every engineer's life easier working on the SSL Origin," informs Anupam. "The EQ's are mind blowing that really helps during recording or even while summing or stem mastering. The central bus routing and also the overall compact design helps to reach out easily to all the controls and thus work faster," he adds further.

Inventory

The studio also has a pair of **Genelec 1237A** as the studio's main monitors and a pair of **Amphion 118** as nearfield. In terms of outboard, the interface and converter is the **Antelope Orion 32 plus**, a selection of microphone preamps like the **Crane-song Flamingo**, **Manley Core** and **Focusrite ISA 428**. Studio C also has an **API 2500 Bus Compressor** and **TC Electronics Effects Processor**. Along with these outboard, the studio has a collection of dynamic, condenser and ribbon microphones from Shure, Neumann, Sennheiser, Earthworks, AKG, Rode and Audix.

All the equipment has been primarily provided by Sound Team, Shalu Music, Ansata Electronics, Pro Media and Electronic Emporium to name a few. "The curation of TAG would not have been possible without the amazing distributors and service providers who came all along to help us bring our dream into a reality. They have also contributed immense amounts of efforts and time towards TAG," says JK.

Along with the equipment that is at par with international standards, the studio also features a large recording room that can accommodate up to a 25-piece Orchestra or a large Live Band.

Acoustic Treatment

The Live Room in Studio C features various acoustic properties in different spots. "We followed a Live-End Dead-End scheme with more absorption towards one side and a reflective one towards the other," informs Anupam. The reflection aspect of the studio was achieved with natural stones to ensure a rich texture when tracking live instruments. The diffusion panels also help in providing a right balance and scatter especially while tracking louder sources. "The room is ideal for small and large recordings. Our percussion, drums and orchestral recording sessions have given some amazing results," adds Anupam.

The control room of Studio C has a Mid Field monitoring flush mounted on stone finished wall and also has quadratic diffusors to the rear. The membrane absorbers to the corners and the diffusive clouds to the top help tighten the space. The flush mounted walls and speakers are angled at about 82 degree ensuring optimum balance of acoustic wavefront at the sweet spot. The wider speaker placement also helps in a wider sweet spot that aids judgement even while moving out to the console edges.

Computer Lab

This space hosts 7 Apple iMac computers with MIDI controllers from MAudio Air as well as the Axiom series. The computer lab is utilized for classes as well as student's extensive DAW training and individual practice to get them work really fast to easily adapt to the industry demands. This room trains students to be proficient in DAW's such as Avid Protools, Apple Logic, Steinberg

Cubase and Ableton. The room also has JBL 308 active monitors as well as the Focusrite Scarlett series soundcard.

Challenges

Like many other businesses, the COVID-19 pandemic proved to be the biggest challenge for TAG, as this delayed the setup and launch of the studio.

TAG Institute started its setup phase in October 2019 and the plan was to have the studios up and running by March 2020. "The Pandemic and the lockdown that followed turned out to be the biggest challenge for us. We were in a 90% completed stage when the nation went to a complete lockdown," says JK.

TAG had to tweak the curriculum to adapt to an online mode of teaching wherein they had to incorporate a lot of visual learning and this involved a lot of video recording and preparing presentations. Microsoft Teams was used as the online platform for students to attend the virtual classroom. "Our online model of education helped us continue classes without any hindrances," says a proud Tamhan.

Once the lockdown was lifted and the government started allowing people to move around, the team met at the Institute to assess the situation. Though the lockdown affected their plans and timelines, the team was able to fuse a schedule where construction work would finish parallel with the professional work happening at TAG.

After all the ups and downs, the rollercoaster ride and almost 12 months since commencement TAG officially announced its completion in October

2020. "We have learnt that adaptability is key for any business to sustain through such a phase and we are now happy about our decisions and how we have progressed through such a phase."

The institute currently offers a 12 month diploma course in each of the segments - sound engineering and music production. It also offers a three-month advanced certificate in post-production and a six-month advanced certificate in music production.

Conclusion

Currently, the majority of the work is being contributed by the post audio industry. "We have been seeing a shift in the industry lately as more and more musicians are now planning their releases for 2021. Music and post I feel will be equal contributors for professional work at TAG," informs JK.

Some notable work that TAG has worked on include *Ak vs Ak* (Netflix), *Chalaang*, *Coolie No.1*, *Laxmii*, *BBC Criminal Justice*, *Radhe*, *Big Bull*, *Taish* and more.

TAG has received positive feedback from across the board and professionals in the industry complementing them for the design of the space. With spacious studios compared to what is being offered by other studios in Mumbai, when you step into TAG it feels like a breath of fresh air.

"In the past few months our staff and team has been tested as we have managed to accomplish work on 19 titles in the last quarter. Our students are also happy and has been enjoying the model of education in spite of the challenges faced due to the Pandemic," concludes a proud JK.

ST. JOHN'S LUTHERAN CHURCH INSTALLED WITH P.AUDIO XT-15

Chennai-based pro-audio company, John Pro, recently completed the audio installation at the St. John's Lutheran Church in Renigunta, Andhra Pradesh. The Church was instated with the **XT-15 loudspeakers** from **P.Audio** making it ready in time for Christmas.

On December 13, St. John's Lutheran Church celebrated its new church dedication and opening thanks to the XT-15 loudspeakers which translated the preachings given by Bro. Anil Kumar of AWE Ministries, who inaugurated the premises.

Mr. Jaychandra from John Pro who was part of the installation process shares, "The Church was seeking an efficient audio system for delivering their services. Keeping in mind their requirements for space, ease of use and performance, we asserted that the



St. John's Lutheran Church instated with XT-15 loudspeakers

P.Audio XT-15 would be the best fit. Not only is the XT-15 super dependable and high on performance value but it is also compact and easy on the eye. The

speakers perfectly address the church's architectural challenges and the sound is projected evenly within the church with great intelligibility. The manage-

ment at St. John's Lutheran Church as well as the worshippers are overjoyed with the quality of sound and have only praises for it!"

OUTLINE INTRODUCES NEW VEGAS 4

Outline have announced the arrival of the latest Vegas loudspeaker line, the all-new **Vegas 4**.

100% designed and manufactured in Italy, the Vegas 4 is a multi-purpose miniature loudspeaker featuring a unique single-driver design and employing a brand new 4" transducer created by Outline's engineers specifically for the product. Its power handling, audio performance, thoughtful design and robustness allow it to fulfil a huge range of roles in both fixed and mobile applications.

Measuring just 12cm x 12cm x 12.6cm and weighing only 1.6Kg (3.5 lb), multiple Vegas 4s can be deployed in projects where high quality audio

is required but where minimum visual impact is demanded – for example, delays and surrounds in theatre, in corporate AV, leisure, retail, worship and much more. When combined with Outline's SUB 110 compact subwoofer a true full-range audio solution can be delivered in an amazingly small overall footprint.

Outline's new L3000 DSP-equipped miniature power amplifier is the ideal partner: for example, it can drive and process up to 16 Vegas 4s, or eight Vegas 4s and two SUB 110s. Alternatively, any of Outline's amplifiers will work just as well and the iP24 processor is the perfect external processing partner.



Every Vegas 4 is supplied with a specially-designed bracket which allows mounting on virtually any surface but also on regular microphone stands, so deployment in any situation is very easy. The enclosure is manufactured to IP55 protection rating, making

it ideal for use in extremes of heat, cold and humidity and is also available in black, white or any one of over 200 RAL colors to match decor as required.

ASHLY AUDIO PARTNERS WITH ELECTRO-ACOUSTICS SYSTEMS FOR SOUTHEAST ASIA

Ashly Audio has announced a partnership with systems integrator and supplier of professional AV solutions, Electro-Acoustics Systems (EAS) to expand product availability in Southeast Asia.

Over the past two years, Ashly has introduced solutions to enable comprehensive integrations in more locations and to more types of businesses.

"In EAS we have found the perfect

partner to further expand Ashly's distribution throughout the Southeast Asia region," said **Andy Lopez**, export sales manager at Ashly. "We look forward to many exciting projects and a long-term partnership that allows us to offer our comprehensive product range to an even wider range of customers."

Among Ashly's newest offerings are the mXa-1502 integrated mixer amp

solution, two new AW Series On-Wall speakers and IS Series Dual-Impedance Column Speakers, and additions to the CA and FA Series power amplifier lines.

"Electro-Acoustics Systems is pleased to represent Ashly Audio as the master distributor for Southeast Asia," said **Lam Tong Loy**, founder and CEO of EAS. "Ashly is a brand synonymous with reliability and durability: critical factors

for systems integrators, consultants and end users when deciding which brands to use in their designs and setup. EAS is excited to represent Ashly's range of audio solutions from speakers, DSP matrix and control software, power amplifiers and digital mixers. We are excited to be partnering with Ashly for the entire Southeast Asia region to offer an even wider range of solutions to our resellers, integrators and clients."



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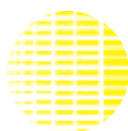


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MARTIN AUDIO ANNOUNCES ADDITIONS AND UPGRADES TO CDD INSTALLATION SERIES

Martin Audio has announced new additions and upgraded voicing for its **CDD series**—as well as improved production capacity—as part of a concerted effort to meet the growing needs of installation applications.

CDD was originally launched in 2015, bringing engineering innovation to installed applications, combining distinctive curved enclosures with patent protected Coaxial Differential Dispersion technology. Delivering class-leading performance, fidelity and coverage consistency to venues that demand the ultimate in cutting-edge technology and style, CDD is also pitched at a highly-competitive price point. Martin Audio further extended the range in ensuing years with both weatherized and marine editions to cater for all outdoor environments including cruise ships.

During the pandemic, Martin Audio has seen a plethora of small to medium installations, both indoors and out, to keep sales of CDD extremely buoyant. Bars and restaurants upgraded systems or extended to outdoor areas to better cater for clientele in changing conditions; houses of worship adapted to socially-distanced congregations with the need for improved coverage and consistency, while education facilities similarly needed better solutions to manage socially-distanced students.

Martin Audio has taken the

opportunity to maximize the potential of the series by increasing production capacity, while extending product lines to include transformer variants of the popular 8" and 10" models, as well as improving the voicing across the series for an up-to-date sound and consistency to the family, straight out of the box.

In terms of increasing production capacity, Martin Audio has achieved this through improved sourcing of suppliers as well as changing the 12" and 15" from their normal UPM Formi cabinet

to tenfold."

Extension of the series includes new 8" and 10" versions, with 70V / 100V transformer options, as well as weatherized variants, enabling daisy chaining of loudspeakers for increased amplifier efficiency in larger installation projects. Harter added, "We have seen increased requests for additional transformer versions to complement the current 5" and 6" transformer models, as larger scale

further enhance the sound quality performance 'out of the box' to make installations even easier and better performing.

New voicing settings for CDD are available to download now, while wooden cabinet changes are available from January and the transformer additions to follow in February.

Dom Har-



construction to wooden cabinets. **Dom Harter**, Managing Director, explained, "The 12" and 15" models in particular have always seen capacity constraints so by moving to wooden enclosures, using innovative banded wood techniques, we have not only been able to retain the classic aesthetics of the CDD design and performance, but now have the capability to increase produc-

tion by tenfold."

Finally, to coincide with this, Martin Audio has also launched new DSP settings across the range to bring the voicing up to date. These are available to complement any amplifier solution but in addition to this there are also new FIR-based presets for iKON amplifiers and DX4.0 controller to

ter summed up, "We're delighted to extend and improve our best-selling CDD series as well as increase the production capacity to maximize its absolute sales potential as we see increased demand of small to medium installation projects at this time."

ORANGE MINT CHOSSES MACKIE AND DYNATECH FOR NEW OUTLET

The **Orange Mint Lounge** has opened a new outlet in Powai, Mumbai after a grand launch on December 12th with audio systems from Mackie and Dynatech.

Installed by Mumbai based solution providers SoS Audio, the pro audio setup consists of multiple units of the **Mackie SRM650 powered loudspeakers** hung from the ceiling as the primary audio system, with the **Dynatech HP-15A+ active loudspeakers** for close-up DJ monitoring.

"Having previously installed Mackie Thump15A at their Vashi location, the management of Orange Mint



The Orange Mint Powai installs Mackie and Dynatech

wanted to abide with Mackie for their new branch as well. We suggested the SRM650 powered loudspeakers owing to its impactful delivery, unparalleled coverage and amazing headroom. As for the Dynatech HP-15A+ they offer great clarity, are extremely versatile and super easy to move around. We could tell that the patrons were absolutely loving the high energy ambience and thoroughly enjoying the music experience at the launch party. The management is thrilled with the response garnered and so are we," says **Prashant Salvi** of SoS Audio.

HOSANNA AG CHURCH IN PONDICHERRY KEEPS SERVICES ENGAGING WITH LD SYSTEMS MAUI 44

Hosanna Assembly of God Church in Pondicherry traces back to the early 1980s, but the Church found its way to its form today, in the 1990s when **Rev. I. Asir** - the Presbyterian of Pondicherry AG Churches started this church in a rented house on Christmas Eve. The church grew steadily in size when further land was purchased and the present multi-storeyed facility was built from 2010-2014, under the leadership of **Rev. Allen Prosper** - Pastor of the Church since July 1999.

Recently, the Hosanna AG Church has reinvigorated its services with energy and enthusiasm, thanks to the newly acquired **LD Systems MAUI 44** playing a crucial role in representing the Word of God. The audio solution was installed by Tamil Nadu based **SoundVisionPro** which is a well-known establishment and one-stop destination for audio equipment, catering a wide base of customers.



Hosanna Assembly of God Church installed with MAUI 44 active column PA

Jacob Alexander of **SoundVisionPro**, who consulted with the church in the install process shares, "The management of the church was seeking an efficient and aesthetically pleasing audio system that would improve upon their regular

services. So, we suggested the MAUI 44 active column PA owing to its great quality and delivery with even sound distribution, and distortion-free audio reproduction. With an enormous 1600 watts of total output, and wide dispersion

angle, just 2 units of this compact column PA are enough to cover an area of 5000 sq feet, and that's what's most impressive about it. All in all, the church management is extremely happy with the sound, and so are we!"

PEAVEY UNVEILS AUREUS DIGITAL MIXER

The foundation of the **Peavey Aureus 28 digital mixer** is professional quality audio in an easy-to-use package. The 10" multi-touch display allows users to access almost any control with just a couple of taps. Fifty-nine dedicated controls allow access to most critical functions with a single touch, making the Aureus the easiest to use digital mixer to date.

Ease of use begins with quick setup, and the Aureus digital mixer packages presets for channels, EQ, gate, compressor, scenes, and shows, the mix can be up and running in minutes. The mixer also provides the ability to save and store your own presets, scenes, and even an entire mix onto a USB drive.

The onboard dock allows a tablet to be placed as a second screen, so users

can monitor the entire mix while adjusting a specific channel or separate group on the mixer.

The Aureus 28 digital mixer contains 28 inputs and 14 outputs with a best-in-class 10" touch display. For ultimate ease of use and workflow, the Aureus 28 has 14 dedicated encoders, 9 motorized faders, and 45 dedicated backlit buttons. Thanks to 16 XLR-1/4", RCA, Bluetooth, and USB inputs, the Aureus can connect to most audio sources. Combine that with 14 outputs, including 10 XLR, USB, and AES digital, and the Aureus will tackle just about any sound reinforcement application.

Remote control is available via onboard WIFI. Connect up to 10 devices simultaneously to control any aspect of the mix. By assigning passwords to

busses, each musician can have control over their own mix by using any device that can open an HTML5 compatible browser. Access a wide selection of reverb and delay through Peavey's exclusive built-in FX series digital effects, featuring simple and advanced modes.

Whether mixing in a club, church, conference center, sports field, arena, or any other place requiring professional audio, the Aureus mixer is the perfect solution, providing world-class work-



flow and audio quality in a compact, easy-to-use format.

CLEARONE APPOINTS TRUSTECH AUDIOVISUAL FOR INDIA

Responding to the growing regional demand for its expanding portfolio of audio conferencing, visual collaboration and AV networking solutions, **ClearOne**, a global provider of audio and visual communications solutions, has bolstered its sales network throughout India with the appointment of its newest distribution partner, **Trustech Audio Visual Solution LLP**.

"ClearOne represents innovative AV industry leadership with their full portfolio of solutions," said **Hardik Shah**, Co-Founder and Director of Trustech. "Our partners' needs vary widely, and we know we can count on the reliability of ClearOne solutions and their com-

ClearOne

mitment to providing the customer support our clients require. We know we can support any type of installation with confidence."

"As the breadth of ClearOne solutions continues to expand, we are tasked with finding those outstanding distribution partners around the globe with the history and industry knowledge upon which customers can rely," said ClearOne Chair and CEO **Zee Hakimglu**. "Trustech stands out in India as a trusted authority for AV solutions and customer service."

BEHRINGER LAUNCHES NEW TA5212 GOOSENECK MICROPHONE

Whether mixing a recording or conferencing, there is a need for a talkback microphone that delivers transparent vocals across an ultra-wide dynamic range. Behringer's new **TA5212 gooseneck microphone** fulfills the needs in all areas – studios, podiums and conferences.

TA5212's super-cardioid polar pattern provides with maximum isolation from surrounding sound sources for class vocals. Switchable low cut – built-in high-pass filter – helps to improve vocal clarity in a noisy conference hall. Special flexi-

ble gooseneck shaft design provides adjustment for effortless talk back.

TA5212 is designed for direct plug-in to a desk mounted female XLR connector or a mixer. A quick plug and locking mechanism makes it easy to handle day to day work.

The high-quality Behringer TA5212 condenser gooseneck microphone comes with wind and pop noise filter. Rugged, reliable metal die-cast construction makes TA5212 withstand rough handling of everyday life.

QSC EXPANDS OPTIONS FOR ACOUSTICDESIGN SERIES LOUDSPEAKERS

QSC introduces the **AD-S5T**, a 5.25" two-way loudspeaker system that offers integrators a premium option for a wide variety of foreground and background sound reinforcement applications where performance, coverage and aesthetics are paramount.

"We designed the AD-S5T on the same foundation as the rest of the award-winning QSC **AcousticDesign Series**, which has become a staple in the industry for installations requiring a refined audio experience," says **Travis Nie**, Product Manager, Installed Loudspeakers, QSC. "This new 5.25" loudspeaker offers integrators yet another surface-mount option to easily meet the needs of

any customer looking to enhance the overall sound experience and create a memorable experience for their audience."

The AcousticDesign Series includes a wide variety of sizes and enclosure types (surface-mount, pendant-mount, ceiling-mount, columnar and SUB/SAT) and provides consistent sonic characteristics across the entire line, allowing the ability to mix-and-match enclosures in a single installation. In addition, by utilizing native Q-SYS network amplifiers, including CX-Q Series, or standalone QSC DSP processing amplifiers, integrators can take advantage of Intrinsic Correction, a proprietary voicing algorithm for QSC loudspeakers, which helps to further reduce the setup time

and tuning process.

To ease installation, the AD-S5T includes the X-Mount system which enables the loudspeaker to be aimed and installed at a variety of precise, repeatable angles without slipping over time.

It's available in black (RAL9011) or white (RAL9010) and housed in a rugged ABS enclosure to easily withstand the harshest elements.



PIONEER PRO AUDIO ADDS NEW SURFACE MOUNT CM SERIES SPEAKERS TO LINE-UP

Pioneer Pro Audio has expanded its **CM Series** to include four new units: the 10-inch **CM-510ST subwoofer** and the IP54-rated 4-inch **CM-S54T**, 6-inch **CM-S56T** and 8-inch **CM-S58T surface-mount loudspeakers**.

The commercial speaker lineup draws on Pioneer Pro Audio's heritage of making dynamic club speakers and enable the brand to provide turnkey sound systems that can save space, complement interior design, and deliver outstanding sound quality in any venue, no matter its layout.



Available in black or white, these new units are perfect for discreet installation in a variety of spaces where reliability is crucial, and the loudspeakers can even

be used for some applications outdoors. These affordable and adaptable new arrivals in the CM Series include a host of features including transformer taps

– ideal if you need a professional and adaptable fixed installation solution.

The new speakers can be controlled by Powersoft's recently released ArmoniaPlus 2.0 software. This powerful tool enables you to assemble systems in simpler, more effective ways as it eliminates the need for an external matrix and reduces the number of cable runs in many applications. Everything can be easily controlled via a mobile app that you can use to adjust the sound in different zones.

An Unequal Music

THE BEDROOM PRODUCER

Building on the theme of this latest issue of our magazine, the tools for music production and what is considered as a 'recording studio' have dramatically changed over the last few years. Driven by access to technology, as well as the rise of genres (which don't necessarily require a traditional recording environment with expensive microphones and preamps, but

say, an SSL 9000 desk and other such world class equipment). Traditionally, the foundation of music production and recording, is built on ensuring the medium through which an instrument or a band or a singer is recorded is of the highest calibre and quality. This meant that each stage of a studio's signal flow process needed to be optimised in order to be competitive in the market. This in turn called for expensive microphones and preamps for recording, high-end consoles and monitoring equipment for mixing and mastering, an environment which needed to be made absolutely sound-proof as well as a plethora of hardware devices that add their own unique value and character in the signal flow process. A studio's USP hence, was often defined by what gear they had as well as the quality of the recording environment. It became a reason an artist would choose a particular place, for a specific sound that the studio was known for. However as innovation in technology continued to shape the industry, two major factors contributed to a complete transformation of how music is recorded and produced. The first, is the fact that computing power exponentially increased, while the physical size of microchips, processors and computing systems decreased. This meant packing a lot more efficiency in machines that are portable, and available not just for industrial and commercial purposes but for retail users as well. As these machines developed, softwares for recording and production also scaled along with the tech that was driving them. Industry-grade softwares like Pro Tools, Logic, Cubase and Ableton were designed to facilitate quick and efficient workflow on massive session files. The ability to record a band or make a beat was no longer confined to a studio, but became portable. It was only a matter of time before even laptops were able to run all out music sessions, thanks to DSP (or digital processing systems) that shared the workload and computing power. Companies like Universal Audio started developing software versions of the very analog devices that were their flag-ship products, opening accessibility of high quality music equipment

to a huge market, and it was not long before dozens of other audio equipment manufacturers followed suit. Technology not only allowed innovation in the equipment, but also in the environments that are needed for music production. Dozens of sound proofing kits are now available on the internet which serve towards creating an environment within which music can be recorded and mixed, even in a normal bedroom. These techniques range from DIY to professional grade kits that come with bass traps, diffusion absorption pads and much more. Portable microphone enclosures and cages also enable recording on the go. Audio equipment manufacturers realised that their mass market growth was not going to come from a handful of studios, but from prosumer level customers, and that's why you now see a plethora of products that are made specifically for "the bedroom producer", which brings us to the second factor that has contributed to this transformation and that is the evolution of music genres. Electronic music, though it started on hardware, is now widely produced "in-the-box" and there are hundreds of companies that produce digital instruments or VSTs for synthesis, recording and mixing. Portability allowed artists that are touring to also create and compose on the road, and you often read about so many modern day hits being recorded in a hotel room or a tour bus. Especially with electronic music, which is heavily based on sampling and synthesis; you do not really require a traditional recording studio to create such music. Even the mixing process becomes much more stream-

lined, since artists use templates that already have dialled in levels on EQs, compressors and summing channels for the various instrument groups that they would use in a track. This trend is only going to continue, and you now even have hits being written on softwares such as GarageBand on the iPhone. While one can argue that the charm of working in a recording studio with analog gear definitely has its own character and appeal, **it is without doubt that the future of this industry is now moving to "in-the-box"**, and digitisation of the process is now widespread enough to where anyone in any corner of the globe can learn how to record or write or mix music simply with a laptop, a basic microphone, keyboard and YouTube access.

by **Abhimanyu Malhotra,**
The Sonic Arts Co.

rather operate 'in-the-box'), the term 'bedroom producer' has cemented its place in the music industry. Contrary to the name, which might imply a product that is of sub-standard quality, bedroom producers & artists have consistently proven that creating good music no longer calls for a million dollar studio and vintage analog equipment. In this month's column we discuss how technology has enabled someone in a 1 BHK apartment to make hits that gain as much, if not more popularity than songs produced in a professional recording studio (with



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Studio Monitor

Attention to Precision

Adam Audio – T-series T8V

The T8V is an affordable, professional 2-way powered studio monitor with an 8" woofer. The T8V provides best-in-class characteristics and sound performance and is the perfect studio speaker for those who have always wanted to work with an 8" monitor but where budgets have been insufficient.

Main Features include:

- U-ART 1.9" Accelerated Ribbon Tweeter
- The air velocity ratio of 4:1 during the sound generation by folded U-ART membrane
- HPS waveguide from the S Series
- Lightweight polypropylene construction of the woofer
- Vertical 2-way system with 8" woofer
- Spacious rear-firing bass reflex port
- Linear frequency response of 33 Hz to 25 kHz
- Maximum peak sound pressure per pair in 1 m \geq 118 dB
- DSP-powered crossover design
- Simple room acoustic adjustments via high- and low-shelf filters
- Analog inputs over XLR and RCA
- Acoustically optimized cabinet geometry

Technical Specification:

Woofer

- Number: 1
- Basket Ø: 8" (203 mm)
- Cone Material: Polypropylene

Tweeter

- Number: 1
- Type: U-ART
- Diaphragm Area: 4 inch² (2420 mm²)
- Equiv. Diaphragm Ø: 1.9" (48 mm)
- Velocity Transform Ratio: 4:1
- Waveguide: HPS

Built-In Amplifiers

- Number: 2
- Woofer: 1
- Type: PWM
- Amp. Power RMS: 70 W
- Tweeter: 1
- Type: PWM
- Amp. Power RMS: 20 W

Control Options

- Input Sensitivity: Switchable +4 dBu / -10 dBV
- Gain: Yes
- High-Shelf: -2 dB, 0 dB, +2 dB
- Low-Shelf: -2 dB, 0 dB, +2 dB



Input Connectors

- Analog: XLR, RCA
- Input Impedance: 10 kOhm / 20 kOhm

General Data

- Panel: Rear
- Frequency Response: 33 Hz - 25 kHz
- THD > 80 Hz: 0.5 %
- Max. SPL per pair at 1 m: \geq 118 dB
- Crossover Frequency: 2.6 kHz
- Max. Power Consumption: 150 W
- Weight: 21.6 lb (9.8 kg)
- Height x Width x Depth: 15.8" x 9.8" x 13.2" (400 mm x 250 mm x 335 mm)

Eve Audio SC3070

SC3070 is a high-resolution, tri-amplified near / mid field monitor optimized for precise midrange and powerful bass response, making it especially well-suited for applications where the complete skill set of a fully-fledged 3-way system is required, but where space is at a premium.

Main Features include:

- Ideal solution for recording, mastering and home studios.
- Air Motion Transformer RS3.1
- Specially designed 4" midrange driver to give accurate and un-hyped transmission
- 7" woofer driver to provide precise and powerful low frequencies
- Fiberglass-coated membrane material
- High-resolution DSP (24bit/192kHz)
- Latency-free filtering and protection from overload
- Three high-quality Class D amplifiers
- Rear-firing bass reflex channel

Technical Specification:

- Dimensions (WxHxD) [inches]: 13.39 x 9.84 x 12.22
- Free-field frequency range (-3dB): 35Hz - 25kHz
- Tweeter: AMT RS3.1
- Midrange: 100mm/4"
- Woofer: 165mm/6.5"
- Cross-over frequency: 320Hz/2800Hz
- Max SPL per pair: 120dBspl
- Number of amplifiers: 3
- Output power (woofer): 185W
- Output power (mid-driver): 100W
- Output power (tweeter): 50W
- Volume: -inf. - +6dB
- High-shelf filter (-5dB - +3dB): > 3kHz
- Mid EQ (-3dB - +3dB): 1kHz
- Desk filter boost (0dB - +3dB): 80Hz
- Desk filter cut (-5dB - 0dB): 160Hz
- Low-shelf filter (-5dB - +3dB): < 300Hz



- Input level dip switch: +7dBu/+22dBu
- Weight [kg/lb.]: 9.8 / 21.6

Fluid Audio - FX80

The new FX series of coaxial studio monitors is a 21st Century reference monitor at home in any recording studio. The FX enclosure has been updated with a complex radius front baffle, which improves cabinet defraction.

Main Features include:

- New, contoured baffle enclosure design
- Coaxial driver
- Boundary compensation DIP switches
- Class D and DSP powered
- LED indicator on front baffle
- Front-loaded slot port design
- Updated Tweeter Grille protection

Technical Specifications :

- Woofer: 8" paper pulp composite cone
- Tweeter: 1.2" Soft Dome
- Frequency response: 35Hz-22kHz (+/- 3dB)
- Crossover frequency: 2.4kHz
- Amplifier Class: Bi-Amped CLASS D
- Low-frequency amplifier power: 60 watts
- High-frequency amplifier power: 50 watts
- Signal-to-noise: 90dB (typical A-weighted)
- Polarity: Positive signal at + input produces outward LF one displacement
- Input impedance: 20 k ohms balanced, 10 k ohms unbalanced
- Input sensitivity: 85 mV pink noise input produces 95dBA output SPL @ one meter with volume control at maximum
- Power: 100V-240V ~50/60 Hz
- System Volume: -30dB to +6dB
- Inputs: Balanced TRS, Balanced XLR, Unbalanced RCA
- Protection: RF interference, output current limiting, over temperature, turn-on/off transient, subsonic filter, external mains fuse
- Cabinet: Vinyl-lami-



*The importance of a great **Studio Monitor** in a studio cannot be undermined. After spending innumerable hours on a track, studio professionals need to hear it in its most neutral state to do full justice. This guide on studio monitors can help. This feature is intended as a guide and does not endorse any of the products featured here.*

- nated MDF
- Size (single monitor): 340*254*295 / 13.4*10*11.6
- Weight (each): 7.8 kg / 17.2 lbs

Kali - IN8

Combining the natural advantages of a 3-way design with hyper-realistic imaging of a co-axial mid-range and tweeter, Kali's IN-8 offers more transparency, lower distortion, and a soundstage that must be heard.

Main Features include:

- Co-Axial Midrange and Tweeter
- 8-Inch Woofer
- Low Noise Port Tube
- Balanced XLR and TRS inputs, and an unbalanced RCA input
- Boundary EQ tuning for optimum sound
- LF and HF trims
- Total harmonic distortion less than 1.4%

Technical Specifications :

- Amplifier Class: D
- Power Configuration: Tri-Amped
- HF Power: 40W (Continuous)
- Midrange Power: 40W (Continuous)
- LF Power: 60W (Continuous)
- Total Power: 140W (Continuous)
- HF Driver: 1" Textile Dome
- Mid-Range Driver: 4" Optimized Profile, Poly Coated Paper
- LF Driver: 8" Poly Coated Paper
- Crossover (LF to Mid-Range): 330 Hz
- Crossover (Mid-Range to HF): 3000 Hz
- Frequency Response: (-10dB) 37Hz - 25 kHz
- Frequency Range: (+/-3 dB) 45Hz - 21Hz
- Listening Distance (85 dB continuous SPL with 20dB dynamic headroom): 2.8 Meters
- Max SPL (Peak @ 1M): 114 dB
- System THD: <1.1% from 70 Hz to 200 Hz; <0.8% from 200 Hz to 3.6kHz; from 3.6kHz to 10kHz; (90dB SPL @1m)
- Unbalanced Inputs: 1 x RCA
- Balanced Inputs: 1 x XLR, 1 x TRS
- TRS/XLR Input Sensitivity: 94dB SPL @1m (anechoic) for +4dBu input.
- RCA Input Sensitivity: 94dB SPL @1m (anechoic) for -10dBV input.
- Height: 17.75 Inches (44.1 cm)
- Depth: 11.25 Inches (28.5cm)
- Width: 10 Inches (25.4cm)
- Weight: 23 lbs (10.4 Kg)



PreSonus Eris E7 XT

The Eris E7 XT builds on the Eris XT-series adding big, controlled bass in a compact form that will fit into a studio of nearly any size. It's easy to feed audio to the Eris E7 XT studio monitors from an audio interface, mixer, monitor controller, or almost any other line-level source.

Main Features include:

- New EBM (Elliptical Boundary Modeled) waveguide
- Ported enclosure designed to maximize bass, allowing to reach down to 42 Hz
- Acoustic tuning controls - Low-cut, Mid, and High controls, as well as 3-way acoustic space tuning
- Superior high-frequency response and wider 100-degree horizontal dispersion
- Balanced XLR, balanced ¼" TRS, and unbalanced RCA line-level inputs
- Suitable for both home recording studios and professional mix engineering

Technical Specifications:

Inputs

- 1- Balanced XLR
- 1- Balanced ¼" TRS
- 1- Unbalanced RCA

Performance

- Frequency Response: 42 Hz - 20 kHz
- Crossover Frequency: 2.5 kHz
- LF Amplifier Power: 75W
- HF Amplifier Power: 65W
- Peak SPL (@ 1 meter): 104 dB
- LF Driver: 6.5" reinforced woofer
- HF Driver: 1.25" silk dome tweeter
- Input Impedance: 10 kΩ
- Dispersion: 100 degrees horizontal by 60 degrees vertical

User Controls

- Volume Range: A-type taper
- MF Control: -6, 0, +6 dB
- HF Control: -6, 0, +6 dB
- Low Cut: Flat, 80 Hz, 100 Hz
- Acoustic Space: Flat, -2 dB, -4 dB

Protection

- RF interference
- Output-current limiting
- Over-temperature
- Turn-on/off transient
- Subsonic filter
- External mains fuse



Physical

- Width: 9.4" (240 mm)
- Depth: 9.5" (242 mm)
- Height: 14.4" (365 mm)
- Weight: 18.5 lbs (8.4 kg)

RCF Mytho 8

MYTHO 8 is a two-way reference studio monitor equipped with two separate AB amplifiers - 200 W for the low frequencies and 100 W for the high - unparalleled for low distortion and natural sound.

Main Features include:

- True active 200 W + 100 W class AB design
- Dedicated DSP processing
- Fully featured input board
- 8" neodymium ICC vented woofer
- 1" aluminum dome tweeter
- Constant directivity wave-guide
- Die cast aluminum cabinet
- Reflection free cabinet design
- Low distortion reflex port

Technical Specifications:

Acoustical Specifications

- MAX SPL @ 1M: 116 dB
- Horizontal Coverage Angle: 110°
- Vertical Coverage Angle: 70°

Input/Output section

- Input Signal: bal/unbal
- Input Connectors: Combo XLR/Jack
- Input Sensitivity: -6 dBu/+6 dBu

Processor Section

- Protections: Thermal, Excurs., RMS
- Controls: Bass tilt, roll-off, treble tilt, desk-top, DSP Controlled
- Limiter: Soft Limiter

Power Section

- Total Power: 600 W Peak, 300 W RMS
- High Frequencies: 200 W Peak, 100 W RMS
- Low Frequencies: 400 W Peak, 200 W RMS
- Cooling: Convection
- Connections: VDE

Physical Specifications

- Cabinet/Case Material: Aluminium
- Color: Black
- Hardware: Orientation adjustable stand

Size

- Height: 430 mm / 16.93 inches
- Width: 310 mm / 12.2 inches
- Depth: 300 mm / 11.81 inches
- Weight: 15.7 kg / 34.61 lbs



ACOUSTIC AND AUDIO SYSTEM DESIGN FOR SMALL ROOMS

- PART 5

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



In the previous part, the article discussed frequency responses of speakers and how they relate to the listening experience. That discussion is the perfect overture to this next topic of interest – system tuning and optimization.

Crossover Point Determination

Before system optimization, crossovers have to be set (usually in a DSP) at selected frequencies. The crossover point is the cutoff frequency below which audio is sent to the subwoofer(s) and above which audio is routed to the mains and surrounds. There are multiple considerations to keep in mind when selecting this crossover point. It takes significantly more electrical power to reproduce lower frequencies than higher ones, so this is the first calculation you need to make. Based on how much headroom you have available on your amplifiers, or even the loudspeaker sensitivity, you may be forced to move the crossover point higher than you desire. There are a few drawbacks to higher crossover points which make them undesirable for reference quality systems. As opposed to mains and surrounds, subwoofers drivers are made with significantly larger diaphragms, which by their nature are usually too

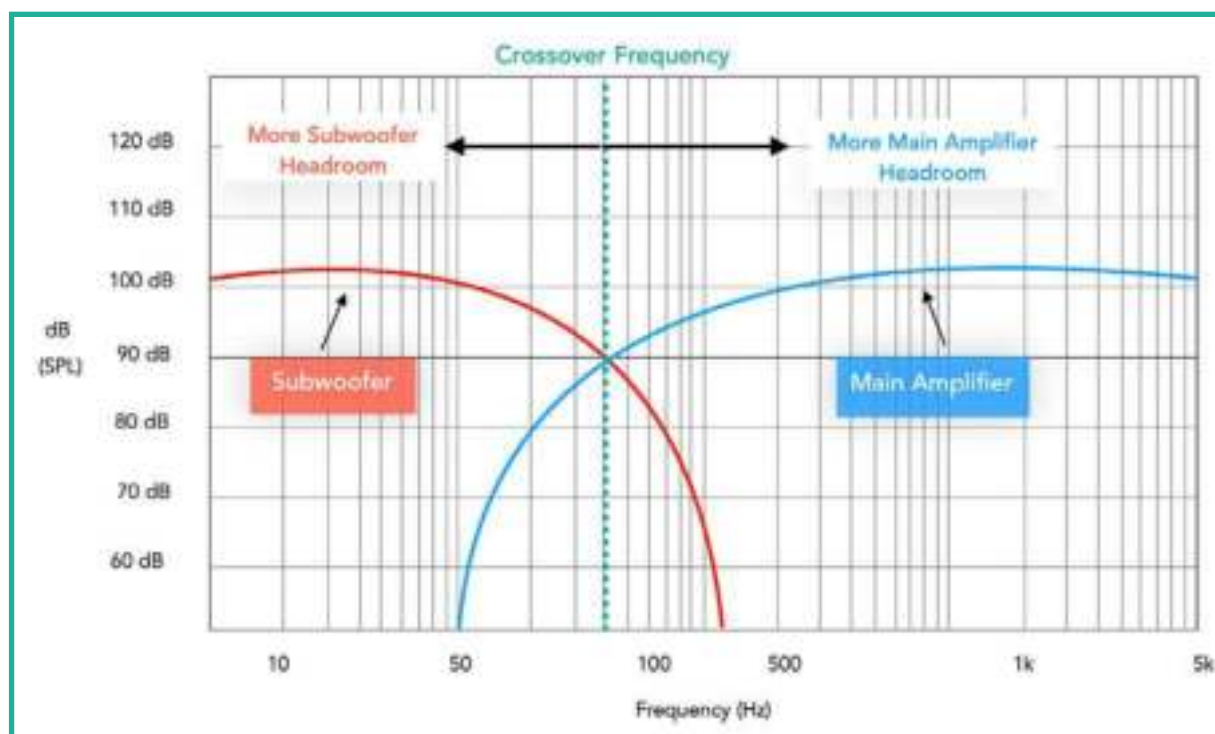


Fig 1: Headroom trade-off while selecting crossover frequency

slow moving to have a good transient response at mid frequencies. Addition-

ally, above 100Hz, we start to perceive sound a bit more directionally, which

is sub-optimal (pardon the pun) for a truly immersive surround experience.

Therefore, it is recommended to set crossovers at 80Hz or lower.

Test Mic Placement

Once audio equipment has been selected and installed within a room, it is now time to optimize the system to the space. Using a single microphone in a single position is a common mistake made by people trying to optimize the 'sweet spot' of a room. Loudspeaker and room interactions always result in some tonal variation across listening seats in a room (pre-calibration), and tweaking a system based on a frequency response measured at a single position can very likely worsen the response at another listener seat in the room. That said, it is also unnecessary to measure responses at every listener seat, so it is important to select a few positions that tell you everything you need to know about the listening area. For example, in a reasonably symmetrical room, one need not measure both extremes of a single row. The image below shows a possible test mic configuration in a room.

One mic is in the sweet spot in the first row, and the opposite corners of the seating area get a mic each as well. The middle of the second row gets another mic for good measure, giving us a total of 4 microphone positions for 7 listener seats. There is no one right way to place the mics in a space, just try to get a good distribution of mics across the listening area. The mic placed in the 'sweet spot' (position 1) will be used to set speaker levels, but all mics have to be used for subwoofer alignment and system EQ.

Equalization

It is difficult to do this topic justice in a short article, so I will attempt to cover some of the best practices for equalizing a system. Firstly, and most importantly, one must understand the limitations of equalization. While it is tempting to flatten a curve using parametric or other EQ filters, one false step can lead to major system damage. EQ cannot be used to rectify room acoustical issues. It also should not be used to fix an apparent problem that is audible only at one seat. Rather, it should only be used for tonal shaping, to get a

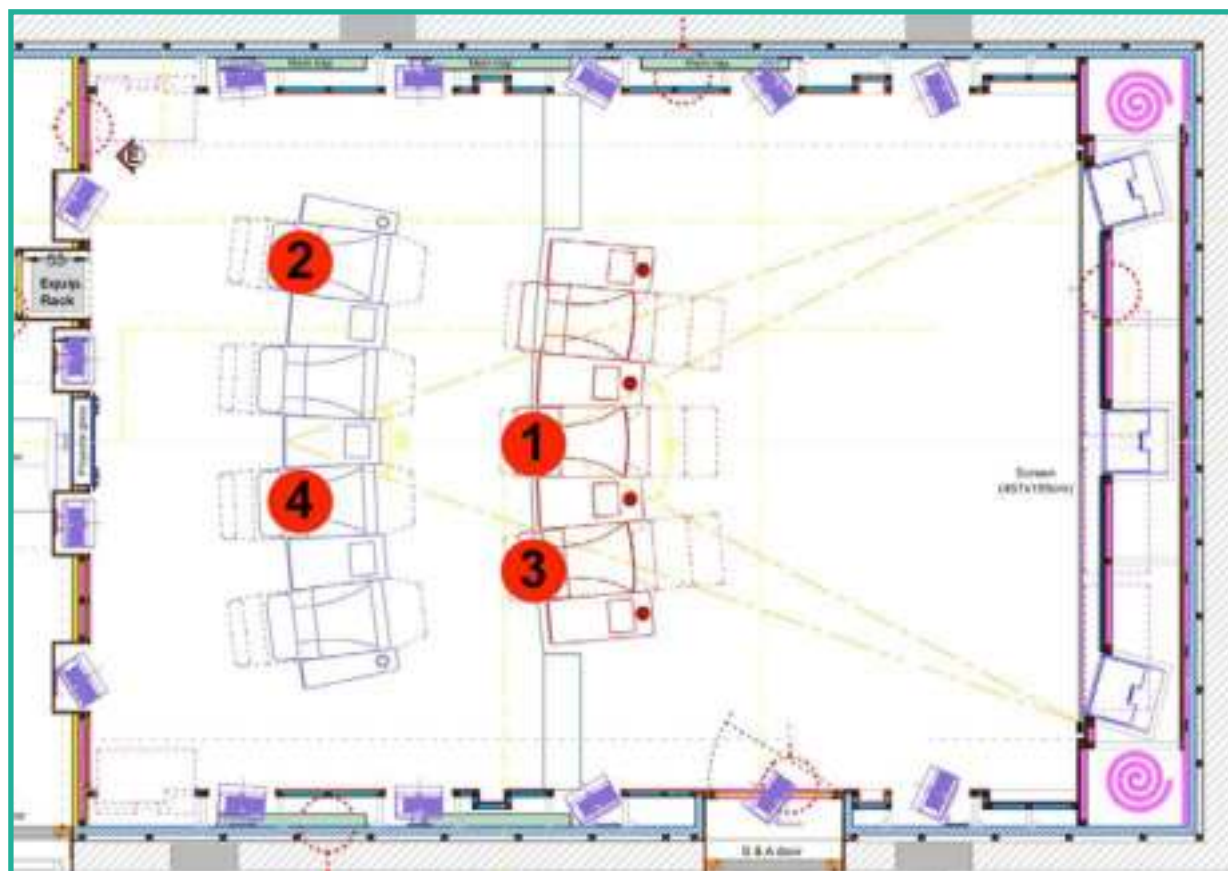


Fig.2: Test Microphone Positions

smooth and flat frequency response, as described in the previous article in this series. <http://www.palmtechnology.in/Article-87-Acoustic-and-Audio-System-Design-for-Small-Rooms-Part-4-by-Rahul-Sarma.aspx>

How do we identify the effect of room acoustics on a frequency response, so that we know to stay far away from it? That is where the multiple mics placed around the listening area come into play. If you have a dip in a frequency response measured in all the microphones, it is unlikely to be a modal issue, which would manifest at the same frequency in all listening positions, at different resonance levels. Even then, it is better to approach with caution and make only gentle changes to the spectrum. It is always more advisable to cut peaks in a response than boost dips, since any boost will eat into system headroom and move you closer to its limit.

The most common mistake made while system tuning is to try and boost a dip that is actually indicative

of a nasty energy cancellation due to signals arriving out of phase at a specific position. Increasing the output of those frequencies doesn't result in any visible change to the frequency response, so one might try to boost the same frequencies with an even higher gain. Before you know it, you have used up the system headroom and eventually fry the system as it runs near its limits!

System optimization

There are many other processes required to optimize a system for a particular purpose, and it is important to not take any shortcuts. We have only covered a small portion of system optimization, and even the topics we have covered like equalization take months/years of study and practice to truly master.

Time alignment, setting effective limiters to protect the system, creating presets for different ways of using a system and phase measurements are just some of the many other system optimization

tasks. It is also worthwhile to test each speaker independently to ensure you have received them in working condition. Never assume that a speaker fresh out of a sealed box must be in perfect working condition. Drivers can be out of phase, and can sometimes even be damaged. It is worthwhile measuring the harmonic distortion curves of each speaker to compare with the factory datasheets. This will ensure that you start optimizing a working system.

Finally, the most important tools required to optimize a system are your ears. There is no substitute for a good ear, and the only way to truly create a good sounding system is to use a combination of measuring tools and critical listening to verify your work. Critical listening ability sets apart the good from the truly great system designers. It is something that can be developed and improved with practice and experience, and therefore needs to be given importance while honing your system optimization skills!

PALM technology
SOUND & STAGE - LIGHTING - INSTALL SOUND - MUSIC PRODUCTION - DJ TECHNOLOGY

Coming in
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STUDIO ISSUE

Create
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MARTIN BY HARMAN LAUNCHES ERA 600 AND 800 PROFILE FIXTURES

HARMAN Professional Solutions, have announced two new fixtures, the **Martin ERA 600** and **800 Profiles** that join the ERA 300 Profile and to round out the full-featured range of ERA Profile and ERA Performance fixtures.

The new ERA profiles are perfect for rental and entertainment applications needing an all-in-one moving head that is both compact and lightweight but also bright, efficient and feature-loaded. Whether being used for concerts and touring or corporate shows, cruise lines, houses of worship, and live TV, the new fixtures are great for a list of scenarios, requiring a truly versatile LED profile.

The new ERA 600 and 800 Profiles deliver incredibly bright yet efficient output - 19,000 lumens



Martin ERA 600 Profile

(ERA 600) and 34,000 lumens (ERA 800) as well as sharp image projection with a flat field. Additional benefits include

1:8 zoom, electronic dimming/strobe, CMY/CTO, iris for beam adjustment and dual rotating gobo wheels, plus an additional static wheel, loaded with gobos from the legendary Martin MAC range.

"We are thrilled to roll out the new 600 and 800 Profiles to round out the range and ensure that there is an ERA profile equipped to support any sized stage or venue," said **Mark Buss**, Martin Lighting Product Manager, HARMAN Professional Solutions. "Designers have been sharing how many applications our new ERA Performance range has given them but for some installs a profile is just going to fit the bill so much better. With these two new profiles plus the ERA 300 Profile, and the three ERA Performance fixtures, LDs now have an arsenal of six of the brightest lights in Martin's history to choose from, which



Martin ERA 800 Profile

greatly widens design potential for compact, LED moving head applications."

PROLIGHTS ECL RANGE A SUCCESS IN STREAMING STUDIOS

It has been a year since the release of the **PROLIGHTS EclPanel TWC**, a 2x1 softlight with tunable white and coloured LED soft light for TV and studios. Since its release, PROLIGHTS has been able to tap into a new market - one that looks for high-quality, reliable fixtures with a good ROI.

With recent product launches of late 2020, PROLIGHTS had expanded the ECL collection into what can be described as a one-stop lighting solution for TV, streaming and motion picture studios - the product portfolio includes Fresnels, Ellipsoidals, Pars, Cyclorama and Soft-Light panels, with fixtures available in multiple sizes and with different LED sources as Tunable

White + Coloured LED sources or static white (tungsten and day-light). "We are one of few companies that are able to offer a complete lighting system for studios," said **Fabio Sorabella**, Managing Director at PROLIGHTS. He added: "We have recently observed that, apart from film companies involved in motion picture productions, several event companies are shifting their business model to online, streamed events. This often requires skillful designers with knowledge of TV lighting. What's so great about our range is that you don't need to balance different sources - with our optimized color algorithm, you can benefit from the ease of use, making

the matching process a lot easier than trying to balance fixtures from several manufacturers."

Since the first shipment of an ECL product, over tens of thousands of units across the range were delivered worldwide and gone to multiple TV, film and streaming studios, rental companies and production houses. It has been used on shows like The Voice and Master Chef and lit countless streaming events as companies took their presentations online.

Paolo Albani, International Sales Manager for Prolights, also commented: "The **EclPanels TWC** and the **EclPanels TWCjr**, its 1x1 alternative are also more accessible comparing to other products,

outperforming in output, color rendering and bringing considerable cost savings thanks to our smart business model that makes them more accessible to all users."

The entire ECL range was designed and engineered in Italy and put through rigorous optics and calibration tests before it even reaches the assembly line. The range is not older than one year, and it uses the latest electronics and LED sources available - this includes RGBW + Warm White sources or six color LED array, across the range, except in the fixed coloured options. The company prioritizes TM-30 and TLCI sources, and high refresh PWM settings optimized for ultra-high-definition cameras.

ECL products are also available in pole-operated versions and have a range of accessories available, developed by Prolights or referenced third-parties: "We wanted a broad and premium range of accessories for our EclPanels and decided to partner with DoP Choice, as it's well established in the market- from SnapBag, SnapGrid, Rabbit-Ears and SnapBox, we make sure that all products have the right accessories right as we launch them. We don't let customers waiting," said Sorabella. The panels can also be operated by a battery, through its 4-pin XLR, accepting industry-standard batteries.



PROLIGHTS EclPanel TWC

CHAUVET PROFESSIONAL UNVEILS NEW FORCE

CHAUVET Professional has turned the notion that “size matters” on its head with the new **Maverick Force 2 Profile** and **Maverick Force 1 Spot**. Developed after extensive R&D and with input from leading designers, this new family of high-performance, LED moving heads, pack arena-sized punch in lightweight frames.

“We developed the new Maverick Force series to address the demand for compact, but powerful fixtures that our touring and broadcast customers have been asking for,” said **Albert Chauvet**, CEO of Chauvet. “Smaller framed, easier-to-handle fixtures are especially well-suited to today’s social distancing environment where limited set-up crews are expected to do the jobs that were once performed by more people.”

The units are not only designed to be lightweight and compact, their output also has force from power-packed advanced LED engines. Weighing in under 60lbs

(27.2kg), the Maverick Force 2 Profile is powered by a 580-watt LED engine that produces an intensely bright 21,000 lumen output. Tipping the scales even less than its stable mate, the under 50-lb (22.7 kg) Maverick Force 1 Spot features a 470-watt LED engine capable of blasting out 20,000 lumens of brightness. Both high-output fixtures produce an array of hues from brilliant reds to soft pastels with CMY+CTO color mixing and an added color wheel with CTB and CRI filters for design flexibility.

Maverick Force 2 Profile features a quick four-blade framing shutter system with 120-degree rotation for precise control, a 7 to 55 zoom to cover a wide range of areas, and 16-bit dimming for smoother fades. Added versatility is provided by its five-facet prism with frost, motorized iris, two rotating gobo wheels, and animation wheel. Maverick Force 1 Spot’s effect wheelhouse has one rotating and static gobo wheel instead.

The discreet operation of these fixtures also makes them well-suited for installations where quietness is of



Maverick Force 2 Profile

paramount importance. Both fixtures feature Pulse Width Modulation and several TV fan modes, making them ideal for broadcast lighting. A variety of advanced control options are offered with DMX, WDMX, sACN, ArtNet, Pre-set synch and RDM capability for remote accessing.

“When developing our Maverick



Maverick Force 1 Spot

Force fixtures, we set out to achieve the optimal balance between lightweight design and high-performance features,” said Chauvet. “As much as lighting professionals are seeking smaller workhorse fixtures, we didn’t want them to have to sacrifice quality for compactness.”

AVOLITES ANNOUNCES NEW DIAMOND 9 FLAGSHIP CONSOLE

Avolites has announced the launch of its new flagship **Diamond 9 console** in two versions: **D9-330** and **D9-215**. Both new visual canvas controllers deliver inspired creative control to production designers in lighting, broadcast and AV, allowing them to create, program and command their ultimate performances.

Bringing a new look and feel to the console, the main front panels are machined from a single sheet of sleek aluminium with high end finishes. The D9-330 boasts 11 ultra-bright touch

screens, including 3 main workspace screens, 3 for media preview, and specific screens for attribute control and softkey short cuts. The brand new motorized touch sensitive Penny & Giles faders and new encoders each have their own RGB bar graphs so levels can be monitored at a glance. There’s also a return of the backlit integrated keyboard.

The most interesting side of the D9 is the right-hand side, with 5 encoder wheels, a T bar for controlling scene masters and a new set of bespoke

buttons carefully positioned so finding them is second nature.

“I had the privilege of using the D9-215 back in January 2020. The experience was fantastic. Programming on it felt familiar but greatly enhanced by the step up in hardware allowing for smoother, quicker and more enjoyable programming experience” says **Tom Campbell** (MIRRAD), production and lighting designer. “As a long-term user of Avolites, I’m very excited to see where the D9 takes the company and I’m very proud to have had a small

part in it.”

The key differentiators go far beyond the aesthetics; they provide more intuitive media control integration for lighting designers in all sectors of the industry. Building on the ground-breaking Synergy feature set, that allows seamless integration between media server and lighting control, the D9 brings this to users’ fingertips with intuitive design and layouts ideal for media playback and control.

The D9s include Avolites’ new logo marque. It reflects the forward thinking strategy direction of the company, whilst underscoring Avolites’ creative-led approach to lighting and media design.

“The Diamond collection, with our new brand logo, marks the first step in our future-facing strategy as a company” says **Paul Wong**, Managing Director of Avolites. “The D9s are the resulting product of years of R&D investment, and we’re very proud to be giving our users the ultimate programming tool for their future creative projects.”

The Avolites D9-330 and D9-215 are available to order now.



STRAND DEBUTS SMALLER NEO COMPACT 10 CONSOLE

Strand has announced the new **NEO Compact 10 Lighting Console**. This new, more compact version of the popular NEO Console is now available globally and brings the power of NEO software in a 10-fader lighting control console perfect for education, theatre or house of worship applications.

"The combination of sophisticated features, quality-built hardware and small form factor makes the new NEO Compact 10 Console the most powerful lighting console in its class," says **Fernand Pereira**, Global Head of Marketing and Product Management, Vari-Lite and Strand at Signify. "The NEO Compact 10 offers the full capabilities of Strand NEO software optimized for a smaller footprint, with seven different onboard effects engines as well as user-configurable buttons, faders and palettes that let you adapt NEO to the way you work."

To further simplify operation, the NEO Compact 10 includes an internal 7" touchscreen that makes it easy to program a complete light show at your fingertips, while the ability to add an external touch monitor brings the full programming capabilities of the NEO software for more complex productions. Thanks to the integrated 10-button numeric keypad and command line support, the NEO Compact 10 offers fast programming of its advanced effects capabilities.

"With a feature set that's unrivaled at its size and price point, the NEO Compact 10 can be used anywhere, whether that's at front of house, in a rack as a backup show control interface or on the go as a portable desk," explains Pereira. "With four DMX universes (up to 2048 channels) by default and upgradable to 10 universes (up to 5120 channels), the NEO Compact brings powerful capabilities to virtually any size space."

In addition to the NEO Compact

10 Console, Strand is also debuting the

NEO Compact 10 PC

Wing, a USB control surface accessory for Strand NEO PC that is based upon the same hardware design as the Compact 10 Console. The 10-fader USB wing offers NEO PC users the same 10 button numeric keypad for fast programming, as well as a touchscreen interface that allows users to quickly select palettes and groups. With the NEO Compact 10 PC Wing and a laptop running NEO PC, users can easily program upcoming shows from anywhere or run a live production with tactile buttons and faders right from their laptop.

To add support for the NEO Compact 10 Series, Strand has released NEO OS version 3.11. The software update also brings enhancements to cue lists and the magic sheet, as well as a new matrix timing tool and other changes.

The new software is available for the Strand NEO Console, NEO RACK Playback Controller, and NEO PC.

"The new NEO Compact 10 Series ushers in a new generation of lighting control solutions from Strand," adds **Sameer Sodhi**, Business Leader, Vari-Lite and Strand at Signify. "The NEO Compact 10 Series joins Vari-Lite and Strand's full range of luminaires, controls, and power and data distribution products to offer theatrical environments a complete solution with industry-leading capabilities from a single manufacturer."

The Strand NEO Compact 10 Series is now shipping.



MARTIN RELEASES NEW P3 SYSTEM CONTROLLER SOFTWARE

HARMAN Professional Solutions has announced that **Martin P3 System Controller Software** Version 5.2.0 is available as a free update for the entire family of Martin P3 System Controllers. Martin P3 System Controller Software

tron, VDO Fatron and Exterior PixLine.

New features include:

- P3 Switch: Instantly toggle individual fixtures between video control and DMX control.
- PixelMap Input: Receive PixelMap



Version 5.2.0 comes with a range of new features and improvements that benefit newer products such as the MAC Aura PXL and VDO Atomic Dot, as well as long-time Martin favorites like VDO Scep-

tron, VDO Fatron and Exterior PixLine. input from a lighting desk for up to 128 universes, drive fixtures with a video feed from a media server or

(Continued on page 53)

ETC EXPANDS LED DRIVING SOLUTIONS WITH ARCSYSTEM PRO D4 CV DRIVERS

ETC announces a new addition to its award-winning **ArcSystem Pro luminaire** platform, the **D4 CV Driver** family. This new line of drivers is designed for

use with 24 VDC constant voltage LED loads, such as linear tape applications. ArcSystem products are renowned for ease of installation as well as quality



of light and dimming—and the D4 CV driver family is no exception.

The D4 CV driver line complements the recently introduced F-Drive system, creating an industry-leading range of LED driving solutions for a variety of installations. The new D4 CV driver line includes both wall-mount and rack-mount options, with four channels per driver, and the ability to reach maximum load capabilities of 528 W across four channels.

The D4 CV Drivers are available in the following three sizes.

- D4 CV 150: Wall-mountable, with four outputs of up to 50 W per output or 150 W with all outputs combined
- D4 CV 350: Wall- or rack-mountable, with over 72 W on a single output or 264 W with all outputs combined
- D4 CV 700: Wall- or rack-mountable, with 146 W per output or up to 528 W with all outputs combined

MA LIGHTING ANNOUNCES GRANDMA3 VIZ-KEY

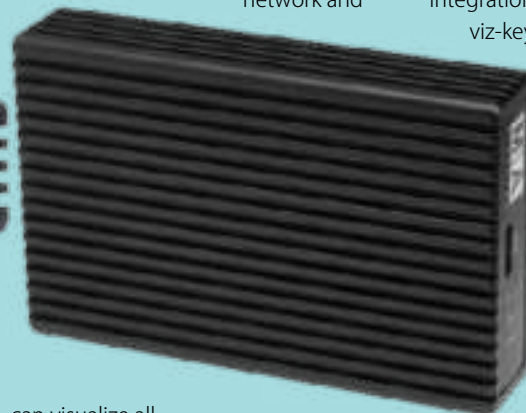
MA Lighting has given answers to users who have been asking for solutions to connect grandMA3 lighting control systems with existing visualization platforms - from a single onPC software device up to a full-blown multi-user system.



grandMA3 viz-key is the unique solution for stable and safe connectivity between 3rd party visualization tools and grandMA3 lighting control systems. Users can simply connect the grandMA3 viz-key with the visualization computer and it

will enable all necessary parameters for visualization.

All compatible 3rd party manufacturers are MA-Net3 members on the network and



can visualize all granted parameters instantly. grandMA3 viz-key also enables all non-grant-

ed parameters for visualization.

MA Lighting has made agreements with several visualizer manufacturers to co-develop a seamless integration between grandMA3 viz-key and their specific pre-visualization solution.

These manufacturers are Capture Visualisation for Capture, Imaginary Labs for Carbon For Unreal, Synchronorm for Dependence², and Vectorworks for Vision. MA Lighting is in contact with further companies and will release updated information as new partnerships are formed.

MARTIN RELEASES NEW P3 SYSTEM...

(Continued from page 52)

dynamically switch between the two.

- Art-Net to P3 Bridge: Create an Art-Net to P3 Bridge using the PixelMap Input functionality to visualize lighting designs in real-time.
- Free Scale Mode: Create canvas sizes larger than full HD with upscaling.
- Map on Video: Set incoming video streams as the background in 'Setup View' and map fixtures directly onto the video in the same window.
- Video on Drawing: Preview a render of the incoming video stream on an imported drawing or picture of the stage or building.
- Spread and Align: Easily manage fixtures in the workspace and speed up your workflow when dealing with large quantities of fixtures.

ADJ INTRODUCES NEW ELEMENT HEX IP CHROME MODEL

Building on the success of the Element HEX IP outdoor-rated wireless up-lighting fixture, ADJ has introduced the new **Element HEX IP Chrome** model. Offering the same tried-and-tested formula of 6-in-1 HEX LEDs, a powerful rechargeable battery, Wifly EXR, wireless DMX and an innovative casing design, the new version features a striking chrome housing. This makes it ideal for applications where, instead of blending into the background, lighting fixtures are required to make a bold statement.

The Element HEX IP Chrome is powered by four 10W HEX (RGBWA+UV) LEDs, which generates a consistent color wash with a 20-degree beam angle. The 6-in-1 LEDs allow for the creation of a huge palette of colors ranging from vivid saturates to subtle pastels. In addition to the primary colors of red, green and blue, the inclusion of both

white and amber LED elements allows for the generation of a wide variety of color temperatures of white light, ranging from stark cool white to soft warm white. Meanwhile, the UV LED element not only allows for the creation of the classic 'blacklight' effect where white and fluorescent materials glow vividly, but it can also be combined with other colors to create hues such as hot pink, electric purple and lime green that aren't possible using tri/quad color uplighters.

As well as full color mixing of the six LED elements, which allows the choice of a vast variety of colors, the unit is pre-programmed with 63 color macros to allow for quick setup when required. It also offers Sound Active operation as well as an Auto Run mode with a choice of 16 pre-programmed color chases as well as 16 color fade patterns.

0 – 100% master dimming and variable speed pulse/strobe effects (0.2Hz-11Hz) are also on offer. A four-character LED display and four corresponding push buttons provide a simple menu interface for mode and color selection as well as DMX addressing.

For DMX control, the unit features a built-in WIFLY EXR receiver which allows wireless control from a distance of up to 2,500 feet (760M). A wireless fixture, the Element HEX IP Chrome also features a powerful internal rechargeable lithium ion battery. An IEC power inlet for charging, as well as an on/off switch, are positioned below the menu display and a USB port is also included for future firmware updates. These are built into a water-resistant hatch on the side of the fixture, which is covered by a hinged lid during operation to provide both protection for the connections and screen

as well as to hide them from view.

With an external casing that meets the IP54 standard, the Element HEX IP Chrome is suitable for temporary event use both inside and outside. A retractable handle folds out from the top of the unit for carrying and is then hidden by the built-in

snoot when the fixture is in position. It features integral feet, which means it can sit directly on the ground for easy-to-setup, but is also highly effective for up-lighting of walls and backdrops. Alternatively, it also features a built-in kickstand which can be used to angle the fixture in towards a wall for a tighter beam. A mounting point on the front of the fixture allows a hanging bracket to be attached so that it can be hung from a truss for down lighting or stage illumination.

"The Element HEX IP has proved to be very popular with entertainment and production companies who want a versatile, reliable LED wash fixture that is truly cable free and can be used both inside and out," comments ADJ USA's National Sales Manager, **Alfred Gonzales**. "Combining hex color mixing, powerful LEDs, a high-capacity battery, ADJ's extended range WIFLY EXR DMX and an intelligently-designed IP-rated case makes it an appealing proposition for event professionals who need to be able to set up event lighting very quickly. That's why we decided to extend our range with the addition of a chrome-finished version. For some applications a black casing, which will blend it to a dark stage or event space, is what's required, but for others an aesthetically-pleasing mirrored finish is more appropriate. Now, with the addition of the Element HEX IP Chrome, ADJ's range has both options covered."



HAS CREATIVITY ALSO BEEN LOCKED DOWN?

Viraf Pocha



Lockdown has been the best thing to have Happened to Me! Typical Responses

- i. This dude Lost It.
- ii. They should have regulated the sale of Alcohol a bit more
- iii. Don't Tell My Wife – PLEEEASE. She put me to work even harder
- iv. Rich Guy – Six servants and an unlimited supply of diversions. Let's storm his mansion
- v. Respect that he putting on a brave face. Check his trousers held up by string.

But Look a Bit further – and for a tiny few it is the genuine truth.

Creativity needs distance, space and a lack of distractions.

Creative people will use this opportunity to Deep Dive into their sphere of activity, or step back and widen their horizons.

All of us have struggled to come to terms with this imposition. Confusion, Distress, Outrage – have swept through our minds. But as we got used to the isolation – all of us adapted to the new normal and began to enjoy some aspects. No Commutes, Better family time.

People in our line of work really had nothing to look forward to, other than a notice of when work will begin. But we pride ourselves on creativity right?

Guys converted their bedrooms into techie studios. Wives were banished to the other room. Lighting boards were set up and visualizers were plugged into the Bedroom TV. Let the On Line tutorials begin.

The net offered dozens of offerings. Very few held my attention as some eager, talking head droned on in clichés about how wonderful they were. If a few nuggets emerged from some guy obviously unused to talking on camera – they were lost simply as it was impossible to practice what the head was preaching.

One particularly earnest guy was excitedly exhorting event guys to confess in the feedback box - on how his generators were the best and his team was the best and his connectors were the best.... You get the idea. Some complicated calculation to justify how he markets his generators as 125 Kva (The 'va' silent or non-existent) when all his other despicable competitors

supplied 100 Kw ('w' silent in this case) FOR THE SAME PRICE. Outrageous!

One of the disadvantages of on line is the speaker does not get to see the disgust or derision on our faces. I quickly learnt to switch my camera off and read mails while being actively engaged on a web chat.

I hated the on line stuff where I had to wear a smart shirt and nod enthusiastically to support a friend or butter up my superior. Bob Dylans 'You Gotta Serve Somebody' playing on repeat in my head. An aside – keep the song close. Best way to de-stress and de-compress after any meeting or occasion when you gotta be nice and agree with whatever crap the guy who signs your check is sprouting on about.

In a Zen moment – I decided I did not like myself in this avatar so I better do something about it.

So I started to dream. What if.....?

What if – I could shoot the idiot who pipes music into my elevator? Thankfully I did not have to take out my Gun. I just had to ask nicely – on many occasions, sometimes with bulging eyes. The music was changed and today all my building guys step out of the elevator whistling tunelessly.

While on elevators – I sneakily inserted cosmetic diffusion gel into the Cheap LED lights. The use of make up to come down and buy fruit dramatically reduced.

These tiny victories encouraged me. I was off. Guidance comes at the right moments. A wise friend (as in, he reads books and does not do web chats) gifted me a wonderful book 'Inside the nudge Unit'. Life Altering. How a tiny course correction can lead to huge changes over time – and nobody notices. I wish I had read the book 50 years ago. As any sailor (or pilot) can tell you even a degree shift can over a distance land you in another country entirely?

Not Including China of course. Can't lose those guys wherever you look.

So I started sending 'What If.....' notes to my friends. Most were ignored. But some responded with positive action. This lucky guy who has a huge garden was encouraged to paint all his garden light reflectors Black and add a tin snoot, so we can't see the source of the light – only the glow on his frees. The Lighting levels are dimmer – but we see more of his natural garden as there are No bright source lights to distract us. Took us 30 years to figure this out.

Another guy who heads one of the largest lighting companies in the world (No Name dropping) was complaining that no matter where he placed his web cast light – His face looked sharp and drawn. I had a roll of matt scotch tape on my desk. I pointed my camera to the roll and in a minute he was digging into his desk – some fuzzy pictures and he was back in soft focus and happy. Very sheepishly – I am promised a steak dinner next time. When I can travel to claim my reward I have no clue – but the promise is encouraging.

Encouraged by my giant strides in home lighting I turned to home automation and quickly realised the value of Steve Jobs. As In (My Opinion) most people regret Home automation (or get bored with it) as the interface system sucks. Some guy had the wise idea that assigning the control of home lighting to your phone. It's a great way to save costs on switches.

Unfortunately Steve Jobs (or someone with his aesthetic sensibilities) has not had a crack at designing home interface controllers. So every time this guy got up at night to go to the loo – he had to enter security codes to get into his phone. Wear his glasses to find the app, scroll to the bathroom light section and have a mini light show as he blinked thru his shaving light, shower light, vanity light and finally find the pot light.

He cursed his architect out the next day – who immediately recommended he install a sensor. So now every time his dog comes within 12 feet of his loo – the bathroom light blinks on. True, he does not have to switch the light on when he enters the loo – but his pot is outside the range of his sensor – so God forbid he takes longer than Five minutes on the pot – he is plunged into darkness. Now I know why my Friends Tag Line 'From Vari Light to Toilet Light'. Bless your foresight baba.

So Now I am deep into designing a simple home automation controller that does not need miles of cabling.

Designing Lighting Desks has been an unresolved dream. Got into countless discussing with Board designers who glare at me.

Exasperated Q to Me: Why don't you just spend the money and buy a bigger desk?

Smartass Answer from me: Cause it won't fit in to the boot of my car. If I

spend my money on a bigger desk, I won't have any money left for a bigger car.

My pet peeve about Lighting Desks is the desperate need to remember the correct sequence of punching buttons with strange names to do the simplest things.

.....That's what I'm thinking on these days. In the next issue I promise you some provocative challenges to our Lighting Board Designers. Until Then. Keep your creativity alive on whatever project you can get your hands on. You'll need to be buzzing when we get back to work.....

THINK

AV-ICN^x e-magazine

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STUDIO SHOWCASE

Recording & Mixing studios are behind the success of any great record and in a country like India where music is an important part of everyday life musicians have a host of options they can choose from. The music scene evolving in recent years, has given rise to new recording studios across India.

Here is a showcase of some studios designed by the best in the business equipped with the best in technology.



Acoustriks

Riversound & Backwaters
Mumbai

INVENTORY

RIVERSOUND:

System Specs:

Processor - 3.5 GHz 6-Core Intel Xeon E5
RAM - 16GB 1866 MHz DDR3
Operating System - macOS Mojave

Pro Tools Version - Ultimate 2020.3.0
Sound Card - Avid HD Native

Plugins:

Avid Complete Plugin Bundle, Slate Digital Mix Rack, Slate Digital Virtual Compressors, Soundtoys All Plugins Bundle, Plugin Alliance Mixing and Mastering Bundle, Fab Filter Pro Bundle, Waves Bundle.

Mixer - Yamaha DM1000
Monitors - Genelec 1237A-SAM GLM Kit with GLM 3.2.0 Installed

Pre Amps -

- Avalon Vt 737sp Pair (Single Channel)
- Manley Slam Stereo Limiter & Micpreamp (Dual Channel)
- SL XRACK X-LOGIC (Dual Channel)

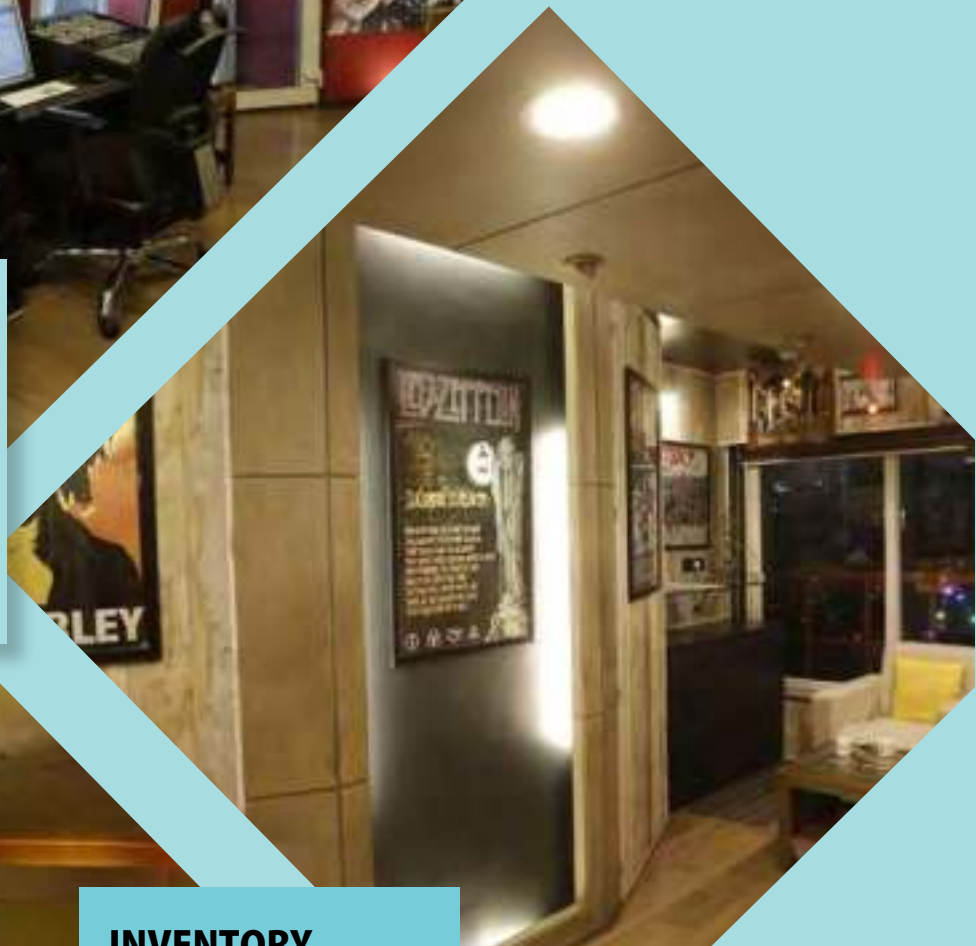


Microphones -

- Brauner Valvet
- SE Electronics Gemini 2
- Neumann KM 184 Pair
- Shure SM58 Beta
- Shure SM57 Beta

Headphones:

- AKG M20X
- HD 280 Pro



INVENTORY

BACKWATERS:

System Specs:

Processor - 3.6 Ghz Intel Core i9
RAM - 32GB 3200 MHz DDR4
Operating System - macOS Mojave Version 10.14.5

Pro Tools Version - Ultimate 2020.3.0
Sound Card - Avid HDX

Plugins:

Avid Complete Plugin Bundle, Slate Digital Mix Rack, Slate Digital Virtual Compressors, Soundtoys All Plugins Bundle, Plugin Alliance Mixing and Mastering Bundle, Fab Filter Pro Bundle, Waves Bundle.

Mixer - Yamaha DM 1000
Monitors - Genelec 8250 A

Pre Amps -

- Manley VoxBox Pair (Single Channel)
- Thermionic Culture The Early-bird 2.2 (Dual Channel)

Microphones -

- AKG C414 XL II Gold Stereo pair
- Brauner VM1
- Shure SM 58
- Shure SM57 Beta

Headphones:

- HD 280 Pro
- AKG M20X



Annapurna Studios

Hyderabad

INVENTORY

Dolby Atmos Premier Equipment List – SLS Items

- Dolby SLS Cinema System 200 Full Range Bi-Amped Screen Channel Cinema Loudspeaker
- Dolby SLS CS218XL Dual 18" Cinema Sub-Woofer 1200W/102dB
- Dolby SLS CS115XL Single 15" Cinema Sub-Woofer 500W/98dB
- Dolby SLS MA460C 12" Spherical Coaxial full-range ceiling, surround speaker
- Dolby SLS CS1290S Single 12" LF, 5" Ribbon two-way passive side surround speaker
- Dolby SLS CS1290C Single 12" LF 5" Ribbon two-way passive Ceiling Surround Speaker
- Dolby SLS CS890C Single 8" LF 5" Ribbon two-way passive Ceiling Surround Speaker
- Dolby SLS Speaker Brackets
- QSC DCA 3422-230
- QSC DCA 2422-230
- QSC DPA 4.5-IN
- QSC DPA 4.3-IN
- QSC DPA 4.2-IN
- 42 U Rack
- 42 U Wiring
- DSS 36

- ATMOS Commissioning
- Dolby CP750Z
- DSP Crossover
- Barco 2k12-C or Christie CP 2000ZX 2k Projector
- Dolby IMS3000 Playback for SMPTE and INTEROP digital cinema packages
- DAC 3202
- Casio XJ-V110W LED Projector

Main Atmos Pro Tools HDX3 System

- S6 M40 Custom Configuration
- S6 M40 Master Touch Module with 12.1" multi-touch TFT screen
- S6 Automation Module
- S6 Fader Modules
- S6 Process Modules
- S6 Knob Modules
- S6 Display Modules with 12.1 Hi-Resolution TFT displays
- S6 Mater Joystick Module
- S6 Master Post Module
- Network Switch Large

Pro Tools HDX and HD Native Systems and Accessories

- Pro Tools HDX Core with Pro Tools | Ultimate Perpetual License
- Pro Tools HDX Core
- Avid HD MADI
- Avid HD I/O 8x8x8
- Sync HD IO



- Digidrid DLS: Pro Tools to Sound-Grid Interface
- NETGEAR GS108 V4-Port Switch
- Mini-Digilink (M) to Mini-Digilink (M) 12ft.
- Adapter: Mini-Digilink (F) to Digilink (M)
- RME M-32 DA – 32 Channel
- Rosendahl Nanosyncs HD
- Pro Tools HD Native TB with Pro Tools | Ultimate Perpetual License

Speakers for Pre-Mix Room

- SYS50 – Dolby SLS Cinema System 50 full-range passive screen channel cinema loudspeaker

- Dolby SLS CS118XL Single 18" Cinema Sub-woofer
- Dolby SLS CS890S Single 8" LF 5" Ribbon two-way passive Side Surround Speaker
- QSC DCA-2422
- QSC DCA-1644
- 32U Equipment Rack
- Dolby SLS Brackets for Surround Speakers
- Dolby CP 750Z
- DSS36 Speaker Management System/Digital Crossover
- ATMOS Commissioning



Pre-Mix 7.1.2 With Pro Tools HDX System

- Pro Tools HDX Core with Pro Tools | Ultimate Perpetual License
- HD I/O 16x16 Analog
- Mini-Digilink (M) to Mini-Digilink (M) 12ft.
- Adapter: Mini-Digilink (F) to Digilink (M)
- Pro Tools | S3 Control Surface Studio
- iPad – Touch Pad
- NETGEAR GS108 V4 8-Port Switch
- Waves Mercury Soundgrid Bundle
- Atmos Production Toolkit
- NHUDP + NHUX9 - Nugen Halo

- Upmix with 3D Immersive extension and Halo Downmix
- Cargocult Spanner
- FabFilter Mixing Bundle
- Audio Ease Altiverb 7 XL
- Lexicon PCM Total Bundle
- Audio Ease Indoor
- Antares Autotune 8
- iZotope RX 6 Advanced
- Ozone 8 Advanced
- BenQ 24" Full HD Color Monitor
- Promise Pegasus2 R4 8TB RAID Storage System
- Avid qualified Sonnet Echo Express IIID Thunderbolt to PCIe 3 slot expansion chassis
- Black Magic Intensity 4K PCIe

STUDIO SHOWCASE

Island City Studios

The Press, The Bay & Madfingers
Mumbai

INVENTORY

The Press

- API 1608 Analogue Recording Console (16 channels 8 busses)
- Universal Audio 4-710d
- Focusrite ISA 428 MKII
- Audient ASP 880
- API 550A Eq
- API 560C Eq
- API 527 Compressor
- Elysia Xpressor 500
- Empirical Labs Distressor (Stereo Pair)
- 1176 FET Compressor
- Quested 212 Far Field Monitor System (Dual Sub)
- Focal Twin Be (LCR) for Near Field 5.1
- Focal 6 Be (Surround) for Near Field 5.1
- Behringer Powerplay Personal Headphone Monitoring System
- Orion 32 HD Converters
- iMac Pro
- Avid Protools HDX
- Apple Logic Pro X

INVENTORY

The Bay

- API 3124V Preamp
- Drawmer 1969 Vacuum Tube Preamp & Compressor
- Avalon 737
- Universal Audio Apollo 8 (Quad)
- Genelec 8260A Mid Field Monitors
- Dynaudio LYD 7 Near Field
- Mackie Big Knob
- Orion 32
- Avid Protools Native
- Apple Logic Pro X

INVENTORY

Madfingers

- Mapex Armory Shell Pack Drum kit with 2 nos boom cymbals stands
- Assortment of Cymbals
- TC Electronics Bass Amp
- Vox AC 15 Guitar Amp
- Laney VC 30 Guitar Amp
- Presonus AR series 16channel mixer
- Mackie Thump PA Speakers
- Laney CX-100 monitor
- Laney AH-200 Keyboard Amp

STUDIO SHOWCASE

Lambodara Studios

Mumbai

INVENTORY

- Main monitoring: Quested Q412D
- Subwoofers: Quested QSB118
- Near field: Barefoot MicroMain 26
- Mixing console: SSL AWS 948
- Software: AVID ProTools & Logic Pro X
- Pre-amp: Neve 4081, Lexicon PCM & Chandler Limited TG12411
- Interface: Universal Audio Apollo X16 & Universal Audio Teletronix LA-2A
- Equaliser: Manley Massive Passive
- Compressors: Universal Audio UAD 1176, Dangerous Music & API 2500
- Microphones: Neumann U87, Brawner MV1 & AKG C12VR
- Cabling: Sommer Cable



Stained Class Productions

Bangalore



INVENTORY

Microphone Locker:

- Austrian Audio OC818 x2nos.
- AKG C414 x2nos.
- Aston Stealth x1no.
- Aston Starlight Stereo Matched Pair x1set.
- Beyerdynamic M 88 TG x2nos.
- Beyerdynamic TG D71c x1no.
- Beyerdynamic TG 150d x1no.
- EIKON DM800 x3nos.
- RØDE NT1A x2nos.
- Sennheiser e840 x1no.
- Sennheiser e835s x1no.
- Sennheiser e602 mkII x2no.
- Sennheiser e604 x4nos.
- Sennheiser e614 x2nos.
- Sennheiser e609 x2nos.
- Shure SM57 x2nos.
- Sontronics SOLO x3nos.
- Telefunken TF39 x1no.
- Telefunken M80-Black x1no.
- Telefunken M80-SH x1no.
- Telefunken M81-SH x1no.

Guitar Amplifier:

- Blankenship Amplification 50W Head
- 2x12 Blankenship Amplification Cab

Drum Kit:

- MAPEX Black Panther Velvetone 5-Piece
- Kick - 22"x18"
 - Rack Toms - 10"x8" & 12"x9"
 - Floor Toms - 14"x14" & 16"x16"
- MAPEX Black Panther Phat Bob Snare Drum - 14x7" (12mm Maple shell)
- Cymbals: Zildjian K Custom
- 14" Hi-Hats
 - 16" & 18" Crash
 - 20" Ride



Outboard Gear:

- Analog Recording & Mixing Console: (88In/48Out)
- Trident 88-32
- Interface: (40In/48Out)
- MOTU 16A x2nos.
 - MOTU MONITOR 8 x1no.
- Backup Interface + Mic Pre: (24In/14Out)
- MOTU 896mk3 x1no.
 - MOTU 8PRE x1no.
 - MOTU TRACK16 x1no.
- Microphone Pre Amplifiers:
- Warm Audio WA273-EQ x1no.
 - Warm Audio WA-412 x1no.
 - Warm Audio TB12 x1no.
- Dynamic Signal Processors:
- Warm Audio WA-2A x2nos.

Monitor Speaker:

- Near-Field (Stereo Setup):
- ADAM A5X x1 pair
 - ADAM Sub8 x1no.
- Digital Realm:
- DAWs:
- REAPER 6
 - Logic Pro X
- * DSP Accelerators:
- Universal Audio UAD-2 Satellite (TB2-Quad Core) x1
- * Control Surface:
- PreSonus FADERPORT (2018)
 - Touch OSC (iPad)
- * MIDI Keyboards:
- Novation IMPULSE 61

STUDIO SHOWCASE

Studio H

Chennai

INVENTORY

Studio A

- Quested Q412 speakers + QSB118 subwoofers + V3110s surrounds in a 7.1 (4 ways) system
- ATC 45 Pro mid field stereo system
- Euphonix Fusion 5 desk with 32 faders
- Zaor studio furniture
- SSL XLogic Superanalogue Recording Channel
- Millennia HV-3R eight-channel mic preamp
- Drawmer 1960
- Manley Voxbox x 2
- Warm Audio WA76 limiter x 2
- Manley stereo Variable MU limiter-compressor
- SSL G series mixbus compressor
- Distressor compressors x 2
- DBX 160A compressors x 4
- Lunch box API 500V

- Manley Massive Passive EQ
- Chandler Limited EMI TG12345 Curve Bender
- Avalon Vacuum Tube Vt 737sp
- TC electronics M3000 - Studio Reverb Processor
- Lexicon PCM96 Surround processor
- TC Electronics D-Two Digital Processor
- TC Helicon Voice works
- Aphex Compellor - Aural Exciter
- SPL EQ Magix
- TC Electronic System 6000



Studio B

- Quested Q212 speakers + QSB118 subwoofers in a stereo system
- ATC 20 Pro monitors in a 10.1 Auro 3D setup
- Avid S3 and Dock systems
- Zaor studio furniture

Central shared machine room with:

- Digidesign full Pro TOOLS HD X with HD Euphonix MA 703 MADI interfaces
- Rosendahl clock
- Prism Sound ADA-8XR converters
- Dolby CP750
- Ashly ne4400 DSP
- Quested amplification and DSP for all the rooms



RELOOP INTRODUCES BUDDY - TWO-CHANNEL COMPACT DJ CONTROLLER

Reloop has introduced the **Reloop BUDDY** - a compact 2-deck DJ controller for iOS, iPadOS, Android, Mac, and PC, which has been designed and developed in close partnership with Algoriddim.

The Reloop Buddy offers DJs of any level all the tools they need to perform creatively and efficiently at a high level. Thanks to its powerful features and the brand new Neural Mix controls, the BUDDY is space-saving without compromising any functionality.

Whether a beginner or an experienced DJ, the Reloop Buddy offers full control over mixes thanks to powerful features including the intuitive pad section consisting of 8 performance modes (hot cue, auto loop, touch FX, sampler,

slicer, bounce loop, Neural Mix, looper), dedicated loop controls, a flexible effect section with FX paddles (hold & toggle), and responsive jog wheels for precise mixing and scratching.

The Reloop Buddy includes extensive Neural Mix controls (pad / EQ mode) to isolate beats, instruments, and vocals of any song in real-time for even more creative mixing possibilities. It offers large FX Paddles with HOLD and ON positions for instant effect mixing.

In terms of outputs, a full headphones cue section and ¼ inch jack are



conveniently located at the side of the unit, together with an RCA out port for direct connection to active speakers and sound systems.

Thanks to its dedicated integration with Algoriddim's djay software, and built-in USB audio interface, the Reloop Buddy enables instant plug and play compatibility with smartphones, tablets, and computers.

The Reloop Buddy is built from quality, durable materials, and its space-saving, highly-portable design makes it perfect for home setup, mobile use, and even on-the-go or while traveling. Furthermore, its built-in device slot can hold smartphones and tablets up to 12.9", which keeps the overall footprint of the unit to a minimum.

ROLAND UNVEILS VERSELAB MV-1 SONG PRODUCTION STUDIO

Roland has introduced an innovative new composition tool for modern music creators. Offering an all-in-one design for go-everywhere production, **VERSELAB** allows composers to create professional multi-track songs with vocal recording, 16 velocity-sensitive pads, and Roland's famous 16-step TR-REC rhythm sequencer. VERSELAB's onboard ZEN-Core sound engine provides a vast library of premium instrument and rhythm sounds to choose from, while future inte-

gration with Roland's Zenbeats music creation app will allow users to enhance their workflow with a computer or mobile device.

VERSELAB gives vocalists and beatmakers everything they need to develop songs anywhere. With templates, pattern generators, and a guided workflow that smoothly moves through the process of making tracks, VERSELAB eliminates option paralysis and lets creators focus on what matters most—finishing their music.

Users can easily record vocals via the

built-in mic or an external XLR mic and add an array of contemporary effects, from auto-pitch to harmonizers. The powerful ZEN-Core engine delivers a history of classic Roland instruments and a wide range of curated sounds for quick-fire inspiration. The TR-REC sequencer and 4x4 pads provide a direct, hands-on interface that's perfect for building drum tracks, bass lines, and melodic parts as fast as the ideas come.

VERSELAB also includes an arsenal of pro mixing and mastering effects to



create polished tracks ready for distribution. Plug-and-play integration with Roland's popular Zenbeats app will be coming soon, providing even more production options by interfacing with a computer, tablet, or smartphone.

MACKIE ANNOUNCES SRT SERIES PROFESSIONAL POWERED LOUDSPEAKERS

Mackie has announced its new line of **SRT Professional Powered Loudspeakers**. The new line was specifically crafted for working musicians and includes three 1600W loudspeakers: **SRT210** (10"), **SRT212** (12"), and **SRT215** (15"). The line also includes an 18-inch 1600W professional powered loudspeaker, the **SR18S**. All models in the new line boast complete wireless control via Mackie's SRT Connect App.

"We made this line for real-world working musicians and DJs that are ready for an upgrade in sound quality and power without breaking the bank," said **Matt Redmon**, Director of Product Marketing at Mackie. "We packed some of our best technology, tuning, and user-friendly features while keeping them at a price that is realistic for just about anyone."

Product Details

The SRT210 10" 1600W Professional Powered Loudspeaker features Advanced Impulse DSP (proprietary acoustic tuning), powerful amplifiers that deliver crystal clear sound with balanced distribution and up to 128 dB, and ultra-versatile SRT Mix Control built-

in four-channel mixer with full-color display. Users will enjoy easy setup, incredible sound, and unbeatable reliability plus total wireless control of up to two SRT series loudspeakers via the SRT Connect app available for iOS and Android.

The SRT212 12" 1600W Professional Powered Loudspeaker



SRT210 (10")

SRT210 (10")

SRT215 (15")

SR18S

features all standout items in SRT210, upping the sound pressure level to 132dB.

The SRT215 15" 1600W Professional Powered Loudspeaker features all standout items in SRT210, upping the sound pressure level to 133dB.

The SR18S 18" 1600W Professional Powered Subwoofer is designed to deliver incredible sound and unbeatable reliability. This product adds powerful low end bass frequency and grants a massive increase in efficiency and output for musicians' whole systems, making it a perfect complement to existing setups. It's also easy to dial in with an adjustable crossover, versatile I/O, and unique voicing modes. This subwoofer features 133dB output and an impressive frequency response range from 33Hz-200Hz.

PIONEER DJ ADDS TO ITS RANGE OF MIXERS AND CONTROLLERS

Pioneer DJ has announced new additions to its range of DJ mixers and controllers with brand new features.

DJM-V10-LF

The **DJM-V10-LF** unit features new, longer channel faders with optimized curves and a new custom-designed curve preset to enable you to perform smooth and accurate mixes.

Some DJs never use a crossfader, preferring

new 60 mm shaft slide faders on the DJM-V10-LF to extend further down the top plate than the 45 mm faders on the original mixer, offering a longer range of movement so DJs can control the volume of the audio source from each channel precisely. What's more, a brand-new fader curve setting has been added to the unit and the faders have been appropriately weighted to enhance the potential offered by their elongated range.

All the other features and specifications of the DJM-V10-LF are the same as the DJM-V10. The



DJM-V10-LF

instead to mix with the channel faders because it gives them more control – whether they want to perform smooth blends with tiny adjustments to the volume of each track, or quickly drop sounds into the mix as if playing a musical instrument. Removing the crossfader from the DJM-V10 has enabled the

6-channel unit produces warm audio with energy and presence, and it's loaded with unique features.

The DJM-V10-LF is a Hardware Unlock device for rekordbox, enabling free use of DJ performance functions when the software is updated to the latest version.

The DJM-V10-LF is Serato DVS-ready

(Serato DJ Club Kit license required, available separately) and TRAKTOR DVS-ready (requires TRAKTOR PRO 3, available separately).

DDJ-FLX6

With a host of brand-new features, the **DDJ-FLX6** 4-channel unit makes it easy to hype up the audience, mix songs from totally different genres, and spice up the sets with pro-sounding scratch effects. The controller is a Hardware Unlock device for rekordbox and it unlocks the DJ performance functions in Serato DJ Pro, so DJs can choose which software application they want to run for free on their laptop.

The DDJ-FLX6 gives DJs the creative

users can create a dramatic build in the music and make it rise to a crescendo.

The DDJ-FLX6 is made to help DJs perform energetically and intuitively. The full-size jog wheels include a track position display so users can manipulate the music instinctively. With the Sample Scratch function, newly introduced to rekordbox, DJs can take sounds they've assigned to the sampler and load them onto the decks.

There are eight Merge FX pattern presets to choose from. Choose from 41 types of effects within the four categories that make up one



DDJ-FLX6

freedom to play the tracks they want to in any order without worrying about mixing different keys and BPM ranges. With the DDJ-FLX6, DJs can effortlessly change from hip-hop to house, from rock to EDM, or between any other styles they want to play thanks to the new Merge FX feature. With simple control of a single knob,

Merge FX (Build FX, Build Sample, Release FX, and Drop Sample) and combine them to create more than 9,000 different patterns.

It's the first Pioneer DJ unit released in a new dark gray matte finish, and its jog wheels have a unique design to complement the aesthetics.

ALGORIDDIM INTRODUCES WORLD'S FIRST AI-POWERED HAND TRACKING SYSTEM FOR DJS

Algoriddim has announced a major update to **djay Pro AI** on iPad, introducing first-of-its-kind gesture-based control of the app, allowing users to mix and manipulate music on a mobile device hands-free.

Users can choose from a set of intuitive hand gestures to scratch, create loops in perfect sync with the beat, and apply filters and effects simultaneously; or simply lean back and perform a clap gesture which triggers an automatic transition from one song to the next. Leveraging the power of Apple's new A14 Bionic chip on iPad, these hand gestures are



intelligently detected in three dimensional space and mapped to advanced DJ performance techniques in real time, with maximal accuracy and instantaneous reaction time.

"The ability to mix music using djay

Pro AI's intelligent, built-in hand tracking technology represents a fundamental change in how DJs are able to orchestrate mixes and adds a new visual dimension to live DJ sets," said **Karim Morsy**, CEO of Algoriddim. "Gesture

Control is a new paradigm with implications beyond DJing and music creation. It is a major step forward with how people interact with mobile technology."

Gesture Control is available as a free update for existing users of djay Pro AI on iPad. The update also introduces a host of new features including enhanced MIDI control and seamless access to users' music

files on Dropbox or Google Drive. Moreover, users can now show a visualizer alongside the virtual turntables and choose between live photos, streamed music videos from TIDAL, or a favorite video from their device's camera roll.

Promotion Index

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 GOREGAON (EAST), MUMBAI, INDIA

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with an advertising campaign in the
PALM technology Newsletters

Frequency: **Bi-Weekly** (every alternate
 Wednesday)

Circulation: **60,000+**

Target Audience:

Live Events | Sound & Light Rentals | Sound,
 Recording & Lighting Engineers
 | Electroacoustic Consultants | Systems
 Integrators | AV consultants | Manufacturers,
 distributors and dealers | Hospitality | House
 of Worship

View our previous newsletters on

http://palmtechnology.in/Newsletter_Archive.aspx

Book your space now! Contact

srai@palmexpo.in for more information
 on available positions and the most
 cost-effective rates

PALM technology

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

STUDIO ISSUE

Main Product Focus
Studio Monitors

Other Product Focus
**Mixing console,
 Studio Headphones,
 Studio Microphones**

Read the entire dope
 in the upcoming
March-April 2021

For Advertising Contact:
Smita Rai
 Advertising Manager
 M: +91 982 094 3398
 E: srai@palmexpo.in

For Editorial Contact:
Meghna Porwal
 Content Manager
 M: +91 98204 03040
 E: mporwal@palmexpo.in

**Create
 Record
 Play**



TO
PLACE
YOUR AD HERE

Contact:
Priyanka Shukla
Assistant Manager (Ad Sales)
E: pshukla@palmexpo.in
M: +91 810 850 4929



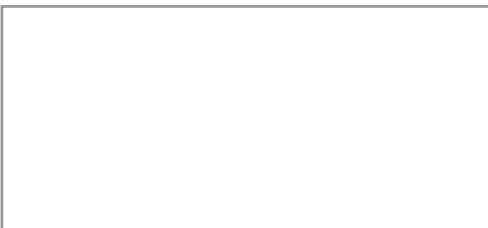
HEINRICH
Technology Beyond Imagination.

Price: 85K
(New Equipment)

Model: H15 (High End 15" Professional
Loudspeaker)
HEINRICH LIMITED
Email: Info@heinrichlimited.com
Website: www.heinrichlimited.com

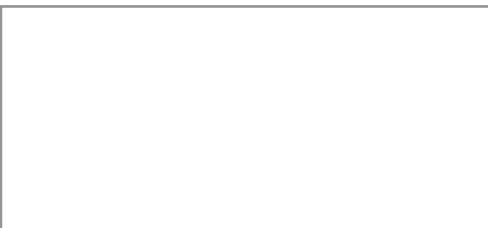


marantz®
Model: AV8805 AV Processor
MZ Audio Distribution India
Email: al@mzaudiodistribution.co.in
Website: www.mzaudiodistribution.co.in



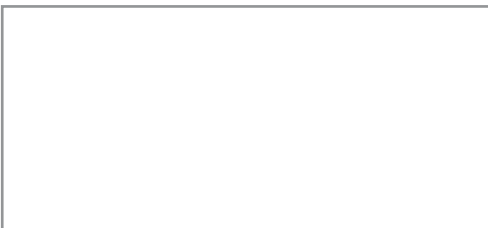
Equipment / Model name...
Rate...

For Sale used equipments...



Equipment / Model name...
Rate...

For Sale used equipments...



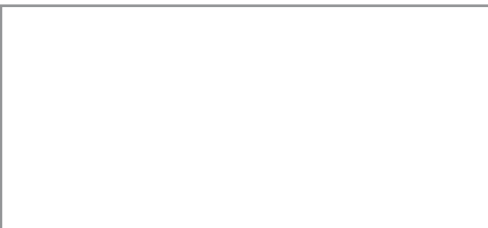
Equipment / Model name...
Rate...

Used / New Equipments for sale



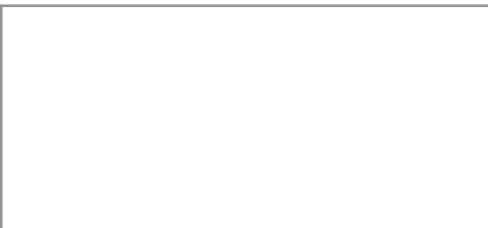
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For Sale used equipments...



Equipment / Model name...
Rate...

For Sale used equipments...



Equipment / Model name...
Rate...

For Sale used equipments...



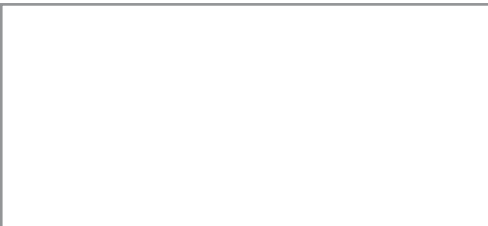
Equipment / Model name...
Rate...

For Sale used equipments...



Equipment / Model name...
Rate...

For Sale used equipments...



Equipment / Model name...
Rate...

For Sale used equipments...

AV-ICN EXPO 2021

AV INTEGRATION COMMUNICATION NETWORKING EXPO

27-29.05.2021

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

SAVE THE DATE

**Information Systems
Integrated Systems
AV Networking Expo**

**EMERGING
AS A CATALYST**

**LARGEST CONVERGENCE OF
AV CONSULTANTS AND INTEGRATORS WITH
TRADE AND PROJECTS**

WHAT'S ON DISPLAY

1	Cable & Connectors	2	Projection Systems
3	Conferencing Equipment & Technology	4	LED Display, Digital Signage, Interactive Displays, Interactive Whiteboards, Video Walls & Large Screen Displays
5	Information Communications Technology	6	Installation Speakers
7	Public Address (PA) & Paging	8	Signal Management & Processing
9	Sound Reinforcement Systems	10	Streaming and Media Storage and Distribution

For Full Exhibit Profile visit www.av-icnx.com

concurrent show

 **palmexpo** 2021
record ► play ► perform

in f t   

EVENT ORGANISED BY:
ABEC 



WE ARE BACK!

The Covid pandemic impacted businesses all over the world. The effect has directly prevailed on each of us. However, the vaccine has given new hope to everyone to revive their lives to normalcy. We will have to live with this new normal.

While businesses all over are indeed reviving, **PALM AV-ICN** is fully geared to host its annual trade show in May 2021. **The PALM AV-ICN Expo 2021** will act as a catalyst from 27th - 29th May 2021 at the **Bombay Exhibition Centre (NESCO)**. AudioVisual, Pro Audio and Lighting industry and trade will gain tremendous momentum.

SECURE YOUR LOCATION AT THE EXPO.

Call us and book your booth today

CONTACT US:

- ✉ exhibit@palmexpo.in
- ✉ exhibit@av-icnx.com
- 🌐 www.palmexpo.in/book_a_booth.aspx

THE LARGEST ANNUAL GATHERING OF PRO AUDIO, LIGHTING AND AV INDUSTRY IS BACK

27-29.05.2021
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