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Karriere und Ausbildung auf der Prolight + Sound 2024

Als Leitmesse der Event-Technology-Industrie setzt die Prolight + Sound einen besonderen Fokus auf die Förderung junger Talente. Mit einem der europaweit größten Jobmärkte des Sektors bietet sie zudem Fachkräften auf Stellensuche eine optimale Plattform.

Im Zentrum des Karriere- und Ausbildungsangebots der Prolight + Sound steht der Future Hub in Halle 11.0. Untergliedert in den Campus, das Career Center, die Start-up Area und die Networking Lounge ist das Areal die ideale Anlaufstelle für die Profis von heute und morgen.

Campus: Aus- und Weiterbildungsvielfalt

Auf dem Campus informieren renommierte Bildungseinrichtungen über Aus- und Weiterbildungsmöglichkeiten in der Veranstaltungsbranche und beraten den Nachwuchs bei der Karriereplanung. Ob spezialisierter Event-Studiengang, Fortbildung oder Schulung - auf dem Campus-Areal gibt es alle wichtigen Informationen in geballter Form.

Career Center: Fachkräftemangel ade

Vom Berufseinsteiger bis zum erfahrenen Profi: Wer auf Jobsuche ist oder sich für Karrieremöglichkeiten in der Event-Industrie interessiert, ist im Career Center genau richtig. Nachwuchs- und Fachkräfte können hier direkt vor Ort mit namhaften Unternehmen in Kontakt treten, die offene Positionen zu besetzen haben.

Start-up Area: Innovative Newcomer der Branche

Wer Lust auf frische Impulse und kreative Ansätze hat, wird in der Start-up Area fündig: Hier präsentieren Unternehmen aus dem Veranstaltungssektor junge, aufstrebende Marken, die seit maximal fünf Jahren am Markt sind. Im Fokus stehen innovative Produkte und Konzepte, die spannende Einblicke in die Zukunft der Eventbranche geben.

Networking Lounge: Relaxt connecten

Vom Messetrubel entspannen und dabei noch etwas netzwerken? Mit ihrem Urban Garden-Look und komfortablen Sitzgelegenheiten lädt die Networking Lounge zum Relaxen, Connecten und Austauschen von Ideen in gemütlicher Atmosphäre ein. Dort werden essenzielle Zukunftsthemen der Branche diskutiert und Impulse für eine nachhaltigere Veranstaltungsindustrie gesetzt.

Future Talents Day (22. März 2024): Der Nachwuchs im Fokus

Das Format richtet sich speziell an Schüler, Auszubildende und Studenten und soll diese aktiv bei ihrem Einstieg ins Berufsleben unterstützen. Mit exklusiven Führungen und interaktiven Workshops gibt es jungen Talenten einen spannenden Einblick in die unterschiedlichen Berufsfelder der Branche.

Weitere Informationen unter: www.prolight-sound.com



MIRA WÖLFEL Director Prolight + Sound mira woelfel@messefrankfurt.com

Inspiration, innovation and networking

In a world where technology and sustainability go hand in hand, these factors are the key to the successful future of our industry. But not only that: They also form the core of Prolight + Sound. Born out of pure passion for music, it embodies a unique blend of glamour, entertainment and business.

t is our special concern to create a place of community with Prolight + Sound, a catalyst for new partnerships and innovative ideas. From March 19 to 22, the exhibition grounds will offer a series of attractive highlights: From new areas like the Image Creation Hub to an expanded Pro Audio offering, to a high-profile lecture program with top speakers.

Look forward to new colleges, a variety of workshops and seminars as well as an expanded conference program. The Future Hub combines job market, further education opportunities and networking possibilities in a unique area. With the Future Talents Day (March 22, 2024), we aim to give young talents insights into the professional fields of the event industry - and inspire them for the di-

Editorial

versity of our industry.

The commitment of Messe Frankfurt to a greener and more energy-efficient event industry also plays a central role: Areas powered by green electricity, Green Sessions, a Future Hub redesigned with resource-saving materials, and Green Tours showcasing sustainable event technology provide inspiration and deeper insights.

One of my personal highlights are our new Community Nights in exclusive Frankfurt locations, to which I warmly invite you. I look forward to moments of exchange, reflection - and to celebrating successful collaboration and fresh impulses together for the future of the events industry.

Warm regards,

Mira Wölfel

PS Upon the release of this first international edition, Prolight + Sound 2024 has already successfully concluded, which is why the announcements of the lectures, panels and keynotes (from page 25 onwards) have not been translated into English. We are confident that this time gap will be resolved in future editions. - Stephan Kwiecinski



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who is who



René Tumler

René Tumler has been the new managing director of the European Association of Event Centers (EVVC) since the beginning of the year. The association was able to recruit Tumler, who hails from South Tyrol, as a competent, dynamic professional in association and politics for the position of managing director. Tumler studied business psychology and political science and is eagerly anticipating his new role.

Previously, Tumler was responsible for the strategic corporate development of the Association of Southwest German Housing Industry (VdW) and had worked as an employee of a member of the South Tyrolean regional government. This background provided him with both association and political experience. Tumler succeeds Sabina Linke at the EVVC, who left the association in July 2023 by mutual agreement. Since then, the position of managing director had been vacant.

In addition to member support and internal management of the association, political advocacy is among the core responsibilities of the new managing director. This includes making the event industry, represented by over 600 member venues, more visible in society, economy, and politics. Particularly in the current times of multiple crises and economic instability, the public perception of the event industry as one of the country's most important economic sectors is more crucial than ever. In his role, René Tumler is responsible for the current seven-member team of the association's headquarters.



Alle Infos auf www.engst-kabel.de

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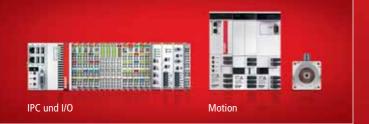
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The 62nd Stage Technical Conference (BTT) will take place in Bochum in 2024. On June 19 and 20, the theater technology industry will gather at the Jahrhunderthalle. The patroness is Ina Brandes (pictured), Minister for Culture and Science of the state of North Rhine-Westphalia. The trade fair for theater and event technology will once again bring together renowned technology manufacturers, initiatives, and associations with professionals from culture and media in 2024. The most important companies in the fields of stage and control technology, lighting, sound, equipment, and decoration will present their latest products and services. Presentations will take place in a special setting: the popular room constructions "Anatomical Theater" and "Soundlab" are well suited for interactive 360° visualizations or audio demonstrations. In addition to the traditional trade fair activities, there will be a accompanying lecture program with discussions and input on specialist topics as well as round tables for interdisciplinary exchange

of experiences. The extensive program includes events such as the presentation of the Weltenbauer Award, the DTHG Night, company visits, and local tours. The Stage Technical Conference has been organized by the DTHG for 117 years.

www.btt2024.de

The Audiomesse High End takes place from May 9 to 12, 2024, at the MOC Event Center Messe München for the next round. Over 200 exhibitors have registered in the first weeks after the invitations were sent out to present their innovations at the largest event of its kind. For many years, the HIGH END has been regarded as an important marketplace for the audio industry, attracting an international audience of professionals. People from over 90 countries come to Munich to learn about industry trends, exchange ideas, network, and do business. For industry experts, audiophile enthusiasts, and music lovers, the four-day event in May 2024 promises to be a highlight once again. It features a balanced mix of B2B trade fair and experiential event: the first two days are reserved for trade visitors, while the doors open to the general public over the weekend. Last vear marked the 40th edition of High End, which saw the largest success since its inception in 1982.

In the four-country corner of Austria, Switzerland, Liechtenstein, and Germany, the Dornbirn Trade Fair invites you from June 24 to 25, 2024, as the host of the 2nd DACH Trade Fair Conference organized by FAMA, the trade fair association in cooperation with Messen Austria and Expo-Event Switzerland. This time, the agenda includes insights into digital marketing, team resilience, as well as inspiration and innovation as a tandem. The organizers promise both inspiring insights and practical solutions for the industry.

■ This year's Theater Fair INTHE-GA and the affiliated Congress will take place from June 24 to 26 as usual in the City Hall in Bielefeld. INTHEGA is a combination of theater market and conference. The theater market (June 24/25, 2024) is the leading trade fair for the touring industry, with around 180 exhibitors from the fields of drama, musical theater, crossover, children's and youth theater, cabaret, shows, and concerts presenting their touring offers for the 2025/26 season. Exhibitors from the fields of ticketing, event software, training, as well as stage and event technology complete the offer. The conference (June 26, 2024) addresses current topics in the touring industry through lectures, discussions, and workshops, providing time and space for intense professional dialogue and collegial exchange. Participation in the conference is open to all interested parties - including providers and quests.

www.inthega.de

After a successful edition in 2023, the FMX - Film & Media Exchange - returns from April 23 to 26, 2024, for four days of in-person events at the House of Commerce in Stuttgart. The 28th edition of the conference offers a high-quality program focusing on animation, effects, interactive, and immersive media. Under the motto "Connecting Ideas", the conference addresses the question: Is the media and entertainment industry coming closer together? In recent times, there has been a growing number of digital platforms, open standards, and other initiatives for open exchange aiming to make cooperation between people easier, more efficient, and more creative. FMX 2024 places special emphasis on connections and issues between people collaborating across platforms, workflows, and distances - both physical and subjective. The thematic range spans from the buzzword "interoperability" to the upheavals currently shaking up film and media production. www.fmx.de

■ The Schoeps Microforum will take place for the fourth time on May 23 and 24, 2024, in the historic Schloss Karlsruhe-Durlach. Over 200 participants from broadcasting, studios, development, education, and film sound are expected to attend the conference with accompanying exhibition. More than 20 high-profile speakers as well as selected companies from the ProAudio industry will be present to showcase their latest findings and products. "The focus will once again be on 3D audio, but there will also be other thematic focuses such as microphone technology and pop music in broadcasting", according to the organizer. A new addition this year is the evening event at the Jazzclub Karlsruhe on Thursday, May 23. https://mikroforum.schoeps.de

On April 24 and 25, 2024, Kern & Stelly will once again host the "Medialog" event. New products and highlights from more than 35 manufacturers are expected. Experts from the AV and UC industry will gather at Hall 45 in Mainz for direct dialogue and personal exchange. The Medialog also offers knowledgeable booth tours, high-quality catering, and an evening get-together on the first day of the event. For more information, visit www.kern-stelly.de.



Stimmt!

With the new campaign "Stimmt!" ("Agreed!" in German), the Forum for Event Management calls on the industry to participate and stand up for democratic values. The initiative focuses on attention-grabbing motifs.



Democracy is in crisis, facing threats from many sides: extremist and populist parties are on the rise across Europe, polarizing societies. Voter turnout is decreasing, as is the trust of parts of the population in state institutions or public media. "If we do not counteract all of this, we will lose power to shape in a globalized and more complex world. The social and liberal basis of the democratic form of government is no longer taken for granted today. We must work to preserve and strengthen it", the Forum's message says.

Their call is: "Agree for human rights. Agree for the rule of law. Agree for diversity and inclusion. Agree for the equality of all people. The next elections are coming, use your voice. It depends on it!" "Our campaign is for everyone who shares these values and wants to make a statement", says Robert Ninnemann, board member of FAMA. "It is a joint initiative of the event industry, which stands for democratic values and a society in its diversity and plurality. Everyone is invited to participate and encouraged to vote. We address companies and individuals in our industry and beyond. The more, the better."

At the center of the campaign is the eponymous website (www.agreed-for.com). Interested parties can download the motifs there and create their own individual designs with their own name and unique color worlds using the label generator. Then they simply share ,,their" key motif on the platform of their choice - for example, as a social media post or as a DIN-A1 poster for demonstrations or the office. Also possible is an AR advertising column, which can be digitally placed via smartphone in busy places in the city or in the company, photographed, and then shared with the hashtag #agreedfor.



The Forum for Event Management now represents a large part of the service chain of the event industry and its essential sectors. The newest member is the Association of Event Organizers (VDVO). This increases the number of members to seven. "We look forward to working together in the Forum for Event Management", says Björn Sänger, managing director of VDVO.



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Win-win situation for festivals and universities

In the dynamic world of the event industry, festival organizers are increasingly seeking innovative ways to elevate their events to the next level. A promising trend emerges through the growing collaboration between festivals and universities. Not only do they expand horizons, but they also revolutionize the industry.



The IST University of Management serves as an excellent example with its specialized programs and continuing education in event management. Moreover, it offers unique expertise in Germany: Prof. Dr. Matthias Johannes Bauer, along with his team of industry experts, conducts research and teaches on festival management. "As a university of applied sciences, we strive to connect academic knowledge with the practical aspects of the festival industry and provide concrete recommendations", summarizes the festival professor.

Festivals serve not only as platforms for entertainment but also as hotspots for creative ideas and innovations. Through partnerships with academic institutions like the IST University, festival organizers gain access to the latest research findings in event and cultural management. "Such collaboration opens up innovative perspectives for the planning and execution of events, especially on topics like sustainability, accessibility, and alternative financing options such as crowdfunding", says Prof. Dr. Bauer, who leads the Master's program in Communication Management.

Furthermore, festival organizers benefit from the early identification and promotion of emerging talents. Through close collaboration with universities like the IST, internships can be offered, and innovative talent development programs can be initiated. Community projects, experience days, and practical lectures create a direct connection between students and the festival industry. "The exchange allows festivals to integrate innovative ideas and fresh perspectives", Bauer adds.

Another highlight of the IST University is its offering of dual-degree programs at the bachelor's and master's levels. The combination of aca-

succesful cooperation (left to right): Levent Tomicki (Rage Against Racism Festival, Duisburg), Prof. Dr. Matthias Johannes Bauer

demic study and practical training allows students to gain valuable work experience. The integration of theory and practice not only prepares welltrained professionals but also fosters the development of a new generation of event managers. "The opportunity to spend extensive time in a company is particularly advantageous in season-dependent industries", explains Bauer. "With multimedia teaching methods such as virtual classrooms and online lectures, the distance learning program at IST offers a high degree of flexibility."

Collaborations between festivals and universities like the IST go beyond strategic partnerships; they serve as a bridge between education and practical application. Such cooperation promises to be an enriching experience for students and a sustainable development for the festival industry. "Organizers who engage in such partnerships are not only investing in the present but actively shaping the future of the event landscape", Bauer emphasizes. For more information on cooperation opportunities with the IST University, visit www.ist-hochschule.de/praxispartnerwerden/kommunikation-und-wirtschaft.

Visitor guidance of tomorrow

An interdisciplinary research project on effective crowd management at large events by the Jülich Research Center, DLR, Eventbande GmbH, and D.Live demonstrates analysis and optimization of visitor flows using scientific computer simulation.

The collaborative pilot research project CroMa-Pro focuses on simulating visitor flows at large event venues, such as the Merkur Spiel-Arena in Düsseldorf. The aim of this interdisciplinary research project is to sustainably improve visitor flows during large events. Additionally, it aims to create an optimized planning basis for traffic management and visitor guidance for arrival and departure processes at large events. The project will be applied directly at the UEFA Euro 2024 football spectacle. In advance, visitor flows on the so-called ,,last kilometer", the final kilometer from transportation options to the venue, are simulated.

CroMa-Pro builds upon a long history of research activities by the project partners in the field of event security and simulation. In collaboration, experts in mobility and security conceptualization from Eventbande GmbH and D.Live have joined forces. This expertise is complemented by scientists from the Jülich Research Center and the German Aerospace Center (DLR) in the area of traffic flow simulation. Through interdisciplinary collaboration among the project partners, exciting synergies emerge, yielding results that are both empirically grounded and practically tested. "Such an interdisciplinary project is a great opportunity to learn from each other in a practical context, to scrutinize and further develop established processes and measures", says Christian Löper, Project Manager of Eventbande and Consortium Coordinator of CroMa-Pro.

Based on the simulation, specific scenarios are observed and analyzed, such as bottlenecks in the routing to parking lots, at the venue, or individual entry points, depending on weather and traffic conditions. Individual packages of measures are coordinated with stakeholders of the host city of UEFA Euro 2024.

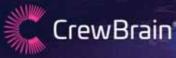
The goal of the project is to be able to use a tool for advising and improving the ability of event planning actors to act. Hauke Schmidt, Executive Director Safety Management, adds: "The project results obtained should be transferable to other stadiums and events. Thus, the project enables the recognition of dependencies between measures in the areas of mobility and security and to react early to interactions and unintended side effects."

To ensure coordinated interorganizational cooperation, simulated security-relevant scenarios and measures are evaluated in workshops among the participating project partners for the pre-planning of events, thereby enhancing the ability of users to act.

"The matches at UEFA Euro 2024 are a scientifically exciting case study. In the past, evacuation scenarios were primarily analyzed. Now,



there is a stronger focus on simulating movement patterns during arrival and coupling pedestrian dynamics with public transportation", explains Jette Schumann from the Jülich Research Center. "Through this comprehensive examination of traffic systems and pedestrian flows in simulation, we support more targeted analyses of potential bottlenecks, conflicts, or risk areas in the arrival and departure to large events", adds Ronald Nippold from the DLR.



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Global Future

The "Future of Festivals" (FOF) trade fair is becoming more international – the largest industry meeting for the festival sector opens up to collaborations with festivals and exhibitors from abroad for global cooperation.

The Future Of Festivals will open its doors for the first time from Thursday, November 28 to Friday, November 29, 2024. Over 7000 organizers, service providers, associations, decision-makers and apprentices from the festival scene are expected to attend.

Cooperation with Fest Forums in Santa Barbara

After a successful edition in 2023, FOF looks to the future. Following the participation of renowned speakers from abroad such as Steven Raspa (Burning Man), Kristine Barenholdt (Roskilde), and Sarah McKenzie (Mutek) in previous editions, this year it becomes even more international. FOF announces collaborations with additional festivals abroad and already confirms the first European exhibitors.

A significant step towards international cooperation: FOF has entered into a partnership with the prestigious American festival conference "Fest Forums" in Santa Barbara. In collaboration with the European festival association Yourope, a panel was organized as part of Fest Forums in February before the season, and then the second part of the panel took place at the Future of Festivals after the season in November.

This comprehensive cooperation opens up new horizons for the global exchange of ideas and innovations, enabling participants to benefit from international perspectives. Signe Lopdrup, CEO of the Roskilde





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Festival in Denmark, and Marta Pallarès, Press Chief of Primavera Sound in Spain, were also present. Both spoke for the first time in North America about the European festival industry. Topics included talent acquisition, sustainability, fan engagement, safety, production, as well as ticketing and sponsorship. A total of around 250 exhibitors attended the event.

New design for the Future of Festivals

FOF aims to constantly evolve not only in terms of content but also visually. Accordingly, there is an update in the corporate design of the

event, which now emphasizes this development with an appealing logo and fresh design. FOF remains in 2024 a representative platform for the entire festival and event industry.

The Future of Festivals originally emerged from a networking event of the festival industry and took place for the first time in November 2021 with a live audience as a trade fair and congress on-site at the Arena Berlin. The festival and event industry is among the six most important economic factors in Germany, and FOF is its representative platform, so to speak, as a beacon of the event industry.

www.futureoffestivals.com



New clarity in the regulatory framework

Thomas Bardeck, Chairman of DIN NA 149-00-04 AA, explains: Every form of event establishes and operates an electrical installation. According to DIN VDE 0100 (VDE 0100), the execution requires an installation company registered in the installer directory of a network operator.

This is not the practiced reality in the events industry or hardly feasible. Therefore, the experts of the DIN Standards Committee for Event Technology, Media, and Film (NVBF) NA 149-00-04 AA submitted an inquiry to the DKE - VDE Association for Electrical, Electronic & Information Technologies, asking whether the requirements of the DIN VDE 0100 series of standards also apply to temporarily installed electrical installations, as they occur in event technology. The response or announcement has now been issued verbatim:

Setting up, commissioning, and operating temporarily mobile electrical installations in event technology constitute safety-critical activities where hazards may arise. These installations are not to be regarded as permanently connected electrical installations within the scope of the standards of the DIN VDE 0100 series (VDE 0100) and must be executed by an "Electrical Specialist for Event Technology". Permanently connected electrical installations in event technology fall within the scope of DIN VDE 0100 (VDE 0100) and require execution by an installation company registered in the installer directory of a network operator. (See also: Event Technology – Electrical Qualification www.dguv.de/ media/fb-verwaltung/sachgebiete/buehnen_studios/elektro_fach.pdf)

Note: The IGVW Standard SQQ1 "Electrical Specialist for Event Technology" defines the scope of professional qualifications obtained through further training as an Electrical Specialist for Event Technology.

It represents a minimum level of qualification required for the professional designation "Electrical Specialist for Event Technology". Accordingly trained individuals are qualified only for the tasks and activities described in SQQ1. Consequently, they may only be commissioned for these tasks. The activities are extensively described in the IGVW Standards SQQ1 and SQP4 "Mobile Electrical Installations in Event Technology". (Source: https://www.dke.de/en/fields-of-activity/core-safe-ty/note-on-standards/setting-up-commissioning-and-operating-mobile-installations)

This means that the events industry and its specific requirements for mobile electrical installations are understood by the DKE as an important part of electrical engineering. Special significance is assigned to the qualification of the "Electrical Specialist for Event Technology". However, there are no responsible committees within the DKE for this case.

The NA 149-00-04 AA, in close cooperation with the DKE, the VBG, and the associations of the events industry, takes the lead in normative projects concerning mobile electrical installations and special networks. Normative projects are already being adapted to the new situation, and documents from the VBG are being revised accordingly. Publications of the IGVW will follow. (Source: https://www.din.de/en/participate/stan-dards-committees/nvbf/news/clarity-for-mobile-electrical-installations-in-event-technology-907708).

In addition to the Basic version with the mentioned features, a Pro ver-

sion is also available. It includes additional useful functions. For exam-

ple, documents can be printed or saved as PDFs. The function to high-

light requirements in color makes the content of the standards even more

quickly understandable. Also time-saving is the ability to compare a new version and the previous edition side by side in a double window. Here

too, the changes are highlighted in color. In addition to a single-user license, there is also a multi-user license (2 to 5 persons) and a site license

(6 or more persons) for the new online service.

Event security online

Beuth Verlag offers a new subscription service: "Event Security Online" provides the opportunity to access more than 100 DIN standards for event security and technology, along with related regulations (e.g., MStättVO), simply through your browser.

With regular updates (quarterly), professionals in the event industry can ensure they don't miss out on new versions. The documents can be subscribed to as a complete package or as individual modules. The following modules are available:

- Stage operation
- Lighting, sound, and media technology
- Stage machinery
- Rigging
- Safety technology
- Standards for training

Requirements for this space-saving and portable way to work with standards using a laptop or tablet include internet access and an up-to-date browser. The search function quickly leads to the desired standard or regulation, which can be opened directly. Compared to purchasing the documents individually, there is a significant price advantage. As an introductory offer, all new customers also receive a 20% discount on the subscription price for the first year.

About Beuth Verlag Beuth Verlag is a comprehensive provider of expertise across various industries, with a focus on construction, mechanical engineering, management, and quality. As a subsidiary of DIN (Deutsches Institut für Normung e. V.), Beuth distributes national and international standards as well as technical regulations and guidelines. The publishing house deve-

Normung e. V.), Beuth distributes national and international standards as well as technical regulations and guidelines. The publishing house develops solutions for the easy application of standards and guidelines for employees in industry, science, commerce, services, the public sector, research, education, and crafts. The portfolio includes specialist literature for all major sectors and professional groups, digitally prepared specialist content, software solutions for standards management, and further education through the DIN Academy. Learn more at beuth.de.



Long-term assurance

The decision of WRC-23 has been made: Broadcasting remains the sole primary user in the TV UHF frequency band. The significance and need of the cultural and events industry have thus been clearly acknowledged.

The World Radiocommunication Conference WRC-23 in Dubai has secured the terrestrial distribution of broadcasting in the long term and thereby recognized the importance of broadcasting and culture. The Alliance for Broadcasting and Cultural Frequencies (ARK) welcomes the outcomes. After four weeks of intense negotiations involving over 4000 delegates from nearly all countries of the world, significant decisions have been made to secure the TV UHF band (470 to 694 MHz) for terrestrial television and wireless production equipment (e.g., wireless microphones):

- Terrestrial broadcasting remains the sole primary user in the TV UHF frequency band in Europe.
- Wireless microphones have been granted their own secondary frequency allocation in now 88 countries: Four additional countries joined at the WRC.

- Mobile allocations were made for individual states only in footnotes to the main text. They are subject to strict conditions to protect broadca-

sting and coordinate with neighboring countries.

- Only WRC in 2031 will conduct an open-ended review of frequency usage in the upper part of the frequency range (600 MHz band) in Europe. The necessary studies for this have expressly stipulated the consideration of wireless microphones and highlighted the need for global harmonization.

For terrestrial broadcasting in Germany, the frequency usage remains at the status quo. The impact of the new country-specific mobile allocations on wireless microphones depends on national decisions following WRC-23. The Alliance for Broadcasting and Cultural Frequencies emphasizes the need for the unchanged use of the TV UHF band for wireless media production to be considered in the implementation of decisions in Germany.

The frequency demand for media and culture remains and will continue to increase in light of new technologies and rising mobile broadcasting usage.

"What more do you want?"

This is the motto of the Berlin team led by Uwe Radke and André Baresel, who have been offering comprehensive rental software for all stakeholders in the event industry since 2015 through their company Eventworx.



Eventworx provides all the relevant features of industry-specific software. It combines quotation and invoice management, inventory management, material plan-

ning, and, through its interface with Crewbrain, also personnel management and logistics.

The software is cloud-based and can be used on various devices while on the go. This allows for planning of future engagements, drafting invoices, or announcing defective equipment, which will then be reflected as shortages in the planning of the next assignment. This way, the entire team is always up to date, able to react, and, in the case of defective equipment, promptly solicit quotes from suppliers.

With the free option to test Eventworx first, receive comprehensive training in its use, and entrust data import to the Eventworx team, the Berliners are happy to take the initiative at the beginning of a partnership. "For us, our customers are part of the team. So, it goes without saying that we welcome them for free initially and always provide them with personal support and assistance as part of our support", explains Uwe Radke, one of the two managing directors.

Due to its easy operation, all basic functions can be used without much effort. These include customization, print templates that are almost completely customizable, platform independence, excellent value for money, and good personal support.

"We continuously develop Eventworx. Through close collaboration with our customers, we are always up to date with their needs. Customer wishes and suggestions find their way onto our to-do list and thus into the application options of our software."

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Unser Grundsatz seit 1993: Mehr Versicherungsschutz bei weiter günstigen Beiträgen

Diverse paths to meaningful business events

In a fresh late-night format, the Innovation Alliance Future Meeting Space presented its new findings at the end of January 2024. The core of the now concluded research phase, themed "Creating Meaningful Events in Challenging Times", was the development of innovative event elements with sustainable impact and genuine significance.



The study with all its insights is now available free of charge. Future Meeting Space was initiated nearly ten years ago by the German Convention Bureau (GCB) and the Fraunhofer Institute for Industrial Engineering and Organization (IAO).

Business events serve as platforms for knowledge exchange and networking, acting as true multitaskers. However, in a time of diverse global challenges and transformation processes, they too must be recalibrated. Those who choose to attend an event expect added value - whether it's new knowledge, extraordinary experiences, inspiration, or a unique personal encounter.

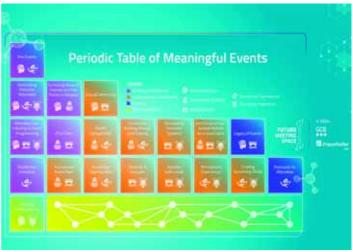
In short, the event should leave a lasting impression in the best possible sense. The Innovation Alliance Future Meeting Space (FMS) therefore demonstrates in its new study how events can become "meaningful" with strategic and substantive elements and furthermore provides concrete recommendations on how to effectively implement these identified elements in practice.

"The future is substantial. Particularly, the ever-accelerating developments in Artificial Intelligence as well as substantial steps towards sustainability elevate business events to new levels", says Matthias Schultze, Managing Director of the GCB. "The stakeholders in the German conference sector, with their expertise and determination, are active drivers of this development - thus securing valuable shares in a dynamic international competition."

During the presentation of the results, which was streamed live from the "Memox" in Frankfurt, not only were the initiators of the Innovation Alliance involved, but also two distinguished experts: Zoe Nogai (with a focus on Gen Z and New Work) and Tanja Bauer-Glück (with a focus on Leadership and Diversity), who supplemented the scientific conclusions with their personal insights and provided practical context.

Precision employment of event elements

Throughout the research process of FMS 2023, five essential event categories were identified: Knowledge Acquisition, Community Building,



Gap Bridging, Inspirational Gain, and Emotional Experiences. They all represent fundamental event objectives and enable organizers to identify their own specific goals.

The multitude of event elements evaluated by the FMS team and assigned to one of these categories also offers practical guidance and concrete instructions for realizing "meaningful events".

"The term 'meaningful' refers to creating events with purpose, sustainable impact, and positive experiences", says Dr. Stefan Rief, Institute Director and Head of the Research Department for Organizational Development and Work Design at Fraunhofer IAO.

Partners of the 2023 research focus, which addressed the theme "Navigating Business Events in Challenging Times", included 7Cities, All Seated, Bayer AG, Bayern Tourism Marketing, Steigenberger Hotels AG, Didacta, Cologne Convention Bureau, Encore by KFP Five Star Conference Services, the EVVC, the Hamburg Convention Bureau, the Leipzig Trade Fair, the City of Münster/Trade Fair, the Congress Centrum Halle Münsterland, the Radisson Hotel Group, SAP SE, and Siemens AG.

Outlook: Research 2024

The transformation of business events places the GCB, together with Fraunhofer IAO, in the focus of applied research in the new phase of the Innovation Alliance. Under the title "Emerging Opportunities, Persisting Classics, Fading Models: Business Events in a Transformative Era", Future Meeting Space 2024 addresses the question of which processes, products, and services in the ecosystem of business events will persist, which will disappear, and which will emerge anew. The goal of exploratory research is to uncover opportunities for all stakeholders along the entire customer journey at business events - both organizers and providers - and to empower them to make data-driven, scientifically informed decisions early on.

SAE steps in

The SAE Institute takes over departments of the insolvent Academy "Deutsche Pop" and recognizes previous achievements.

The SAE Institute expands its range of studies and takes over departments from the insolvency of the Academy Deutsche Pop. There were over 3000 students enrolled there recently. Many of them now have the opportunity to continue their education at the SAE Institute. This is facilitated by the recognition of previous academic achievements. Additionally, the SAE Institute shows solidarity by offering a comprehensive assistance package for all those affected.

The Music Support Group, operator of the Academy Deutsche Pop, filed for insolvency at the end of 2023. As a result, the educational activities had to be discontinued. A significant portion of the previous education in various creative disciplines is compatible with the study offerings of the SAE Institute. Further courses have now been taken over by the SAE Institute and will be integrated into ongoing education starting March 2024. These include training programs such as voice-over artist, photo/media designer, presenter, graphic designer, and photo designer.

"The insolvency application of Deutsche Pop and the sudden cessation of educational activities harm the media location of Germany and are a significant setback, especially for the students. Many are facing an uncertain future and have suffered financial losses due to already paid tuition fees. Through the recognition of academic achievements, the adoption of some training programs, and our comprehensive assistance package, we can now offer a new perspective to the majority of these students. We also warmly invite former teachers of the Academy Deutsche Pop to contact us. It is a challenging situation in which we feel obliged to take responsibility. We aim to provide a new 'professional home' to as many affected individuals as possible", says Chris Müller, Managing Director of the SAE Institute in Germany.

A comprehensive assistance package includes the best possible recognition of previous achievements as well as free access to content from previous modules of the relevant SAE course to catch up on missing knowledge. Discounts are also granted, especially for students who have suffered significant financial losses. The education advisors at each campus provide detailed information about the exact conditions.

The Academy Deutsche Pop is a business unit of Music Support Group GmbH, which filed for insolvency on November 30, 2023, at the Munich District Court. Attorney Rolf Pohlmann from the law firm Pohlmann Hofmann was appointed as the provisional insolvency administrator. Current information on the ongoing process is summarized there. By taking over the mentioned study programs, the SAE Institute does not assume the entirety of the Academy Deutsche Pop and does not enter into any legal succession.

With 54 schools in 28 countries, the SAE Institute is one of the world's most successful private educators for media professions. Degree programs are offered in the fields of Audio, Games, Music Business,

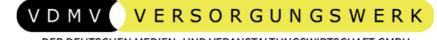


Film, Animation, Content Creation & Online Marketing, Web, and VFX. In the summer of 2022, the European business was acquired by the French AD Education Group. Since then, the SAE Institute has consistently pursued its expansion course.

Founded in Australia in 1976, the SAE Institute is a globally operating private educational institution for professions in the creative and media industries. It sees itself as an internationally networked creative platform that sets the stage for successful careers. Among SAE graduates are numerous Oscar or Grammy winners. The SAE Institute's network spans over 28 countries on six continents with more than 54 institutes. The SAE Institute in Europe is part of the AD Education group.

Locations outside Europe belong to the global educational provider Navitas. In Germany, the SAE Institute has branches in Berlin, Bochum, Frankfurt, Hamburg, Hanover, Cologne, Leipzig, Munich, and Stuttgart. Another location in Nuremberg is under construction and will open in 2024.

The practice-oriented curriculum of the SAE Institute is tailored to the requirements of the media industry and allows for a bachelor's degree in Arts/Science after two years. Various master's programs are offered the-reafter. The bachelor's degrees are offered in collaboration with the University of Hertfordshire. There is also cooperation with Folkwang University of the Arts Essen for postgraduate programs. Further information is available at www.sae.edu.



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etprolight + sound 2024

The heart of the industry

With new and expanded areas, a high-caliber program, and major community events, Prolight + Sound 2024 serves as a catalyst for new collaborations and innovative solutions. In short, from March 19 to 22, people will gather again in Frankfurt. Here's a glimpse of the highlights of the upcoming show.



A vibrant mix of glamour, glitz, and business: Prolight + Sound puts even more emphasis this year on its unique blend of networking and entertainment. Targeted at theater and event technology professionals, it provides ideal orientation through a focused structure: "Advance Your Knowledge", "Elevate Your Entertainment & Experience", and "Discover The Exhibition" guide attendees to a range of educational offerings, innovative products, live performances, and much more.

A central focal point is the Main Stage in Hall 11.0. Renowned speakers present exciting talks on industry-relevant topics daily. Keynotes include:

Tuesday, **March 19**, **2024**: Stefan Weil (CCO Atelier Markgraph): "Music makes the people" (English); Genevieve Cleary (Creative Director): "The Power of Sound" (English)

Wednesday, March 20, 2024: Gregor Tresher & Edgar Dirksen on their careers, production life, label management, and more (German)

Thursday, March 21, 2024: Christopher Matthews, Levi Jack Sibthorpe, and Jan Detavernier on implementing eco-friendly events (English); Michael Kastner (Holoplot, Head of Product) on the groundbreaking audio system X1 Matrix Array, developed for Sphere in Las Vegas (English); William Ellis & Prof. Tim Wall on their ,,What is your One LP?" Project (English)

Friday, March 22, 2024: Prof. Stefan Luppold & Patrick Haag on "Success factors for events" (German) The educational program also expands. Under the umbrella of the "Prolight + Sound College", three colleges offer comprehensive training opportunities: Camera College (in cooperation with the Federal Association of Television Cameramen BVFK), Pro Audio College (in cooperation with the Association of German Tonmeisters VDT), and the VPLT College. The latter provides crucial information and tips on central topics of event technology, including sound level measurement, statics, or best practices for networking techniques in the event industry. Upon completion, participants receive a written confirmation of acquired knowledge. The lectures are held partly in German and partly in English.

Furthermore, the Prolight + Sound Conference (in cooperation with VPLT), the International Event Safety Conference (I-ESC), the Manufacturers' Forum, and the VPLT Experience Zone invite attendees to professional lectures, talks, and presentations on current industry topics.

With the Image Creation Hub, a completely new motion picture area emerges. Created in collaboration with the Federal Association of Television Cameramen (BVFK), it offers workshops, panel discussions, and daily talks on exciting topics, accompanied by an exhibition featuring the latest products and technical innovations from renowned manufacturers.

Once again larger than the previous year, the Performance + Produc-



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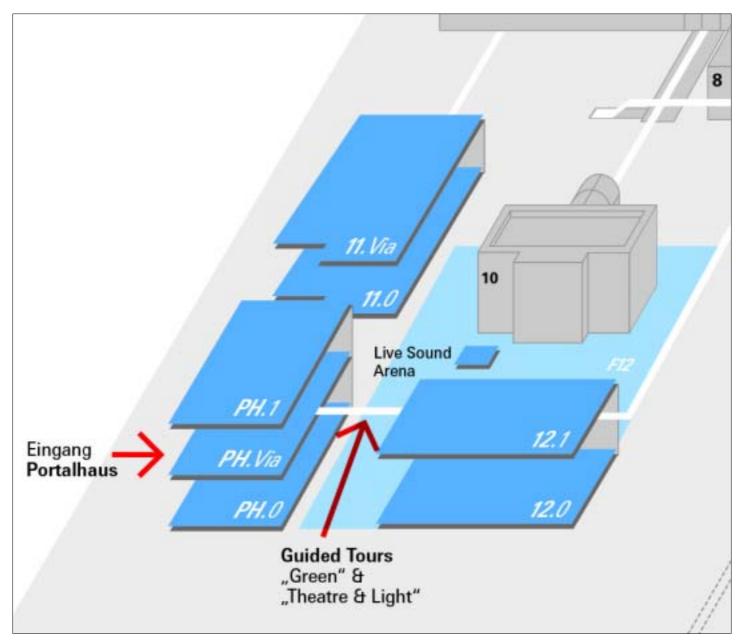




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tion Hub presents itself: The innovative area dedicated to DJing & production expands to 3000 square meters, bringing together knowledge transfer, product experience, and entertainment. In the newly created 100-square-meter Live Box, award-winning DJ Emanuel Satie, guitarist Yasi Hofer (Helene Fischer Band, among others), and many others provide emotionally charged performances.

A special focus of Prolight + Sound 2024 is on fostering young talent and recruiting. The Future Hub (Hall 11.0) is the central meeting point for today's and tomorrow's professionals. It consists of the Campus (educational institutions presenting specialized programs), the Career Center (a meeting place for professionals and companies with job openings), the Start-up Area (presentations of young, innovative companies), and the Networking Lounge (relaxation and networking in an Urban Garden setting).

The Future Talents Day on March 22, 2024, is spearheaded this year by VPLT in collaboration with BDKV and EVVC. The format is specifically designed for young people and aims to actively support them in entering the professional world. With exclusive tours and interactive workshops, young talents gain an exciting insight into the various professions within the industry.

Sustainability is further promoted at the upcoming event. "Green Sessions" in collaboration with EVVC and "Green Tours" provide information on particularly sustainable technologies and product innovations. The Future Hub undergoes a redesign using resource-efficient materials and is powered by green electricity. A new concept is introduced for the community events. For the first time, the organizers invite attendees to three major community nights in exclusive locations in Frankfurt, including the "Champions Bar" at the Marriott Hotel and the "Neue Kaiser". On March 21, the Opus and Sinus Awards ceremony transforms into a glamorous gala dinner at the Steigenberger Icon Frankfurter Hof.

Prolight + Sound 2024 also offers new attractions in an expanded Pro Audio area: In the Audio Bar, high-quality headphones from wellknown brands can be tested in a relaxed atmosphere, and the newly introduced Immersive Audio Dome showcases innovative immersive sound systems. In the Live Sound Arena, sound reinforcement systems are once again demonstrated under realistic conditions. On the Silent Stage, implemented in cooperation with In Ear, the sound of a live band can be experienced through headphones, and integrated sound technology solutions can be tested on-site.

As the largest trade fair in the entertainment technology industry in the DACH region, Prolight + Sound offers its audience the entire spectrum of event technology: from the internationally most comprehensive offering for theater and stage technology (Pro Stage) to the largest platform for lighting technology in the event sector in Europe (Pro Light) and the latest in professional audio (Pro Audio) and AV technology (Pro AV). Furthermore, innovative solutions for the event sector are presented (Pro Event).

Worldwide Radiance

This year's Systems Integration Award goes to "The Sphere" in Las Vegas. The spectacular structure, belonging to the Madison Square Garden, was built with the involvement of several German companies.

Las Vegas epitomizes entertainment like few other cities: whether it's casinos, music and magic shows, top-notch restaurants, or flights over the nearby Grand Canyon, the desert metropolis offers top-class event highlights. Yet, even in a place full of superlatives, there exist attractions whose radiance sets them apart. One such attraction is "The Sphere", which opened last September and is awarded the Systems Integration Award "Sinus" 2024. With its spectacular fusion of groundbreaking technologies, the "Mega Sphere" creates innovative, immersive experiences in unique brilliance - and sets a significant impetus for the future of entertainment.

The "Sinus" is considered one of the most prestigious industry awards in the field of audiovisual installation. Since 2004, it has been awarded annually as part of the Prolight + Sound event. The award is jointly presented by the associations VPLT and EVVC as well as the Messe Frankfurt.

Even the basic data and numbers give a glimpse into the dimensions reached with the mega-project: The Sphere, with a height of 112 meters and a width of 157 meters, is the largest spherical construction in the world. A 54,000 square meter fully programmable exterior surface, known as the Exosphere, is equipped with 1.2 million LED pucks. The world's largest and highest-resolution LED screen indoors offers a 15,000 square meter LED display with a resolution of 16k x 16k. Overall, the extraordinary building accommodates 17,600 people (20,000 with standing room).

However, what makes "The Sphere" truly unique is not primarily the numerical superlatives - it's the perfect interaction of countless technical components. An essential element of the spherical construction lies behind the approximately 195-meter-wide and 76-meter-high LED screen

inside: its impressive "Sphere Immersive Sound" audio system was specially developed for the curved interior and comes from the Berlin-based company Holoplot. The revolutionary X1 Matrix Array audio system is integrated into 1600 fixed and 300 mobile speaker modules, combined with a total of 167,000 individually amplified speaker drivers. The underlying 3D audio beamforming and wave field synthesis technology enables controlled, crystal-clear sound for up to 20,000 people, providing each guest with an individual listening experience.

The seamless interaction of Sphere Immersive Sound and the curved LED indoor display is complemented by 4D technologies such as haptic seats and a range of atmospheric environmental effects, including gusts of wind, changing temperatures, cold breezes, and suggestive scents. This creates multisensory, immersive experiences of the highest caliber.

Through the outstanding combination of artistic ambition and innovative technical implementation, The Sphere fulfills the requirements for winning the "Sinus" in a special way. With its unique technical capabilities, it provides the ideal venue for a variety of entertainment formats, from live concerts to sports events to high-resolution film experiences and much more. Following the phenomenal opening phase with U2, the American stalwarts of Phish and "Dead & Company" (see last ET.Now issue) are currently performing at the venue, alternating with spectacular film visions. A prime example of modern system integration at the highest level, for which further information is available at www.thespherevegas.com.

The Opus and Sinus award ceremony will take place on Thursday, March 21, 2024, as part of a glamorous gala dinner at the 5-star luxury hotel Steigenberger Icon Frankfurter Hof.





Capturing the zeitgeist

This year, the Prolight + Sound awards two projects with the German Stage Prize "Opus" that address the theme of individuals in very different ways: the Grand Show "Falling In Love" and the "walkable sound body" by the Ensemble Modern.

The Grand Show "Falling In Love" at the Friedrichstadt-Palast in Berlin stages the story of a deaf poet in search of love as a breathtaking, innovative play of colors - curated and visually designed by designer icon Jean Paul Gaultier. The Ensemble Modern's walkable sound body at the Cresc Biennale 2023 puts the individual in relation to the community at the center. The impressive realization of this project earns the jury the special award "Opus Avantgarde".

The Opus is considered one of the most prestigious awards for outstanding stage projects. Since 2002, it has been awarded by an expert jury from the fields of business, associations, trade publications, and representatives of Messe Frankfurt as part of the Prolight + Sound event. The creative use of technology in the design of theater or stage productions, concerts, conferences, and open-air events is honored. The recipients of the non-endowed honorary prize are the Association for Media and Event Technology (VPLT), the European Association of Event Centers (EVVC), and Messe Frankfurt.

Stage art par excellence: "Falling In Love"

When creativity and technical expertise are combined at the highest level with appropriate financial resources, an ideal breeding ground for breathtaking art emerges. A striking example in every respect is provided



by the Friedrichstadt-Palast in Berlin with its Grand Show "Falling In Love", which premiered on October 11, 2023. Created with a recordbreaking production budget of 14 million euros, over 100 artists from 28 nations transform the stage into a dazzling sea of __colors, shapes, costumes, and effects, supported by technically innovative installations.

In an exclusive collaboration with Swarovski, 100 million Swarovski crystals bathe the scenery in sparkling light - an impressive world record in the film and stage industry. Among them is the world's largest cut Swarovski crystal, weighing 180 kg.

Star designer Jean Paul Gaultier, as Visual Design Director, translated his aesthetic vision not only into costumes but also into set design. As curator of the show, he also brought emerging design teams on board. These include Hannah Rose and Steven Raj from Fecal Matter, who challenge gender boundaries and beauty ideals with their unique vision of beauty and reality. Sasha Frolova, a performance artist specializing in latex, completes the team with her striking aesthetics.

For the first time, the Friedrichstadt-Palast engaged deaf dancers Callum Webdale and Hearns Sebuado, who alternately embody the protagonist You. To provide Webdale and Sebuado with the best possible basis for their performances, a vibration plate was installed in the stage floor, among other measures. Through this, the two can orient themselves in their solo moments to the sound waves of the music. In addition, all texts were translated for them by sign language interpreters, and their dressing rooms were equipped with light signals, as they cannot perceive the usual bell signals.

The spectacular stage production also fascinates with technically impressive installations such as movable platforms in a water basin, water effects, mirror zones, and an imposing rain curtain. The audiovisual experience is rounded off by an immersive 360° sound system and impressive lighting with 250 LED spotlights, 129 conventional spotlights, and 347 moving lights.

The idea for the project comes from artistic director and producer Berndt Schmidt, inspired by the poem ,,The Garden of Love" by English poet William Blake (1757-1827). Book and direction were taken over by Oliver Hoppmann, one of Europe's most successful showmakers.

At the center of the story is You, a young, deaf poet full of passion and longing. The artist does not fit into any schema and feels misunderstood. His search for love repeatedly ends in rejection. In these moments, You

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wishes to simply sink into the ground. But then the gray asphalt of civilization breaks open under his feet, and he plunges into another reality. In this hidden garden of love, a world opens up to him that he has never seen before - a surging sea of colors and beauty, a diversity that encompasses all facets of nature. Here, the eternal human dream of a better world lives, enclosed within age-old norms. The focus is on whether You will ultimately find the words to shake the walls created by humans and make love flourish.

The emotional story, embedded in a technically sophisticated visual and costume extravaganza, captures the spirit of the times: to date, over 300,000 tickets have already been sold. (Editor's note: Another report on "Falling In Love" can be found at the end of this issue.)

"Walkable Sound Body" by the Ensemble Modern

This year, the Ensemble Modern receives the special award "Opus Avantgarde" for its "Walkable Sound Body" at the "Cresc - Biennale for Contemporary Music" in Frankfurt. The internationally staffed ensemble is one of the best-known, leading groups of artists for modern music worldwide and performs at renowned festivals around the globe. The "Cresc" festival is organized by the Ensemble Modern in cooperation with the HR-Sinfonieorchester. Under the title "Me We", musical formations explored the relationship between the individual and the community in a variety of forms of contemporary music in 2023.

The jointly staged "Earth Dances" work (by Sir Harrison Birtwistle) by the HR-Sinfonieorchester and the Ensemble Modern allowed the audience to experience the performance again immediately after the live performance in the form of a walkable sound body.

Sound designer and sound director Norbert Ommer relied on innovative technologies. The sounds recorded by the orchestra were transferred to a 3D audio installation, allowing the audience to move freely within the created orchestral sound body. The playback was linear and was mixed three-dimensionally live by Ommer using a d&b Soundscape System and transmitted into the space.

The technology used included, among other things, 44 speaker components, supported by 8 subwoofers on different levels. These were groundsupported, arranged at a height of 5 meters, and in a ring below the studio ceiling. A particular highlight was the programmed rotation of the entire orchestra by up to 180 degrees and the movements of lead instruments within the sound body. The technical implementation was realized through cooperation with companies such as Crystal Sound.

The Opus and Sinus awards ceremony will take place on Thursday, March 21, 2024, embedded in a glamorous gala dinner at the 5-star luxury hotel Steigenberger Icon Frankfurter Hof.



Vorträge, Keynotes, Panels

Eine Zusammenstellung aller zum Redaktionsschluss vorliegenden Informationen zu den zahlreichen Angeboten der Prolight + Sound in chronologischer Reihenfolge.



Dienstag, 19. März 2024

10.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box

Swing Flare Club

Der Swing Flare Club ist eine kreative und hochmoderne Gruppe begabter Künstler, die die Grenzen der Musiktechnologie immer weiter hinausschieben.

10.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage

ARKAEI

Ein faszinierendes Showcase von Controllerism und Visual Djing.

10.15 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Speakers Area

Anleitungen/Übungen zur Lichtgestaltung, Führung von E-Kamera-Systemen, Steadicam und Polecam, Probebetrieb

10.30 Uhr, Manufacturers Forum, Halle 11, Ebene 0, Raum ,,Korall"

Stromverteilung für das 21. Jahrhundert

Die meisten Stromverteilungssysteme werden den Anforderungen der modernen AV-Technik nicht gerecht. Sie handhaben die Lasten schlecht, haben keine Möglichkeit, die Stromaufnahme der einzelnen Stromkreise und den Energieverbrauch zu erfassen und warnen nicht vor Überlastungen. Auch gibt es keinen Schutz gegen den Ausfall des Neutralleiters. In Anbetracht der Werte, die auf dem Spiel stehen - nicht nur die Sicherheit der arbeitenden Personen, sondern auch der Wert der Anlagen und der Veranstaltung selbst - sind bessere Lösungen erforderlich.

Erklärung: StageSmarts stellt seit 2017 auf der PLS aus und freut sich, zur Verbesserung der Sicherheit beizutragen, indem wir bessere Lösungen für die Stromverteilung bei Veranstaltungen entwickeln und anbieten.

Referent: Ing. Mats Karlsson von Stagesmarts

10.50 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage

DJ Talk

Vortrag zum Thema Moderne Lichtsteuerungssysteme für Mobile DJs

11.00 Uhr, Pro Audio College, Portalhaus, Ebene C, Raum Prisma

Media-Netzwerke unter der Lupe

Ziel des Vortrags ist die Darstellung verschiedener Verfahren zur Übertragung von synchronen A/VMediadaten über Ethernet-Netzwerke und der Vergleich untereinander. Dabei wird auch die physikalische Ausführung des verwendeten Netzwerks und dessen IT-Sicherheit aus verschiedenen Blickwinkeln betrachtet. Redundanz und Überwachung, sowie einfache Fehlersuche mit gängigen Netzwerktools werden anhand von praktischen Beispielen vorgestellt.

11.00 Uhr, PLS Conference, Halle 11, Ebene 0, Raum ,,Granat"

VPLT College: Schallpegelmessung

Messen und Ermitteln von Schalldruckpegeln sind die wichtigsten Voraussetzungen dafür, um die gängigen Normen und Gesetze zum Thema Schallschutz einzuhalten. Die Richtlinien für Schallpegelbegrenzung von Veranstaltungen werden durch die DIN 15905-5 geregelt. Um die Zuschauer einer Veranstaltung vor bleibenden Hörschäden zu schützen, wurde vor ca. 20 Jahren die DIN-Norm 15905-5 «Maßnahmen zum Vermeiden einer Gehörgefährdung des Publikums durch hohe Schallemissionen elektroakustischer Beschallung» aufgesetzt. In diesem Vortrag werden die Norm in der Neufassung vom Juli 2022 behandelt und praktische Tipps zur ihrer Einhaltung gegeben. Referent: Dipl.-Ing. Andreas Ederhof

11.00 Uhr, Main Stage, Halle 11, Ebene 0, E11 Bewältigungsstrategien in schwierigen Zeiten: Wege zu mehr Wohlbefinden und Widerstandsfähigkeit

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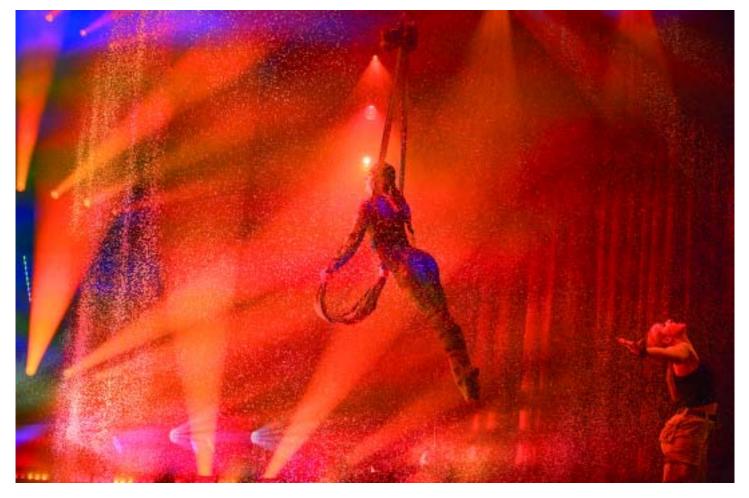


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Wir werden die Rolle von Emotionen und ihre evolutionäre Entwicklung untersuchen. Die strikte Trennung zwischen Gefühlen und Verstand ist heute nicht mehr haltbar, denn beide Weisen der Informationsverarbeitung helfen uns gemeinsame, Ziele, Aufgaben und Aktivitäten effizient auszuwählen. Wodurch unterscheiden sich Herausforderung und Überforderung und welche persönlichen Steuerungsmöglichkeiten haben wir, um darauf einzuwirken? Psychische Widerstandsfähigkeit (Resilienz) kann auf unterschiedlichen Ebenen gefördert werden. Diese Prozesse sind wichtig, um die Planetare Gesundheit nach vorne zu bringen. Wir werden darüber sprechen, worauf es dabei ankommen könnte und wo die persönliche, die politische und die unternehmerische Verantwortung dabei liegt.

Referentin: Ruth Habermehl

11.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box Denise Frey

Denise entdeckte während ihres Musikstudiums ihre Liebe zur Improvisation und elektronischen Musik und war als Saxophonistin in verschiedenen Bands und Projekten aktiv.

11.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage SOMA Laboratory

Produktvorstellung und Performance am PULSAR 23 Analog Synthesizer.

11.00 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Speakers Area Kurzworkshop SUMOSKY – Mixed Reality with Image Based Lighting

11.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage Yamaha

Finger-Drumming mit dem Finger Drum Pad FGDP-30 von Yamaha.

11.30 Uhr, Manufacturers Forum, Halle 11, Ebene 0, Raum ,,Korall"

Innovation in Bewegung; Entschlüsselung des Dreiklangs von Sicherheit, Zuverlässigkeit und Hochleistungsfahrrädern in der kinetischen Architektur

Entdeckungsreise in die dynamische Welt der kinetischen Architektur. Dieses Seminar befasst sich mit den Feinheiten von Sicherheit, Zuverlässigkeit und hoher Beanspruchung, die zusammen das Dreigestirn bilden, das die Entwicklung des kinetischen Designs vorantreibt Es wird die Bedeutung der EN 17206 für eine Revolution in der kinetischen Kunst veranschaulicht, die Auswirkungen der Zuverlässigkeit auf kinetische Kunstanwendungen diskutiert und innovative Lösungen für ein nahtloses, ununterbrochenes Erlebnis erkundet.

Referent: Jim Love (TAIT international Ltd.)

11.30 Uhr, Pro Audio College, Portalhaus, Ebene 1, Raum Transparenz 2 Media-Netzwerke unter der Lupe

Ziel des Vortrags ist die Darstellung verschiedener Verfahren zur Übertragung von synchronen A/VMediadaten über Ethernet-Netzwerke und der Vergleich untereinander. Dabei wird auch die physikalische Ausführung des verwendeten Netzwerks und dessen IT-Sicherheit aus verschiedenen Blickwinkeln betrachtet. Redundanz und Überwachung, sowie einfache Fehlersuche mit gängigen Netzwerktools werden anhand von praktischen Beispielen vorgestellt. *Referent: Heinz Rykers*

11.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage DJ Ray-D

Im HUB wird er seine DJ-Schule Rayacademy präsentieren und Workshops zu den Themen Club-DJIng und Turntablism geben.

11.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box Al Jacobi

Al Jacobi aus Dänemark ist der einzige Rapper der Welt, der mit den MiMU Gloves auftritt

12.00 Uhr, Main Stage, Halle 11, Ebene 0, E11

Music makes the people

Musik hat das Potenzial, auszugleichen, sogar zu heilen - Musik als Therapie. Musik verbindet uns, Musik schafft Zusammengehörigkeit und Einheit. Musik kann verändern, kann lenken und umlenken. Musik und ihre Strukturen wie Festivals können neue Werte für die Welt, in der wir leben, schaffen. Diese Keynote reflektiert diese Themen und zeigt inspirierende, bahnbrechende Beispiele für Musik und ihre vielfältigen Möglichkeiten. Referent: Stefan Weil (Atelier Markgraph) 12.00 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Talk

Grundlagen der Fernsehtechnik

Referent: Ansgar Otto, BVFK – Bundesverband der Fernsehkameraleute e. V.

12.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage

DJ Iron

DJ Iron hat 1998 das Auflegen für sich entdeckt, nach viel Training und viel Geduld gilt er als einer der besten Club-DJ's in Deutschland.

12.30 Uhr, Manufacturer's Forum, Halle 11 Ebene 0, Raum Korall

Gefahr durch Strahldichte

Ging früher die Gefahr bei Entladungslampen von UV-Strahlung aus, erfahren wir heute eine Gefährdung durch Strahldichte.

Referent: Dipl.-Ing. Herbert Bernstädt (Adam Hall)

12.30 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box

Swing Flare Club

Der Swing Flare Club ist eine kreative und hochmoderne Gruppe begabter Künstler, die die Grenzen der Musiktechnologie immer weiter hinausschieben.

12.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage

Satzky Audiotechnik

Produktpräsentation des Beschallungssystemes

13.00 Uhr, Pro Audio College, Portalhaus, Ebene C, Raum Prisma

Mixdown

ProTools Session einer Deutsch-Pop-Produkion

13.00 Uhr, PLS Conference, Halle 11, Ebene 0, Raum ,,Granat"

Wie man den Risiken begegnet, die von LED-Bildschirmen und ihren Trägerstrukturen ausgehen, wenn sie im Freien verwendet werden In Anbetracht der Unfälle, die sich ereignen, scheint die sichere Planung und Installation von LED-Screens immer noch ein Thema zu sein. Dieser Vortrag geht nicht nur auf die Sicherheitsanforderungen und Vorteile für Anwender von LED-Wänden durch die neue DIN 56929 "Veranstaltungstechnik - LED-Wandsysteme und Zubehör, Schnittstellen und Sicherheitsanforderungen" ein, sondern beleuchtet auch die praktische Seite, wie z.B. die richtige Auswahl von Tragkonstruktionen, Schwierigkeiten, die im Zusammenhang mit Windlasten auftreten und den richtigen Umgang mit den daraus resultierenden Risiken.

Referenten: Dipl. -Ing Norbert Tripp (Technical Director) und Laura van Haperen (VPLT)

13.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box

Swing Flare Club

Der Swing Flare Club ist eine kreative und hochmoderne Gruppe begabter Künstler, die die Grenzen der Musiktechnologie immer weiter hinausschieben.

13.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage

ARKAEI

Ein faszinierendes Showcase von Controllerism und Visual Djing.

13.00 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Speakers Area

Kamerabewegungen mit der Steadicam und einer Pole Cam, Drohne, Helicopter

Referenten: Michael Gebendorfer, Matthias Gollmer (BVFK - Bundesverband der Fernsehkameraleute e. V) Gabriel Manz, Klaus Jürgen Stuhl(HD-Skycam), Martin Müller

13.00 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Speakers Area

Anleitungen/Übungen zur Lichtgestaltung, Führung von E-Kamera-Systemen, Steadicam und Polecam, Probebetrieb

13.30 Uhr, Manufacturers Forum, Halle 11, Ebene 0, Raum ,,Korall"

Curtain Call

In diesem Vortrag erhält man einen umfassenden Einblick in die vielfältigen Dimensionen von textilen Installationen, die von 1 bis 3000 Quadratmetern reichen und sowohl beweglich als auch dauerhaft verbaut sein können.

Referent: Eike Jan Gerlach (Gerriets)

13.30 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage

69 Beats

Showcase des polnischen DJ Champions präsentiert von Humpter.

14.00 Uhr, PLS Conference, Halle 11, Ebene 0, Raum ,,Granat"

Geht das ins Auge?

Seit 2010 gibt es in Deutschland die Arbeitsschutzverordnung zu künstlicher optischer Strahlung, welche aufgrund der EU-Richtlinie 2006/25/EG erlassen wurde. Neben den in der Veranstaltungswirtschaft bereits bekannten Gefährdungen durch UV- und IR- Strahlung rückt nun auch immer mehr die Gefährdung durch sichtbares Licht in den Fokus. Es herrscht auch unter Fachleuten immer noch eine große Unsicherheit über die Gefährdung durch Scheinwerfer im Bühnenbereich. Was bedeutet das für die Branche? Wie kann eine Gefährdungsbeurteilung angemessen erstellt werden? *Referent: Sven Kubin (VBG)*

Kelerenii. Sven Kubin (VDO)

14.00 Uhr, Main Stage, Halle 11, Ebene 0, E11 ,Die Macht des Klangs

Die Macht des Klangs und seine multidimensionalen, physiologischen, psychologischen, emotionalen Wirkungen: Auswirkungen der Klangplatzierung zur Steigerung des Wohlbefindens bei der Unterhaltung; warum man bei der Gestaltung eines Raums oder eines Erlebnisses zuerst an den Klang denken sollte, Einsatz von Technologie, um die Einbeziehung des gesamten Körpers zu verbessern und unser Wohlbefinden bei der Unterhaltung zu steigern.

Referent: Genevieve Cleary (Sound Connective)

14.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box

DJ Oliver Magenta

Live Set aus dem Bereich elektronische Musik.

14.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage

Sanes Medicine

Finger Drumming und moderne Dance Performance.



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14.00 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Talk Nachhaltige Maske bei Film und Fernsehen

Referenten: Karin Hunkel, Dion Mieske (BVFK - Bundesverband der Fernsehkameraleute e. V.), Ellen Schulz, Nicole Stoewesand, Moderatorin: Anke Seeling

14.30 Uhr, Pro Audio College, Portalhaus, Ebene 1, Raum Transparenz 2 Media-Netzwerke unter der Lupe

Ziel des Vortrags ist die Darstellung verschiedener Verfahren zur Übertragung von synchronen A/VMediadaten über Ethernet-Netzwerke und der Vergleich untereinander. Dabei wird auch die physikalische Ausführung des verwendeten Netzwerks und dessen IT-Sicherheit aus verschiedenen Blickwinkeln betrachtet. Redundanz und Überwachung, sowie einfache Fehlersuche mit gängigen Netzwerktools werden anhand von praktischen Beispielen vorgestellt. Referent: Heinz Rykers

14.30 Uhr, Manufacturers Forum, Halle 11, Ebene 0, Raum ,,Korall" Pixera in 4 Akten

Die Echtzeitplattform Pixera als Kreativtool für moderne Theater- und Showproduktionen. Pixera ist ein 64-Bit Medienserversystem für Echtzeit-Medienverarbeitung. Das allgemeine User Interface ist in 4 unterschiedliche Zugriffspunkte unterteilt, die es sehr einfach ermöglichen, jeweils andere Aspekte einer Showprogrammierung unabhängig voneinander in Echtzeit zu verändern. Ein flexibel gestaltbares Bühnensetup, Show Control Elemente und eine offene API-Schnittstelle ermöglichen einen kreativen, künstlerischen Prozess für Theater und Showproduktionen.

Referent: Fabian Pointinger (AV Stumpfl)

14.30 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage SOMA Laboratory

Produktvorstellung und Performance am PULSAR 23 Analog Synthesizer.

14.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage Yamaha

Finger-Drumming mit dem Finger Drum Pad FGDP-30 von Yamaha.

15.00 Uhr, PLS Conference, Halle 11, Ebene 0, Raum ,, Granat"

Konvergenz in den Mediennetzen

Es gibt in der Live-Entertainment Industrie erhöhte Anforderungen an die Netzwerke und ihre Nutzung. Dabei geht es nicht nur um die mechanischen Belastung des Equipments, sondern vielmehr um ausfallsicheren Betrieb und ein entsprechendes Management dieser Protokolle und des Backbones. Wer ist dafür verantwortlich? Wie kann dieses geleistet werden? Oder doch lieber jedes Gewerk sein eigenes Netzwerk aufbauen lassen, um die Verantwortung nicht übernehmen zu müssen? Wie kann ein Netzwerk konvergent werden und bestenfalls sich selbst managen? Wie können Applikationen im Bereich Audio, Video, Licht sicher damit arbeiten?

Referenten: René Berhorst (MA Lighting), Florian Burtscher (Neutrik), Florian Nürnberger (Neumann & Müller), Dietmar Rottinghaus (Neutrik)

15.00 Uhr, Main Stage, Halle 11, Ebene 0, E11

Der Thrill und die unausgesprochene Resonanz - was ich in einem Theaterdesign von Mikki Kunttu suche

In seinem Vortrag spricht Mikki Kunttu über seine Grundlagen als visueller Designer und die Auswirkungen, die dies auf das Leben im Allgemeinen hat. Referent: Mikki Kunttu



15.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box **Denise Frey**

Denise entdeckte während ihres Musikstudiums ihre Liebe zur Improvisation und elektronischen Musik und war als Saxophonistin in verschiedenen Bands und Projekten aktiv.

15.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage 69 Beats

Showcase des polnischen DJ Champions präsentiert von Humpter.

15.30 Uhr, Manufacturers Forum, Halle 11, Ebene 0, Raum ,,Korall"

Nachhaltigkeit und Flexibilität auf und neben der Bühne

Der Bedarf an grünen Energielösungen ist in der Film- und Veranstaltungsbranche allgegenwärtig. Wenn eine Antwort auf diesen Bedarf zusätzliche Kostenvorteile, mehr Flexibilität und völlig neue Möglichkeiten für Energiekonzepte bringt, dann sprechen wir von einer echten Innovation. Instagrid bietet eine Innovation, die nicht nur durch die Reinheit der Stromversorgung, die Unempfindlichkeit gegenüber Stromausfällen und die Robustheit der Spitzenstromversorgung überzeugt, sondern es ermöglicht ein völlig neues Stromkonzept für Effektlichter, Nebelmaschinen und andere Anwendungen. Instagrid one max ist die Antwort auf eine nachhaltige Energieversorgung, die in nur 20 kg zusätzliche Vorteile bringt. Erfahren Sie mehr darüber, wie Sie Ihre Anwendung erleichtern können.

Referent: Bernd Gienger (Instagrid)

15.30 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05

KI - Künstliche Intelligenz bei Film- und Fernsehen

Referenten: Eugen Gross (Aiconix), Prof. Michael Schwertel, Frank Trautmann (BVFK - Bundesverband der Fernsehkameraleute e. V.), Moderatorin: Anke Seeling

15.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage Sanes Medicine

Finger Drumming Showcase und moderne Dance Performance.

16.00 Uhr, Main Stage, Halle 11 Ebene 0, E11

Kreativität und Naturschutz

In diesem Vortrag wird die Kreativdirektorin und Künstlerin Eileen Hall einen Überblick über das Tayos-Projekt geben

Referentin: Eileen Hall

16.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box Swing Flare Club

Der Swing Flare Club ist eine kreative und hochmoderne Gruppe begabter Künstler, die die Grenzen der Musiktechnologie immer weiter hinausschieben.

16.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage DJ Talk

Vorstellung des Produkts "bookitup" zur Verwaltung von Anfragen und Auftritten für Mobile DJs

16.30 Uhr, Manufacturers Forum, Halle 11, Ebene 0, Raum ,,Korall" Was ist Smart VT

Smart VT steht für Smarte IIoT Lösungen für die Veranstaltnugs-Technik. Wie verändert IIoT in Zukunft die Veranstaltungstechnik? Wachsende Integration der HW, Virtualisierung und Conainerisierung der SW und die Kommunikation über Common IT Infrastruktur (Ethernet, Wi-Fi, 5G, BlueTooth, NFC)

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eröffnen neue, effiziente Möglichkeiten der Steuerung und Kontrolle aller Systeme einer Veranstaltung.

Referent: Jürgen Steinbacher (Protec)

16.30 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Speakers Area Anleitungen/Übungen zur Lichtgestaltung, Führung von E-Kamera-Systemen, Steadicam und Polecam, Probebetrieb

16.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box Al Jacobi

Al Jacobi aus Dänemark ist der einzige Rapper der Welt, der mit den MiMU Gloves auftritt

16.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage Intuitive Music

Produktvorstellung des "Exquis" Controllers, der den Midi Innovation Award 2023 gewonnen hat.

17.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage DJ Iron

DJ Iron hat 1998 das Auflegen für sich entdeckt, nach viel Training und viel Geduld gilt er als einer der besten Club-DJs in Deutschland.

17.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box DJ Chederac

Scratch Routine vom bekannten polnischen Turntablisten

17.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage Satzky Audiotechnik

Produktpräsentation des Beschallungssystemes

Mittwoch, 20. März 2024

10.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box Swing Flare Club

Der Swing Flare Club ist eine kreative und hochmoderne Gruppe begabter Künstler, die die Grenzen der Musiktechnologie immer weiter hinausschieben.

10.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage ARKAEI

Ein faszinierendes Showcase von Controllerism und Visual Djing.

10.15 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Speakers Area Anleitungen/Übungen zur Lichtgestaltung, Führung von E-Kamera-Systemen, Steadicam und Polecam, Probebetrieb

10.30 Uhr, ProAudioCollege, Portalhaus, Ebene 1, Raum Transparenz 2 Schallwellen und Schallausbreitung: Experimente für die Tontechnik-Praxis Ist es schlimm, wenn ein Stativ zwischen Schallquelle und Mikrofon steht? Referent: Jörn Nettingmeier (VDT)

10.30 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage DJ Talk

Vorstellung des Produkts "bookitup" zur Verwaltung von Anfragen und Auftritten für Mobile DJs

11.00 Uhr, PLS Conference, Halle 11, Ebene 0, Raum ,,Granat" VPLT College: Fresh-up Statik: Der richtige Umgang mit den Belastungstabellen von Traversensystemen.



Man erfährt Hintergründe über Erstellung und Inhalt der Tabellen erstellt und wie man sich die Tabellen für die tägliche Arbeit zu nutze machen kann. Dazu weitere Fragen rund um die statische Auslegung von einfachen Traversensystemen. Referent: Dipl.-Ing. Uwe Runtemund

11.00 Uhr, I-ESC, Halle 11, Ebene 0, Raum ,,Korall"

How to Safety? Veranstaltungssicherheit im In- und Ausland

Im Vortrag geben die Referenten einen Überblick über die Sifa-Strukturen sowie rechtskonforme Anforderungen bei Events im In- und Ausland, Sicherheitskoordination und Unterweisungsmanagement international.

Referenten: Dipl.-Ing. Jörg Bräutigam (VBG), Falco Zanini, Laura van Haperen (VPLT)

11.00 Uhr, Main Stage, Halle 11 Ebene 0, E11, Main Stage

Qualität in der Veranstaltungstechnik

Neue Veränderungen bei der DPVT, die ab sofort vom TÜV Rheinland geführt werden

Referenten: Thorsten Geißler (PCS Professional Conference Systems), Sven Hansen (Event Safety Consult), laf Seiche (TÜV Rheinland), Moderator: Randell Greenlee (VPLT)

11.00 Uhr, I-ESC, Halle 11 Ebene 0, Raum Korall

Event-Strukturen = Fliegende Bauten ?

Der Vortrag bietet einen Einblick in die neuen Anforderungen der Norm "EN 17879 Eventstructures - Safety requirements" und die Komplexität der Verwaltungsverfahren des Bauwesens in Deutschland.

Referent: Dipl. Ing. Matthias Moeller (Sixty82)

11.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage **SOMA Laboratory**

Produktvorstellung und Performance am PULSAR 23 Analog Synthesizer.

11.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box .noir.

Eine mitreißende Live-Show des italienischen Electronic Music Artists

11.00 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Speakers Area **Der Weg zum automatisierten Tracking** *Referent: Kevin Klaes (Zactrack)*

11.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage Yamaha

Finger-Drumming mit dem Finger Drum Pad FGDP-30 von Yamaha.

11.30 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box Al Jacobi

Al Jacobi aus Dänemark ist der einzige Rapper der Welt, der mit den MiMU Gloves auftritt

11.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage DJ Ray-D

Im HUB wird er seine DJ-Schule Rayacademy präsentieren und Workshops zu den Themen Club-DJIng und Turntablism geben.

12.00 Uhr, ProAudioCollege, Portalhaus, Ebene 1, Raum Transparenz 2 Rock-Mix (live) - viele Quellen und keine Zeit

Ob Festival oder TV-Produktion: oft muss es bei Rock- und Popbands schnell gehen. Wie man trotzdem einen anständigen Mix abliefert und welche



Vorbereitungen Zeit und Nerven sparen, zeigt dieser Vortrag. Referent: Sebastian Zündorf (Proper Audio)

12.00 Uhr, I-ESC, Halle 11, Ebene 0, Raum ,,Korall"

Event-Strukturen

Die neue Europäische Norm "EN 17879 Event structures - Safety requirements" wird in Deutschland als "DIN EN 17879 Event-Strukturen - Sicherheit" auf normativer Ebene umgesetzt. Sie entfaltet aber keine unmittelbare Wirkung, solange sie nicht in die Musterverwaltungsvorschrift Technische Baubestimmungen (MVV TB) aufgenommen ist und im Anschluss von den Bundesländern in deren jeweilige Verwaltungsvorschrift Technische Baubestimmungen überführt wird. Der Vortrag bietet einen Einblick in die neuen Anforderungen der Norm und die Komplexität der Verwaltungsverfahren des Bauwesens in Deutschland.

Referent: Dipl. Ing. Matthias Moeller (Sixty82)

12.00 Uhr, Main Stage, Halle 11 Ebene 0, E11, Main Stage

Vom Beleuchtungsstudenten zum Berufsprofi: Mein bisheriger Weg Cara Hood ist eine walisische freischaffende Lichtdesignerin, die sich für in-

novative, zugängliche und inklusive Produktionen einsetzt und sich für neue Texte und unkonventionelles Theater begeistert

Referentin: Cara Hood (The Women In Lighting Project)

12.00 Uhr, I-ESC, Halle 11 Ebene 0, Raum Korall

How to Safety? Veranstaltungssicherheit im In- und Ausland

Sicherheit für alle Beschäftigten und Besucher von Veranstaltungen ist das höchste Gebot. Doch wie sicher ist sicher und welche Rolle spielen dabei die Sicherheitsfachkräfte?

Referenten: Laura van Haperen, Falco Zanini (VPLT), Dipl.-Ing. Jörg Bräutigam (VBG)

12.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box DJ W2MHC

Live DJ Set von DJ Welcome 2 my Houseclub

12.00 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Speakers Area Magic of the Moment: Der Filmlook - Was ist "der Filmlook"? Eine Bestandsaufnahme zwischen Lookbooks, Dreh am Set und Colourgra-

ding.

Referent: Ulrich Mors (BVFK - Bundesverband der Fernsehkameraleute e. V.)

12.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage D.J. Iron

DJ Iron hat 1998 das Auflegen für sich entdeckt, nach viel Training und viel Geduld gilt er als einer der besten Club-DJ's in Deutschland.

12.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box Swing Flare Club

Der Swing Flare Club ist eine kreative und hochmoderne Gruppe begabter Künstler, die die Grenzen der Musiktechnologie immer weiter hinausschieben.

12.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage **Denise Frey**

Denise entdeckte während ihres Musikstudiums ihre Liebe zur Improvisation und elektronischen Musik und war als Saxophonistin in verschiedenen Bands und Proiekten aktiv.



13.00, I-ESC, Halle 11, Ebene 0, Raum ,,Korall"

Rigging & Artistik - Einwirkungen aus artistischen Darbietungen

Wie groß sind die Einwirkungen, die auf Grund der durch die Artisten vorgeführten Kunststücke entstehen? Der Vortrag gibt einen Einblick in Messergebnisse und Erkenntnisse, die an der Berliner Hochschule für Technik in Zusammenarbeit mit der staatlichen Artistenschule Berlin gewonnen wurden. Referent: Prof. Stephan Rolfes (Berliner Hochschule für Technik)

13.00 Uhr, PLS Conference, Halle 11, Ebene 0, Raum ,,Granat" Wetterereignisse und Klimawandel

Die zunehmende Häufigkeit extremer Wetterereignisse betrifft Organisatoren und Teilnehmer gleichermaßen. Die Notwendigkeit, professionelle Wetterdienste für alle Veranstaltungen in Anspruch zu nehmen, dient als entscheidende Präventivmaßnahme gegen mögliche Schäden an der Infrastruktur, dem Wohlbefinden der Teilnehmer und dem allgemeinen Ruf der Veranstaltung. Referent: Joachim Schug (Diplom-Meteorologe)

13.00 Uhr, Main Stage, Halle 11 Ebene 0, E11

Ein Label-Manager und ein DJ/Produzent

Im Gespräch: Geschichten aus fast 30 Jahren im Musik-Business. Referenten: Edgar Dirksen (Cocoon Rec), Gregor Tresher (Cocoon Rec)

13.00 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Speakers Area Dedolight NEO - The next generation of Dedolight LED light Referentin: Britta Becker (BVFK - Bundesverband der Fernsehkameraleute)

13.00 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Speakers Area Anleitungen/Übungen zur Lichtgestaltung, Führung von E-Kamera-Systemen, Steadicam und Polecam, Probebetrieb

13.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage ARKAEI

Ein faszinierendes Showcase von Controllerism und Visual DJing.

13.30 Uhr, Pro Audio College, Portalhaus, Ebene 1, Raum Transparenz 2 Grundlagen der Raumakustik und des Studiobaus

Bau- und Raumakustik sowie der Studiobau an sich muss gewisse Parameter erfüllen.

Referent: Ulrich Schiller

13.30 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box DJ Chederac

Scratch Routine vom bekannten polnischen Turntablisten

13.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage 69 Beats

Showcase des polnischen DJ Champions präsentiert von HUMPTER.

14.00 Uhr, I-ESC, Halle 11, Ebene 0, Raum ,,Korall"

Nach der Weltfunkkonferenz - wie sicher sind die Kulturfrequenzen?

Denn 85 Prozent des Equipments, das in Europa für die Tontechnik eingesetzt wird, nutzen diesen Bereich. Die Weltfunkkonferenz 2023 hat sich intensiv mit dem Frequenzbereich beschäftigt. Was sind die Ergebnisse? Was heißt das für die nationale Umsetzung? Droht ein Frequenzverlust, gar eine Fragmentierung von nutzbaren Frequenzbereichen in Europa? Was können Frequenzmanager nun tun? Wie stellt man sich auf die Situation ein? Referenten: Jens Pilz, Marco Völzke, Dr. Jochen Zenthöfer

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14.00 Uhr, PLS Conference, Halle 11, Ebene 0, Raum ,,Granat" Licht als Werkstoff

Er nutzt Licht in seinen verschiedenen Formen, um nahezu architektonische Konstruktionen und Skulpturen zu schaffen. Diese sind jedoch nicht statisch oder stellen eine einzelne Form dar, sondern verändern sich im Laufe der Zeit zu immer neuen, mit der Musik synchronisierten Strukturen und Mustern. So entstehen Dramaturgien aus Licht, Bewegung und Klang, die den Besucher oder Betrachter in eine Parallelwelt entführen und ihn den Alltag für eine Weile vergessen lassen. In seinem Vortrag wird Bauder einen Einblick in die Entstehung seiner Werke geben und einen Blick hinter die Kulissen gewähren. *Referent: Christoph Bauder*

14.00 Uhr, Main Stage, Halle 11, Ebene 0, E11

Metamorphose. Kirchenräume als Begegnungsorte der Zukunft.

In dialogischem Format vermitteln die beiden Vortragenden Thesen zur Wandlung von Kirchenräumen. Sie berichten von ihren akademischen Studien im Rahmen eines Entwurfsprojekts an der Hochschule Darmstadt, analysieren anschaulich weltweite Benchmark Cases und liefern Denkanstöße wie die Wandlung von Kirchen gelingen kann. Es werden prozessuale Strategien, wie z.B. Beteiligungsmodelle, räumliche Prinzipien und programmatische Dimensionen aufgezeigt. Im Kontext der Prolight & Sound werden auch aktuelle Tendenzen und Potentiale von technologischen Aspekten erschlossen.

Referenten Prof. Dipl.-Ing. Lars Uwe Bleher (Hochschule Darmstadt), Hanna-Lena Neuser (Evangelische Akademie Frankfurt)

14.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box DJ Emanuel Satie

Live DJ Set vom Star der elektrischen Musikszene.

14.00 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Talk

Honorarentwicklung bei Film- und Fernsehen

Referenten: Stephan Korb, Jens Schade (BVFK - Bundesverband der Fernsehkameraleute), Guntram Schuschke, (fair TV), Frank Trautmann (BVFK), Markus Zapf (Neopol Film Frankfurt)

14.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage **SOMA Laboratory**

Produktvorstellung und Performance am Pulsar 23 Analog Synthesizer.

14.30 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage Yamaha

Finger-Drumming mit dem Finger Drum Pad FGDP-30 von Yamaha.

15.00 Uhr, I-ESC, Halle 11, Ebene 0, Raum ,,Korall"

Die strafrechtliche Sicht - Was passiert, wenn mal was schief gegangen ist? Reichweite und Grenzen individueller, strafrechtlicher Verantwortlichkeit bei Betriebsunfällen, im Zusammenhang mit der Delegation von Aufgaben, der Pflichtenübertragung und beim Zusammenwirken Mehrerer *Referent: Andreas Stüve (Polizeipräsident in Essen)*

15.00 Uhr, Main Stage, Halle 11, Ebene 0, E11

European Championships in München - Wie gelingt eine nachhaltige Sportgroßveranstaltung?

Die Veranstaltung war ein großer Erfolg und wurde mit dem SPOBIS Award für Nachhaltigkeit in der Kategorie "Venue & Event" ausgezeichnet und kam unter die Finalisten des Deutschen Nachhaltigkeitspreises. Die gesetzten Nachhaltigkeitsziele wurden in nahezu allen Bereichen erreicht. Wie sah das Nachhaltigkeitskonzept aus und welche Herausforderungen gab es in der Zusammenarbeit mit den Stakeholdern? Marion Schöne berichtet von Ihren Erfahrungen und gibt Einblicke in die Dos and Donts.

Referentin: Marion Schöne (Olympiapark München)

15.00 Uhr, Pro Audio College, Portalhaus Ebene 1, Raum Transparenz 2 "Als ob kein Lautsprecher da wäre …" - Sprache und Musik "unhörbar" verstärken

Rock'n'Roll muss kesseln, und die PA ist ein integraler Bestandteil des Erlebnisses.

Referent: Jörn Nettingsmeier (VDT)

15.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage **Denise Frey**

Denise entdeckte während ihres Musikstudiums ihre Liebe zur Improvisation und elektronischen Musik und war als Saxophonistin in verschiedenen Bands und Projekten aktiv. 15.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box Al Jacobi

Al Jacobi aus Dänemark ist der einzige Rapper der Welt, der mit den MiMU Gloves auftritt

15.30 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage DJ Talk

Vortrag zum Thema "Moderne Lichtsteuerungssysteme für Mobile Djs"

15.30 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05

Soziale Absicherung für Selbständige

Referenten: Jörg Geⁱßler (VRFF Die Mediengewerkschaft.), Dr. Andreas Lutz (Verband der Gründer und Selbstständigen Deutschland), Marcus Pohl (BAGSV - Bundesarbeitsgemeinschaft Selbstständigenverbände), Frank Trautmann (BVFK - Bundesverband der Fernsehkameraleute), Dr. Christiane Schnell (IFS - Institut für Sozialforschung), Tobias Sommer, Moderatorin: Anke Seeling

16.00 Uhr, I-ESC, Halle 11, Ebene 0, Raum ,,Korall"

Spionage, Sabotage, Cyberangriffe - Ihre Daten im Visier

Nach einem allgemeinen Überblick über das Thema, die Beleuchtung der "Tätergruppen" und der gängigsten Methoden erfolgt ein Überblick über die wesentlichen Elemente von Konzepten zur Abwehr von Bedrohungen bzw. dem Umgang mit erfolgreichen Angriffen.

Referent: Henning Voß

16.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage DJ City LinkUp

DJ City LinkUp ist Deutschlands führendes Networking-Event für Club-Djs.

16.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box .noir.

Eine mitreißende Live-Show des italienischen Electronic Music Artists

16.30 Uhr, Pro Audio College, Portalhaus Ebene 1, Raum Transparenz 2 ESSENCE: Lebenslanges Lernen in der EU

Das von der Europäischen Union geförderte und vom VDT geleitete Projekt ESSENCE-ERASMUS arbeitet an einer gemeinsamen, europäischen Live-Sound-Qualifikation

Referent: Jörn Nettingsmeier (VDT)

16.30 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Speakers Area Anleitungen/Übungen zur Lichtgestaltung, Führung von E-Kamera-Systemen, Steadicam und Polecam, Probebetrieb

Donnerstag, 21. März 2024

10.00 Uhr, Performance + Production Hub, 11 Ebene 0, E50, Live Box Swing Flare Club

Der Swing Flare Club ist eine kreative und hochmoderne Gruppe begabter Künstler, die die Grenzen der Musiktechnologie immer weiter hinausschieben.

10.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage **ARKAEI**

Ein faszinierendes Showcase von Controllerism und Visual Djing.

Image Creation Hub, Halle 11 Ebene 0, E05, Speakers Area

Anleitungen/Übungen zur Lichtgestaltung, Führung von E-Kamera-Systemen, Steadicam und Polecam, Probebetrieb

10.30 Uhr, Pro AudioCollege, Portalhaus, Ebene C, Raum Prisma Soundchecken - aber richtig!

Der Soundcheck ist für die Techniker der wichtigste Termin im Ablauf eines jeden Konzerttages. Crews treffen aufeinander, man gewinnt oft einen ersten Eindruck vom Gegenüber. Gleichzeitig müssen alle oft unmittelbar an einem Strang ziehen, denn Zeit ist Geld. Beim Konzert soll alles perfekt klingen, also muss am Ende des Soundchecks alles justiert sein. Genauso wichtig ist aber die Stimmung im Team. Lange Soundchecks machen schlechte Laune und sind das Verhältnis zwischen Künstler und Techniker wird nicht besser, je länger man braucht. Christoph Stoll gibt einen Einblick in sein "Mind-Set", mit dem Soundchecks kurz und für die Menschen auf der Bühne vertrauensbildend werden. Er erklärt, was er auf der Bühne und am Pult vorbereitet, bevor die Band ankommt und welche Routine bei den Soundchecks abläuft. Manches an seiner persönlichen Herangehensweise ist vielleicht unorthodox und muss nicht für jeden funktionieren, inspirieren kann es schon. Der Kurs richtet



sich in erster Linie an Tontechniker aber auch an Auszubildende. Er soll helfen, Soundchecks selbstbewusst und zügig "durchzuziehen". Auch Künstler und deren Betreuer können hier etwas Wichtiges mitnehmen. *Referent: Christoph Stoll*

10.30 Uhr, Manufacturers Forum, Halle 11 Ebene 0, Raum "Korall"

Sixty82 - Arena Frame, Alpha Modular Truss System und zugehörige Produkte

Referent: Dipl. Ing. Matthias Moeller

10.50 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage DJ Talk

Vorstellung des Produkts "bookitup" zur Verwaltung von Anfragen und Auftritten für Mobile Djs

11.00 Uhr, Main Stage, Halle 11 Ebene 0, E11

Große Konzerte vs. Eigene

Yasi stand schon auf großen Bühnen, aber auch auf kleinen. Das sind komplett unterschiedliche Welten.

Referent: Yasi Hofer

11.00 Uhr, PLS Conference, Halle 11 Ebene 0, Raum "Granat"

VPLT College: Netzwerke in der Veranstaltungstechnik - Grundlagen, Best Practices und zukünftige Trends

Einstieg in die Netzwerktechnik. Themen wie Layer 2 & 3, also IP- und MAC-Adressen, VLANs, Managment-Interface und Topologien werden besprochen. *Referent: Leo Kühne*

11.00 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Speakers Area Der Weg zum automatisierten Tracking Referent: Kevin Klaes (Zactrack)

11.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage **SOMA Laboratory**

Produktvorstellung und Performance am PULSAR 23 Analog Synthesizer.

11.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage Yamaha

Finger-Drumming mit dem Finger Drum Pad FGDP-30 von Yamaha.

11.30 Uhr, Manufacturers Forum, Halle 11 Ebene 0, Raum "Korall" Es sollte unmöglich sein, also haben wir es gebaut und getourt

Butch Allen erzählt von einigen der atemberaubendsten und spektakulärsten Designs der Konzertgeschichte. Er erzählt von den Herausforderungen, mit denen diese Produktionen konfrontiert waren, den Lösungen, die gefunden wurden, und letztlich vom Weg, der zum Erfolg führte. In einer Post-COVID-Welt geht es auch um die Produktionszeiten, einen angespannter Arbeitsmarkt und Beschränkungen in der Lieferkette, die die Komplexität noch weiter erhöhen. *Referent: Butch Allen*

11.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage DJ Ray-D

Im HUB wird er seine DJ-Schule Rayacademy präsentieren und Workshops zu den Themen Club-DJIng und Turntablism geben.

12.00 Uhr, Pro Audio College, Portalhaus, Ebene C, Raum Prisma Der WHO-Standard "Safe listening venues and events": die Rolle der Menschen am Pult

Referent: Jörn Nettingmeier (VDT)

12.00 Uhr, Main Stage, Halle 11 Ebene 0, E11

Bambus boomt: Bau von klimaschonenden Veranstaltungen

Es wird untersucht, wie Bambus die europäische Veranstaltungsbranche im nächsten Jahrzehnt prägen kann, wenn es um szenische Gestaltung, tragende Strukturen, regenerativen Anbau und sozioökonomische Faktoren geht. *Referenten: Jan Detavernier, Christopher Matthews, Levi Jack Sibthorpe*

12.00 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Speakers Area **Objektive - Das Auge der Kameraleute**

Ein Erfahrungsbericht

Referenten: Tom Holzhauser (BVFK - Bundesverband der Fernsehkameraleute), Andreas Schlenker

12.15 Uhr, Performance + Production, Halle 11 Ebene 0, E50, Open Stage DJ Iron

DJ Iron hat 1998 das Auflegen für sich entdeckt, nach viel Training und viel Geduld gilt er als einer der besten Club-DJs in Deutschland.

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12.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box Steve Nash

Showcase des Finger Drumming World Champions 2024

12.30 Uhr, Manufacturers Forum, Halle 11 Ebene 0, Raum "Korall"

Einfache und schnelle Prüfung des elektrischen Equipments (DGUV-V3) Der Zuhörer erfährt, wie elektrische Geräte, Verteiler, Verlängerungen unterschiedlichster Bauart etc. schnell, einfach und digital geprüft werden können, inklusive rechtskonformer Dokumentation.

Referent: Markus Geyermann

12.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage 69 Beats

Showcase des polnischen DJ Champions präsentiert von Humpter.

13.00 Uhr, PLS Conference, Halle 11 Ebene 0, Raum "Granat"

Es ist NICHT dauerhaft!

Beschreiben wird die aktuelle Situation in Bezug auf IEC 60364-7-711, VDE 0100-711 und 740, DIN 15767. Außerdem wird ein Ausblick auf weitere Entwicklungen aus Sicht der Anwender gegeben.

Referenten: Thomas Bardeck, Dietmar Rottinghaus

13.00 Uhr, Main Stage, Halle 11 Ebene 0, E11

Live-Entertainment in die Zukunft katapultieren - Wie das HOLOPLOT X1 Matrix Array auf der Sphere in Las Vegas leistungsstarken, klaren und flexiblen Sound liefert.

Es werden die technologischen Grundlagen vorgestellt, die das X1 Matrix Array antreiben, erklärt, wie diese in das Systemdesign für Sphere umgesetzt wurden und über einige der wichtigsten Herausforderungen gesprochen, die während des Entwicklungs- und Inbetriebnahmeprozesses zu bewältigen waren. *Referent: Michael Kastner*

13.00 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Speakers Area Infinity Lighting - Bringen Sie die Sonne ins Studio

Referentin: Britta Becker (BVFK - Bundesverband der Fernsehkameraleute)

13.00 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Speakers Area Anleitungen/Übungen zur Lichtgestaltung, Führung von E-Kamera-Systemen, Steadicam und Polecam, Probebetrieb

13.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box Al Jacobi

Al Jacobi aus Dänemark ist der einzige Rapper der Welt, der mit den MiMU Gloves auftritt

13.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage **ARKAEI**

Ein faszinierendes Showcase von Controllerism und Visual DJing.

13.30 Uhr, ProAudioCollege, Portalhaus, Ebene C, Raum Prisma

Frequenzmanagement

Nach einem Einblick in das Thema Frequenzmanagement wird erläutert, wo die rechtlichen Rahmenbedingungen zu finden sind und worauf man achten sollte. *Referent: Marco Völzke, selbständiger Frequenzmanager*

13.30 Uhr, Manufacturers Forum, Halle 11 Ebene 0, Raum "Korall"

Realitätsgetreue Fixture Ansteuerung mit dem grandMA3 System und GDTF Eine einfache und unkomplizierte Steuerung, die auf dem realen Verhalten einer Lampe basiert, ist das, was man sich von einem Lichtsteuerungssystem wünscht. In dieser Session wird ein Blick auf zukunftssichere Konzepte und zeitsparende Workflows innerhalb des grandMA3 Systems geworfen. Außerdem wird besprochen, wie GDTF als Standard zur Beschreibung von Fixture-Typen das gesamte Produktions- und Programmiererlebnis bereichert. *Referentin: Daniel Kannenberg*

13.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage Steve Nash

Showcase des Finger Drumming World Champions 2024

14.00 Uhr, PLS Conference, Halle 11 Ebene 0, Raum "Granat"

XR-Baumuster - effiziente Produktionsplanung statt XR-Gimmicks

Technologien wie Virtual Reality und Augmented Reality sind aus der Gaming Industrie bekannt - Spielzeuge der Unterhaltungselektronik. Doch der Einsatz von XR im praktischen Arbeitsalltag ist mehr als nur eine Spielerei und verdient einen seriösen Platz im Werkzeugkasten. Die Vorteile im Einsatz von XR in der Planung von Produktionen sind vielfältig und ein hilfreiches Kommunikationstool. Doch der Einsatz muss gelernt sein, denn eine effiziente Kommunikation hängt auch von der richtigen Nutzung ab. Referent: Vincent Kaufmann

14.00 Uhr, Main Stage, Halle 11 Ebene 0, E11

Jetzt mal Klartext: was sind korrekte Arbeitsbedingungen?

Das Forum Veranstaltungswirtschaft spricht zu rechtmäßige Arbeitszeiten, Scheinselbständigkeit und mehr.

Referentin: Timo Bittner (Flüsterlaut), Helge Leinemann (Exposive Medien gruppe), Marcus Pohl (ISDV), Linda Residovic (VPLT), Hendrik Rogel (PM Group), Moderator: Randell Greenlee (VPLT)

14.00 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Talk

Nachhaltigkeit bei Film- und Fernsehen

Referentin: Britta Becker (BVFK - Bundesverband der Fernsehkameraleute), Marie Marxmeier, Nicole Stoewesand, Oliver Zenglein (Crew United), Tim Zur (Sumolight), Moderatorin: Anke Seeling

14.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E30, Live Box Yasi Hofer

Live Performance der Ausnahmegitarristin.

14.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage Ableton

Produktpräsentation des neuesten Midi-Controllers PUSH 3

14.30 Uhr, Manufacturers Forum, Halle 11 Ebene 0, Raum "Korall"

Emotionale Reaktionen mit innovativen Spezialeffekten auslösen Um eine Emotion auszulösen, ist Engagement erforderlich. In der Unterhaltungsindustrie beschäftigen wir uns mit den Sinnen. Normalerweise tun wir dies durch eine Form visueller Medien wie Beleuchtung, Video, Laser oder eine szenische Konstruktion oder eine hörbare Interaktion unter Verwendung von Musik, Tonspuren oder Gesang. Ton und Bild können einen tiefgreifenden Einfluss darauf haben, wie wir uns unterhalten - tatsächlich sind sie seit Jahrhunderten die tragende Säule des Theaters und der Live-Aufführungen. *Referentin: Stephen Thurgood-Perry*

14.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage Satzky Audiotechnik

Produktpräsentation des Beschallungssystemes

15.00 Uhr, Main Stage, Halle 11 Ebene 0, E11

Was ist Deine One LP?

Fotoporträtserie, die die Qualitäten von Aufnahmen und die Auswirkungen, die sie auf das Leben der Menschen haben, erforscht. Jedes Porträt zeigt die Person mit einer Aufnahme, die von großer persönlicher Bedeutung ist, und wird von einem kurzen Interview begleitet.

Referenten: William Ellis, Prof. Tim Wall

15.00 Uhr, PLS Conference, Halle 11 Ebene 0, Raum Granat

Vom klassischen Verfolgungsspot bis zur vollständigen Verfolgung. Eine kleine Reise durch die Zeit und was wir noch erwarten können. Im Zuge der technologischen Entwicklung unserer Branche hat sich auch im Bereich der klassischen Scheinwerfer einiges getan. *Referent: Christian Glatthor*

15.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage 69 Beats

Showcase des polnischen DJ Champions präsentiert von Humpter.

15.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box DJ Chederac

Scratch Routine vom bekannten polnischen Turntablisten

15.30 Uhr, Manufacturers Forum, Halle 11 Ebene 0, Raum "Korall" Schwarze Projektionsfolien... Geht nicht? Geht doch! Einsatz im Theater-/ und Eventbereich

Referent: Jan Walter

15.30 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05

Frauen hinter der Kamera

Referentinnen: Viola Laske (BVFK - Bundesverband der Fernsehkameraleute), Caroline Rosenau (BVFK), Sofia Samoylovas, Elke Werry, Anke Seeling

15.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box Al Jacobi

Al Jacobi aus Dänemark ist der einzige Rapper der Welt, der mit den MiMU Gloves auftritt



15.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage Intuitive Music

Produktvorstellung des "Exquis" Controllers, der den Midi Innovation Award 2023 gewonnen hat.

16.00 Uhr, Main Stage, Halle 11 Ebene 0, E11

Der Weg zum ersten Stadthotel mit Null-Energie-Bilanz - Eindrücke aus der Praxis

Michaela Reitterer errichtete 2009 das weltweit 1. Stadthotel mit Null-Energie-Bilanz und richtete 2020 die gesamte Ausrichtung auf die 17 nachhaltigkeitsziele der UNO, den SDGs aus. Was das in der Praxis bedeutet, warum sie in Zeiten des Fachkräftemangels dieses Problem nicht kennt und was das für jede und jeden Einzelnen in der Umsetzung bedeutet, darüber erzählt sie in diesem Vortrag.

Referentin: Michaela Reitterer

16.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box Swing Flare Club

Der Swing Flare Club ist eine kreative und hochmoderne Gruppe begabter Künstler, die die Grenzen der Musiktechnologie immer weiter hinausschieben.

16.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage DJ Talk

Vortrag zum Thema "Moderne Lichtsteuerungssysteme für Mobile DJs"

16.30 Uhr, Manufacturers Forum, Halle 11 Ebene 0, Raum "Korall"

Teleskop-Tribühnensysteme

Das Teleskoptribünensystem ist ein System zum Öffnen und Schließen der tragbaren Tribüne, das in großen Gebäuden wie Sporthallen, Messegeländen und Konzertsälen verwendet wird, in denen Platzprobleme auftreten. *Referent: Inanc Sayin*

16.30 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Speakers Area Anleitungen/Übungen zur Lichtgestaltung, Führung von E-Kamera-Systemen, Steadicam und Polecam, Probebetrieb

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Produktvorstellung und Performance am Pulsar 23 Analog Synthesizer.

17.30 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage **Yamaha**

Finger-Drumming mit dem Finger Drum Pad FGDP-30 von Yamaha.

17.30 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box Satzky Audiotechnik

Soundvorführung des Beschallungssystemes.

Freitag, 22. März 2024

10.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box Swing Flare Club



Der Swing Flare Club ist eine kreative und hochmoderne Gruppe begabter Künstler, die die Grenzen der Musiktechnologie immer weiter hinausschieben.

10.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage ARKAEI

Ein faszinierendes Showcase von Controllerism und Visual Djing.

10.15 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Speakers Area Anleitungen/Übungen zur Lichtgestaltung, Führung von E-Kamera-Systemen, Steadicam und Polecam, Probebetrieb

10.30 Uhr, Pro Audio College, Portalhaus, Ebene C, Raum Prisma Soundchecken - aber richtig!

"Am meisten Spaß macht doch der Soundcheck!" - noch nie gehört? Ich auch nicht.

Referent: Christoph Stoll

10.30 Uhr, Das Unternehmerforum, Halle 11 Ebene 0, Raum Korall Scheinselbständigkeit und die richtige Beauftragung von Subunternehmen Dieser Workshop richtet sich an die Geschäftsführung, Human Ressources, Dispoition von Produktionen, Projektmanager und Selbständige.

11.00 Uhr, PLS Conference, Halle 11 Ebene 0, Raum "Granat" Wie KI unsere Branche revolutionieren wird

Ist dies Fluch oder Segen für unsere Branche? Wie können sowohl kleine Firmen als auch große Konzerne KI sinnvoll einsetzen? Kann KI den Fachkräftemangel lindern? Welche Vorteile & Nachteile KI für unsere Industrie bringt,. *Referent: Titus Härich*

11.00 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Speakers Area **Der Weg zum automatisierten Tracking** *Referent: Kevin Klaes (Zactrack)*

11.00 Uhr, Performance + Production Hub. Halle 11 Ebene 0, E50, Open Stage **SOMA Laboratory**

Produktvorstellung und Performance am Pulsar 23 Analog Synthesizer.

11.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage Yamaha

Finger-Drumming mit dem Finger Drum Pad FGDP-30 von Yamaha.

11.30 Uhr, Camera College, Halle 11 Ebene 0, Raum Karmesin Licht bei Streamern / Licht als Gestaltungsmittel

11.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box Al Jacobi

Al Jacobi aus Dänemark ist der einzige Rapper der Welt, der mit den MiMU Gloves auftritt

11.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage Ableton

Produktpräsentation des neuesten Midi-Controllers PUSH 3

12.00 Uhr, PLS Conference, Halle 11 Ebene 0, Raum "Granat" So erstellen Sie professionelle Drohnenshows!

Vom Design bis zu Start der Drohnen. Als Einzelshow oder Teil einer größeren Produktion. Ich nehme Sie mit auf einen Kurztrip durch die spektakulärsten Shows der Welt und zeige wie Drohnen die Veranstaltungswelt verändern. *Referent: Peter Smiatek*

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12.00 Uhr, Main Stage, Halle 11 Ebene 0, E11

Erfolgsfaktoren für Events

Events werden in kreativen Prozessen entworfen - oft aber auch einfach von Termin zu Termin fortgeschrieben. Dabei stehen vielfach das Budget und der Zeitdruck im Vordergrund, eine klare Definition von Zielen und Zielgruppen fehlt - ebenso wie die Überprüfung des Ergebnisses! Dieser Vortrag beleuchtet Faktoren, die für den Event-Erfolg wichtig sind.Mehr Verständnis für Catering, Matchmaking, Veranstaltungstechnik und weitere Faktoren schärft das Verständnis dafür, wie sie wirken und damit ein wichtiges Gestaltungs-Element sein können.

Referenten: Patrick Haag, Prof. Stefan Luppold

12.00 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Speakers Area Kamerabewegungen Steadicam/PoleCam

Referenten: Michael Gebendorfer (BVFK), Matthias Gollmer (BVFK), Martin Müller

12.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage DJ Iron

DJ Iron hat 1998 das Auflegen für sich entdeckt, nach viel Training und viel Geduld gilt er als einer der besten Club-DJ's in Deutschland.

12.30 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box Steve Nash

Showcase des Finger Drumming World Champions 2024

12.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage Showcase des polnischen DJ Champions präsentiert von Humpter.

13.00 Uhr, PLS Conference, Halle 11 Ebene 0, Raum "Granat" Trends bei den Sicherheitsstandards für Veranstaltungen

Aktuelle Informationen über die neuesten veröffentlichten Normen und Fortschrittsberichte über neue Normenentwürfe, die sich in der Entwicklung befinden, vom einzigen ANSI-akkreditierten Entwickler von Sicherheitsnormen für die Unterhaltungsindustrie in den USA. Seit April 2023 wurde eine weitere neue Sicherheitsnorm für Veranstaltungen veröffentlicht, zwei Normen wurden vom International Building Code anerkannt, und mehrere neue Normungsprojekte im Bereich der Ausrüstungs- und Veranstaltungssicherheit wurden in Angriff genommen. Die Norm ANSI E1.50-1 (Stützstrukturen für Videosysteme) wird derzeit überarbeitet, und eine weitere neue Norm für die Belegung von 19-poligen Steckern wurde in Angriff genommen. Die Trends sind global, und wir alle arbeiten weiterhin an denselben Zielen! Gibt es Möglichkeiten für eine globale Harmonisierung? *Referent: Richard Nix*

13.00 Uhr, Main Stage, Halle 11 Ebene 0, E11

Roundtable der Hochschulen - Akademische Bildung Heute & Morgen in der Medien- und Veranstaltungstechnik

Wie sieht das Angebot für Studierende an den Hochschulen momentan aus? Wo sehen die Hochschulen in Zukunft die Herausforderungen bei sich, oder insgesamt in Bezug auf akademische Abschlüsse im Bereich der Medienund Veranstaltungstechnik? Welche Themen sind an den Hochschulen zurzeit aktuell oder welche werden vielleicht auch heiß diskutiert? Der VPLT moderiert das Gespräch mit Vertretern der führenden Hochschulen in Deutschland. Fragen aus dem Publikum sind erwünscht!

Referenten: Prof. Axel Barwich, Prof. Dr. Alexander Lindau, Laura van Haperen, Anke von der Heide

13.00 Uhr, Das Unternehmerforum, Halle 11 Ebene 0, Raum Korall Wie mache ich mich selbständig in der Kultur und Kreativwirtschaft? Dieser Vortrag wendet sich an Menschen in mobilen (nicht ortsgebunden), künstlerischen, technischen, kulinarischen, organisatorisch/planerischen und kreativen Berufen.

13.00 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Speakers Area Kurzworkshop SUMOSKY - Mixed Reality with Image Based Lighting

13 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Speakers Area Anleitungen/Übungen zur Lichtgestaltung, Führung von E-Kamera-Systemen, Steadicam und Polecam, Probebetrieb 13.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box Al Jacobi

Al Jacobi aus Dänemark ist der einzige Rapper der Welt, der mit den MiMU Gloves auftritt

13.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage Intuitive Music

Produktvorstellung des "Exquis" Controllers, der den Midi Innovation Award 2023 gewonnen hat.

13.30 Uhr, Image Creation Hub, Halle 11 Ebene 0, E05, Talk Azubi-Tage - Open Stage

Professional Training - Aus- und Weiterbildung Kamera Referenten: Felix Fischl (Filmhaus Frankfurt), Jörg Geißler (VRFF), Nils Jahnke (BVFK), Eyk Stein, Frank Trautmann (BVFK), Moderatorin: Anke Seeling

13.30 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage Satzky Audiotechnik

Produktpräsentation des Beschallungssystemes

13.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage Steve Nash

Showcase des Finger Drumming World Champions 2024

13.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box DJ Chederac

Scratch Routine vom bekannten polnischen Turntablisten

14.00 Uhr, Main Stage, Halle 11 Ebene 0, E11 Vortrag EVVC - Future Talents Day

Von AnnenMayKantereit bis Coldplay, von Verkehrswende bis Nachhaltigkeit Wieso die Fan Anreise für Großveranstaltungen ein derart wichtiger Hebel ist und wie Veranstalter, Künstler und Ticketanbieter kreativen Einfluss nehmen können. *Referentin: Rosa Hoelger (The Changency)*

14.00 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Live Box Scratch Battle powered by JICO

Competition der besten Turntable Artists präsentiert von JICO und Scratch Buffett.

14.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage **DJ Talk**

Vortrag zum Thema "Moderne Lichtsteuerungssysteme für Mobile DJs"

14.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage DJ Iron

DJ Iron hat 1998 das Auflegen für sich entdeckt, nach viel Training und viel Geduld gilt er als einer der besten Club-DJ's in Deutschland.

15.00 Uhr, Main Stage, Halle 11 Ebene 0, E11

Herzrasen - Die 3 Säulen der Zielerreichung

In seinem Vortrag Herzrasen, spricht Daniel Engelbrecht über die 3 Säulen der Zielerreichung, die ihm auf seinem Weg geholfen haben. Über den unbändigen Willen seine Ziele zu erreichen und dennoch die Achtsamkeit nie aus dem Auge zu verlieren, um die Gesundheit nicht zu gefährden. *Referent: Daniel Engelbrecht*

15.15 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage 69 Beats

Showcase des polnischen DJ Champions präsentiert von HUMPTER.

15.30 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage **SOMA Laboratory**

Produktvorstellung und Performance am Pulsar 23 Analog Synthesizer.

15.45 Uhr, Performance + Production Hub, Halle 11 Ebene 0, E50, Open Stage **Yamaha**

Finger-Drumming mit dem Finger Drum Pad FGDP-30 von Yamaha.

New podcast "Tourgespräche"

"My podcast isn't about the stars on stage, but about the people behind the scenes. Whether it's the crew or the band, everyone is interesting and important to make the big show a success", says "Tourgespräche" ("Tour Talks" in German) initiator Markus Vieweg. A preview.





All conversations take place on tour - hence the name. "This can be backstage, in a café, or wherever suits at the moment", explains Markus Vieweg. He himself is a touring musician, so the interviewees are more willing to give insights into their lives, their jobs, and anything else that is interesting. To kick off the small "Tourgespräche" series, there's a preview of the first four episodes.

For instance, there's Juliane Polack (left), a make-up artist and SFX specialist. She works for and with people from film, television, and music, and has worked with Scooter, Sido, and Lars Eidinger. She says: "When you stress out and think 'Oh God, nobody has called for a week, I'll never get a job again', then you create a pressure that you shouldn't have. You should actually lean back and say, 'Someone will call, I'm not worried, and I'll do my best, do some client acquisition', and then you can go your way like that."

Another podcast partner is Anne Pfüller (2nd from left). She is an organizer and executive at Mewes Entertainment Group and works with artists like the Prinzen, Sarah Connor, or Alvaro Soler. When asked what the important points are for her as an organizer during a running tour, she responds: "That naturally depends on the production: On a tour where the band and crew have been working together for a long time, you know: it's running smoothly. But if you're also responsible for the crew (...) you have to look at how everything works. It has to fit on a personal level, so you look at all the trades."



Kai Lindner (3rd from left) is a pianist and keyboardist for Johannes Oerding and runs his own recording studio in Hamburg. Additionally, he designs complete shows as a musical director, such as those for Alexander Klaws. "For me, it's very important that every instrumentalist who plays in one of my projects can speak openly. There are other options as well -I've experienced it myself. Sometimes I demand things and then suggest doing something differently, but if someone convinces me otherwise, they might be right and may even have a better approach. I hate nothing more than when something fails due to different egos."

Lastly, a preview of the episode with Tex van Buren (right), who works as a drum tech for productions by Nico Santos, KontraK, and SDP. In this job, he not only ensures a perfect setup every night but also provides fresh ideas when needed. "If you're in the metal scene, it's always intense: big backline, flames everywhere, and ideally four bass drums and eighteen toms. It's a bit of toxic masculinity, but it's also an incredibly awesome genre to reach many people internationally. It's also a very grateful audience, and you travel to many countries that you wouldn't otherwise go to."

The complete podcast episodes of "Tourgespräche" can be found at www.tourgespraeche.de. If you want to get in touch directly with Markus Vieweg, you can do so at info@tourgespraeche.de.

www.tourgespraeche.de



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KI & Co.: Practical applications instead of pure technology hypes

After an AI year in 2023, dominated by intelligent language models like ChatGPT and Bard, the event industry in 2024 shifts its focus back to the essentials: practical application.

"In 2023, there was experimentation; in 2024, there will be implementation: It's not about which technological trend is currently in vogue, but rather how these innovations can be seamlessly and effectively integrated into the planning and execution of events through a solid digital infrastructure", explains Maximilian Pohl (pictured), CEO of Eventnet. As a specialist in Wi-Fi and internet solutions for events, Eventnet understands the importance of a robust digital infrastructure as the foundation for successful events.

Virtual Reality (VR) and Mixed Reality (MR) are more than just buzzwords. The industry is in a phase of experimentation and cautious exploration. VR has been used for some time in event planning to enable virtual tours and interactive experiences that are not achievable in the real world. 2024 marks a new era. Hybrid events and personalized participant experiences can create new user experiences through AI.

VR and Mixed Reality: More than just buzzwords

The use of VR and MR has significantly increased in the event industry in 2023. "An example is the use of VR to demonstrate a product to visitors at a trade show that cannot be represented in reality. Or an object tour without the object in a very early planning phase", explains Pohl. "This creates added value for the visitor without the technology becoming an end in itself."

The success of VR, MR, and AI applications depends significantly on the ability of the digital infrastructure to provide real-time data or to update regularly. "Reliable infrastructure is crucial to ensure that the digital experience delights participants and does not frustrate them. This applies to all applications that work with live data or are designed for interaction. For example, VR live streams, gamification, or virtual journeys to other places. A connection failure would be as serious as a power outage during a live performance", warns Pohl.





Therefore, 2024 is not only the year of implementing VR, MR, and AI in the event industry but also the year in which professional digital infrastructure transitions from a "nice-to-have" to an absolute "must-have". The digital requirements for events continue to increase, along with the necessity of robust infrastructure. "Organizers urgently need competent partners to ensure that the technical side functions smoothly. Otherwise, they will constantly deal with technical installations or problem-solving instead of creating unforgettable experiences for their participants", adds the expert.

New demands in customer service: Infrastructure and creative concepts

According to his experience, customers currently need support in two aspects: providing suitable digital infrastructure and developing creative concepts. For the former, Eventnet offers solutions that, among other things, are suitable for modern real-time applications due to high redundancy and low latency. "Many customers want to use the technology but are not yet concerned about a robust technical foundation", says Pohl. For the latter, his company collaborates with 3D designers and VR experts.

"Organizers should take these steps right now to remain competitive", recommends the expert. For example, it's good to experiment with small applications and initially consider them as helpful gimmicks. "This keeps costs within budget and allows for experimentation." It's important that the experience for users is truly good. For this, it must make sense, be well implemented, and run technically without interruptions. Whether it's the current interactive immersive exhibition "Inside van Gogh", Monet's 360-degree journey through the history and works of the Impressionist, or the time-travel provider Time-Ride, which leads through 7000 years of Bavarian history with VR: Especially in the field of art, culture, and tourism, according to Eventnet, there are many successful VR-supported formats that would have been unthinkable ten years ago and now generate significant revenue. While the big buzzwords dominate the media, there are some trends that have grown in practice - and therefore may be even more significant:

Hybrid Events and Year-round Event Cycles with More Sustainability: Many companies are switching to a model where they host smaller physical and virtual events more frequently throughout the year, spreading them out. This practice allows for continuing discussions and engagement of participants online over longer periods. Sustainability will also play an increasing role and can be effectively supported by digitalization. Sponsor advertising can be displayed digitally, personalized items can be printed on-site as needed, and participants can optionally participate remotely in program points.

Personalized Participant Experiences: The topic of Artificial Intelligence (AI) is also making increasing inroads into the event industry. Or-

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ganizers are increasingly using AI and data analytics to create individual experiences for participants. This includes personalized schedules, recommendations tailored to the interests of participants, and automatically generated summaries of program points or follow-up questions from participants. For the first time, the masses can be provided with individualized information.

The trend is towards automating and consolidating various event technologies into an integrated solution to provide organizers and participants with a seamless event experience. Because the more natural and easier it is to use the individual digital offerings, the better the acceptance and user experience. This also applies to the presentation of events on websites or in event apps. "User demands will continue to increase in 2024", Pohl is convinced. "The better the information is presented and accessible, the more positively the entire event will be perceived." Organizers should work with professionals to create tailored event pages that not only reflect the essence of the event but also allow participants to navigate modernly and intuitively.

Conclusion: Meaningful integration as the key to success

Digitalization in the event industry in 2024 is not just a trend. It is a necessity to create added value - and thus a prerequisite for success. Through the targeted integration of VR, Mixed Reality, and AI into event planning and execution, events can be elevated to a new level. A powerful and reliable digital infrastructure is the foundation on which these applications build. Technology must be a means to an end. Experimentation is the basis for competitiveness.

About Eventnet: Eventnet GmbH is a provider of reliable internet solutions in the events industry as well as digital services for event organization such as video streaming, event apps, cashless payment systems, or WLAN marketing. The company specializes in planning and implemen-



ting individual solutions for event locations, congresses, festivals, and other projects that rely on a stable internet connection or digital visitor management. The portfolio includes both temporary internet solutions and permanent installations for locations. The systems and applications can be individually tailored to the event concept, the size of the events, and the local conditions, and are tailored to the respective needs.

www.eventnet.de



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State-of-the-art technology at the Ballin House

Hapag-Lloyd has modernized the main conference room of its headquarters and equipped it with an LED wall from Delta Display Systems.

The headquarters of Hapag-Lloyd AG, the impressive Ballinhaus (Ballin House), is one of the landmarks of Hamburg. The shipping company operates one of the largest container fleets worldwide. This strong market position requires representative and optimally equipped conference and meeting rooms. Now, Hapag-Lloyd has modernized the main conference room and equipped it with an innovative LED wall from Delta Display Systems.

The roots of Hapag-Lloyd AG date back far into the 19th century when the first ships of the founding companies - the Hamburg-Amerikanische Packetfahrt-Actien-Gesellschaft (Hapag) and Norddeutscher Lloyd - set sail, transporting cargo and passengers to New York.

176 years later, Hapag-Lloyd is a global liner shipping company with 258 modern container ships, 1.9 million TEU transport volume, around 14,000 employees in 400 offices in 135 countries.

Hapag-Lloyd has a container capacity of 2.9 million TEU - including one of the largest and most modern fleets of refrigerated containers. A total of 115 liner services worldwide ensure fast and reliable connections between more than 600 ports on all continents. Hapag-Lloyd is one of the





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leading providers in transatlantic, Middle East, Latin America, and intra-America traffic. One of Hapag-Lloyd's goals is to ,,connect the world across the seas". However, this goes far beyond shipping traffic because to connect companies, markets, and economies, the most advanced communication tools and technologies are also required.

Back to the headquarters in Hamburg: The existing cube video wall no longer met current demands and requirements. So it was clear that a modern LED wall was essential for the redesign of the main boardroom. The choice fell on a 110-inch HD COB LED wall with a pixel pitch of just 1.2 mm from Delta Display Systems. It offers seamless, brilliant images thanks to the small pixel pitch, and even in close proximity, it still provides sharp reproduction. The anti-glare surface and wide viewing angle ensure a pleasant viewing experience. The new LED wall supports multi-screen conference applications and enriches every meeting.

In addition to the main boardroom, the lobby of the Ballin House was also equipped with an LED wall. The installed 165" Full HD LED COB videowall from Delta Display Systems welcomes visitors with generous visualizations in lifelike colors and outstanding image quality or with upto-date information.

An important part of any LED wall solution is the wall mounting. In this case, the frame was designed, manufactured, and installed by EHM Visualsystems. It is based on the cantilever system, which allows access to the back of the LED wall for fine adjustments without the need to remove the COB boards. The Delta COB LED wall can be fully serviced from the front. The magnetic LED modules are mounted on the frame without the need for special tools. On-site calibration is not required as all panels are calibrated at the factory.

Datavision Germany was responsible for selecting the LED wall. The installation was carried out by Visual Technology from the UK, who are also known for renowned projects in Germany.

"We are very pleased that the choice fell on an LED wall from Delta Display Systems. This not only equips the boardroom with state-of-theart technology but also ensures sustainability to be prepared for future developments", says Holger Graeff, General Manager Vivitek & Delta Display Solutions EMEA, DSBU.





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Enhanced audience experience

The Danish company Cue Pilot relies on Aja Video Systems for its solutions in planning professional video productions.

From live broadcasts to on-site events, the audience experience is becoming more extensive day by day. Large-scale LED displays as the central element of big arena shows and TV formats continue to create popular stage entertainment formats. The viewer perceives every production detail, from lighting to music to choreography and wardrobe, more intensely than just a few years ago.

However, this means that every single production element of a show must be perfectly positioned and synchronized. Copenhagen-based company Cue Pilot enables this for broadcasters and event producers, offering solutions for studio and mobile production planning and execution based on Aja Video Systems' I/O technology. These have already been used in countless productions in Europe and the United States, including tours by Rosalía and Beyoncé, as well as mega-shows like the Eurovision Song Contest.

"Our goal is to develop solutions that allow production teams to present live music performances, reality TV competitions, and large corporate events with optimal precision and without sacrificing creativity. We achieve this by combining proprietary software with standard hardware solutions like Aja Corvid 44 12G BNC and Io X3", shares Cue Pilot product specialist Chris Abbott.

"As the action unfolds on stage, our solutions drive the background visual effects, provide signals to teams, and ensure that the camera perspectives desired by the director are planned and adjusted as precisely as in an edited music video. Our solution, consisting of a combination of hardware and software, enables every part of the production team to work together perfectly and seamlessly." When Cue Pilot first entered the market almost fifteen years ago, it was initially a tool for directors but quickly grew into a cross-production solution for everyone, from the LED creative team to the lighting designers to the artists. Available as both portable and stationary solutions, Cue Pilot makes it easier for broadcast and live event production teams to plan, edit, and then execute their multi-camera shows. Directors and teams plan the show on a timeline and can seamlessly communicate the plan in real-time to the entire team.

Cue Pilot's mobile Macbook Pro production kit includes an integrated Aja Io X3 Thunderbolt 3 Video I/O Box. By connecting to a laptop via Thunderbolt, Io X3 allows Cue Pilot's customers to output video to four Cue Screens (a new feature in Cue Pilot 8), track timecode reference signals to ensure all production elements are synchronized, and use RS-422 to cut through serial interfaces for serially operated mixers. All of this is possible with a small case the size of carry-on luggage on an airplane.

Regarding their use of Aja technology, Abbott notes: "We are a small team with a large customer base, working around the clock to serve customers in different time zones. Therefore, it's important that our technology can be easily deployed and withstand live productions - and that's what Aja ensures. Moreover, updates are provided promptly to adapt to changes in the field."

Technology

Corvid 44 12G BNC features four bidirectional 12G-SDI ports with a reference input. 8K input or output is possible with quad



12G-SDI cables, and 4K/UltraHD I/O can be achieved with a single 12G-SDI or 6G-SDI cable or quad 3G-SDI cables. 2K/HD I/O can be achieved with a single SDI cable or dual-link SDI, allowing simultaneous capture and monitoring via SDI. The card is available as an active (fan) vs. passive cooling system (no fan) model, with both versions supporting RS-422 and LTC input through ports on the top of the card. Other Corvid 44 12G models are also available, including low-profile versions with HD-BNC connectors.

Aja Io X3 is a Thunderbolt 3-connected professional video and audio I/O device that offers HDR or SDR 2K/HD capture and output via 3G-SDI and HDMI. The portable, rugged, and compact device optimizes high-quality HDR I/O up to 2K/HD 60p on compatible Thunderbolt 3enabled Mac or PC hosts running professional video and audio applications. As a powerful solution for single, dual, and multi-channel SDI workflows, Io X3 provides premium 2K/HD/SD I/O with HDR directly from nearly any modern laptop or computer and is an ideal capture and output device for many production and post-production applications.

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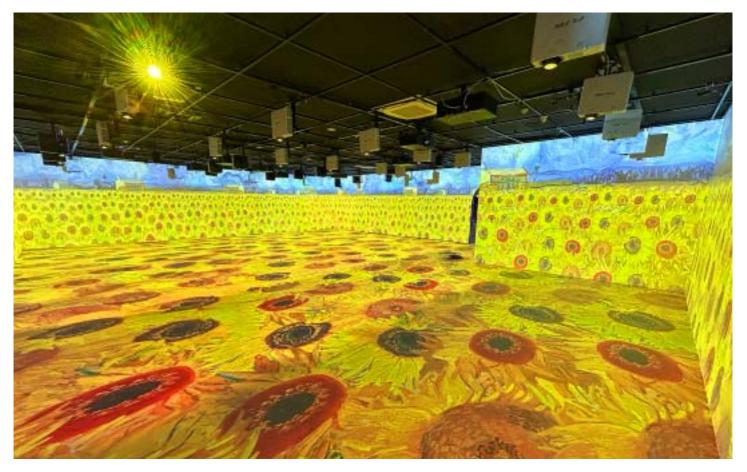


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Van Gogh conquers Vietnam

Twenty-five cameras, nine servers, 70 projectors, and a wealth of video mapping know-how enable a 360° view of the art of Vincent Van Gogh in Ho Chi Minh City.

With the help of its patented Auto-Alignment technology, the Vioso team has realized the first large-scale immersive art exhibition in Vietnam. Spanning an area of 3800 square meters indoors and outdoors at the Gigamall shopping center in Ho Chi Minh City (formerly Saigon), the "Van Gogh Art Lighting Experience" utilizes AV technologies such as projection mapping, virtual reality, and 3D audio to shed new light on the artistic career of Vincent Van Gogh, represented with over 900 virtually exhibited works.

The highlight of the exhibition is undoubtedly the installation "Vincent's Soul", which, with the help of large-scale video mapping, immerses visitors completely in the art of the Dutch master. This area is equipped with 70 projectors, which are automatically calibrated using Vioso software and dozens of cameras to create a space with artworks depicted on the walls and floor, fully surrounding the viewer.

"This here are the spaces; I want to place video content everywhere how should we proceed?" This refreshingly simple specification from the client, recalls Etienne Servant, Senior AV Project Manager at Vioso, who gladly took on the challenge of realizing the "Van Gogh Art Lighting Experience".

He describes the process: "I first took care of the planning and design of the installation, including the layout of projectors and cameras, media servers, and signal distribution, and then provided the exhibition with





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planning documents so that the installation could be technically prepared. Then I was on-site to train the staff in operation and, together with the client, to use all projectors to create a seamless, perfectly distorted image and thus a unique immersive atmosphere."

Mia Nguyen, CEO of First ITC, Vioso's technical project partner, recalls the support provided by Servant and the rest of the Vioso team under the leadership of Raul Vandenberg, the company's Chief Sales Officer: "Throughout the preparation and installation process, the team answered all my questions and provided clear technical answers. From plans to implementation, the project was supported both remotely and on-site. In addition to video projection, I also received recommendations and assistance regarding audio, IT, laser, lighting, electricity - they helped me keep a really good overview of my planning and design so that I could turn an empty space into an immersive exhibition."

To create the desired atmosphere in the "Vincent's Soul" and "Vincent's Land" areas, 25 calibration cameras were required, which, in combination with the Vioso 6 Auto-Calibration software, work for projection mapping in the immersive space and on a Van Gogh statue. A cluster of nine media servers running Pixera ensures content playback.

7 years of preparation, 2 months of implementation

Although the project was prepared over a long period of seven years, the technical team had only two months to implement the installation so that the exhibition could open on time in December 2023. Nguyen explains: "The timing was really tight because we had to open before Christmas to give our visitors the opportunity to come during the holidays. We only started technical integration in October."

"As is often the case with international projects, one of the biggest challenges was getting the equipment through customs, which was a real team effort from Vioso and us. From start to finish, everything was a matter of timing, and that applied to everyone: from the construction workers and painters to the technical team. Without Raul and his team's tight project planning, it would have been impossible to meet the opening deadline."

Etienne Servant is still excited to be involved in a project that represents the largest immersive installation in Vietnam to date and ensured that the Vietnamese audience could experience video mapping on a 3D sculpture for the first time.

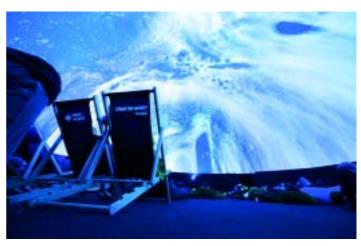




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A dome full of films

M-Vision Laser projectors take visitors of the Astra Film Festival on a cinematic j ourney – with 1-Chip DLP M-Vision Laser projectors from Digital Projection.

The Astra Film Festival is a spectacular event held annually in Sibiu, Romania, a former European Capital of Culture. As a significant event in the European film community, the festival runs for just over a week and welcomes film enthusiasts of all ages to various locations in the city. One of the most famous venues is the so-called Full Dome, a fully immersive dome.

The Full Dome, with its 300 square meter multimedia projection dome in the main square of Sibiu, is one of the highlights of the festival every year. It offers an audiovisual 360-degree experience that completely immerses the audience in the cinematic highlights of the festival. "As a Full Dome professional, it is always a pleasure to discover new and exciting immersive films every year", says Camilo De Anna, Technical Editing Manager and Head Stage Manager at the system integrator New Media.

For films shown in the Full Dome, the Astra Film Festival demands top-notch quality and intensity. To achieve this, New Media relied on six Digital Projection M-Vision 27000 WU projectors due to their image and color quality, reliability, and brightness. The six projectors were positioned around the entire dome and projected onto the 360-degree screen.

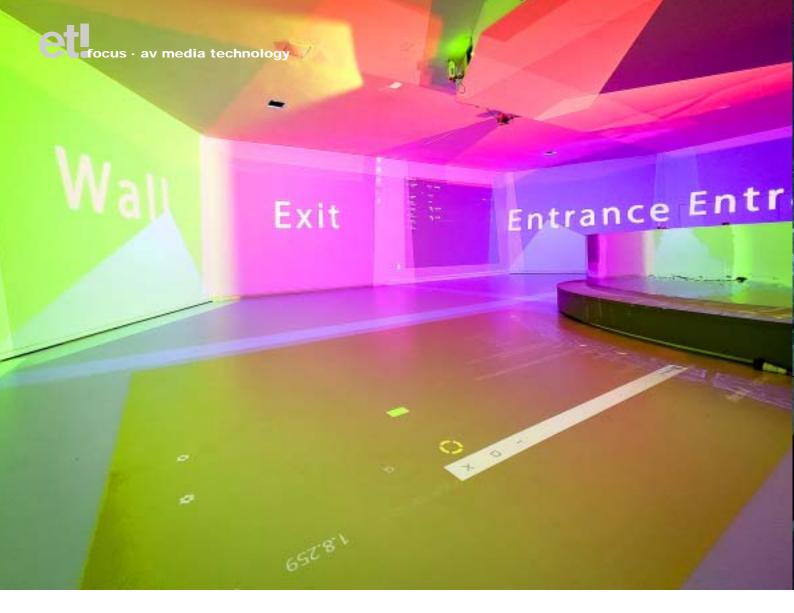
One of the main reasons New Media chose to partner with Digital Projection was the reliability of the projectors. According to De Anna,

the M-Vision projectors offered a successful combination of projection performance, maneuverability, and lightweight: "The M-Vision laser projectors were perfectly manageable with three or even just two people, greatly facilitating the setup and teardown of such a short-term event."

The Full Dome dome was the venue for a diverse selection of films ranging from documentaries to musical experiences to animated films and films about the vastness of space. Behind the scenes, a Screen Berry server was responsible for deconstructing and reconstructing the image to match the dome's mapping. Multiple HDMI fiber optic cables were connected from the server to the respective projector, projecting the image onto the internal projection screen, ensuring that the projection surface was as close as possible to the screen to guarantee flawless quality.

"The dome itself is not a particularly complicated system for the projection path. The difficulty lies more in the various constraints that this format brings, which is why we always opt for the most modern equipment", explains De Anna. He was very satisfied with the result, emphasizing that even the more experienced viewers who return to the Full Dome every year were thrilled with the end result and appreciated every additional detail.





The immersive Rhine Falls

Dost Architecture commissioned WSDG to design a 360-degree experience for one of Europe's natural wonders - the Swiss Rhine Falls.

Located in the north of Switzerland, the Rhine Falls is one of the largest waterfalls in Europe, attracting thousands of visitors every year who want to experience its natural beauty. The Rhyality Immersive Art Hall, situated directly above the waterfalls in a converted industrial complex, has been offering this experience year-round thanks to modern AV technology. Visitors now experience a unique, fully immersive journey that vividly brings to life the sights and sounds of the waterfalls through state-of-the-art 360-degree audio and video technology.

The project was initiated by concept artist and film producer Beat Toniolo and local tourism entrepreneur Hanspeter Weder, who commissioned the architecture firm Dost Architecture to realize their vision for the complex. Dost, in turn, engaged WSDG (Walters-Storyk Design Group), which possesses the necessary expertise in acoustics and system design for such projects.

The cornerstone of the visitor experience at Rhyality is the 200-person main hall, which showcases the visual works of the immersive art hall - particularly the flagship "Rhine Falls in 4 Seasons", depicting a year in the life of the waterfalls through a combined presentation of video, music, field recordings, and narration.

Designing an intuitive visitor experience that fits into the existing halls of the complex was of paramount importance for the project managers at Dost. "The existing space was like a blank canvas that needed to be prepared for a complete 360-degree experience", says Dost project manager and interior architect Julian Tschanen. "It required a highly multidisciplinary approach to create an atmosphere that also feels cohesive for visitors." WSDG was chosen because they had already created similar immersive solutions in places like the National Museum of Qatar, the Shanghai State Grid Pavilion, and the Aura Club Events Hall.

Initially, the acoustic design of Rhyality faced the interesting challenge of how to equip a room with suitable acoustics without causing unwanted reflections from the projection surfaces on the walls that would disrupt the experience. To solve this problem, the WSDG team recommended a special theater curtain from Gerriets. "The right use of materials in these projects can make a big difference in their functionality", says Gabriel Hauser, Director of Acoustics at WSDG. "The advantage of this particular fabric is that it's suitable for projection, but also acoustically transparent, meaning we can use it for both purposes without the absorption or speakers being visible to the visitors."

The speaker arrangement for Rhyality was developed in collaboration with Holophonix and utilizes a total of 98 speakers for a fully immersive sound experience. Two layers, one at 1.2 m and the second at 3.2 m height, are provided behind the walls as well as ceiling speakers for a third height level. Dante and the acoustically transparent projection surfaces allow for easy addition of additional speakers as needed. The Holophonix processor enables



up to 128 playback channels and supports all relevant immersive algorithms such as Wave Field Synthesis (WFS), Ambisonics, and others.

The system installation was carried out by Bild+Ton. "This is our first project utilizing Holophonix technology, and we are very satisfied", explained Hauser. "The Holophonix approach was cost-effective, especially considering the availability of 128 audio channels in the output domain (Dante format). Additionally, Holophonix is part of Amadeus Audio, a French loudspeaker manufacturer, thus they can deliver a tailored system from start to finish. Direct support was provided by Holophonix (Paris) as well as the local Swiss distributor of Amadeus Audio."

Rhyality is a popular destination and has expanded its offerings with additional immersive video presentations. It also serves as a flexible event space.



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Behind the scenes

During the BBC Earth Experience in Melbourne, Australia, visitors are taken on an incredible journey through the natural world, while a new video explains the technology behind the scenes.

The BBC Earth Experience is an immersive exhibition that recently opened at the Melbourne Convention and Exhibition Centre, Australia. The commentator is the legendary director Sir David Attenborough.

Produced in collaboration with Moon Eye Productions, Live Nation, BBC Studio, and Tinker Imagineers, the digital experience guides visitors through multiple rooms showcasing the diverse ecosystems of the Earth across seven continents.

The playback technology of the Earth Experience, used for this installation, is noteworthy. TDC, one of Australia's leading providers of video technology, utilized the Bee Blade Media Server from Hive to implement the entire project.

Michael Hassett, Managing Director of TDC, explains: "The main difference from normal installations is that we insert the Hive players into the projectors, saving a lot of space and energy. There is no cable distribution system, no control room, just the media player in the projectors at the venue."

The entire exhibition is equipped with 70 Panasonic projectors, with 55 creating the central 360-degree high-resolution panorama with over

127 million pixels. The Hive software allows for precise positioning and timing control of each projector.

The BBC Earth Experience is TDC's latest digital installation following projects at the Australian Museum, the Australian National Maritime Museum, and the Dream Circus at Luna Park, Sydney. "The technology applied here heralds a new, greener, and transformative approach to digital storytelling", adds Hassett. "It not only saves time and money but is also very environmentally friendly."

Michael Hassett founded the company in 1981. TDC specializes in providing state-of-the-art video production technology and develops the latest high-end video technology to realize projection mapping, LED technology, virtual production, XR, automation, immersive technology, and camera tracking solutions.

TDC operates offices and studios in Sydney and Melbourne, maintains an extensive inventory of advanced video equipment, and offers solutions for TV and film and theater - from virtual productions to live events.

The video for the BBC Earth Experience can be found here: https://hive.run/news/bbc-earth-experience







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Wall of Wonder

In a new educational exhibition at the European Molecular Biology Laboratory in Heidelberg, a Leyard LED wall informs and inspires the next generation of bioscientists.

A 4K Carbon Light VX LED wall from Leyard Europe is the centerpiece of a new inspiring and educational exhibition at the headquarters of the European Molecular Biology Laboratory (EMBL), Europe's flagship laboratory for biosciences, which explains and celebrates its work on better understanding the building blocks of life on Earth.

The World of Molecular Biology exhibition occupies 800 square meters of the double-height atrium of the EMBL main building in Heidelberg and tells the story of life through 45 AV exhibits, including a mix of audiovisual, virtual reality, and interactive elements grouped into three zones under the themes "The Spirit of EMBL", "Life is Amazing", and "Seeing is Understanding".

The centerpiece of the exhibition is the "Wall of Wonder", an 8 x 4 meter Leyard Carbon Light VX 4K LED screen with a 1.9 mm pixel pitch, whose content is controlled via a 7th Sense media server and Pixielab Show Control Blocks. The video wall was designed and installed by DJ Willrich (DJW), the responsible AV system integrator for the AV technology in the exhibition designed by Haley Sharpe Design.

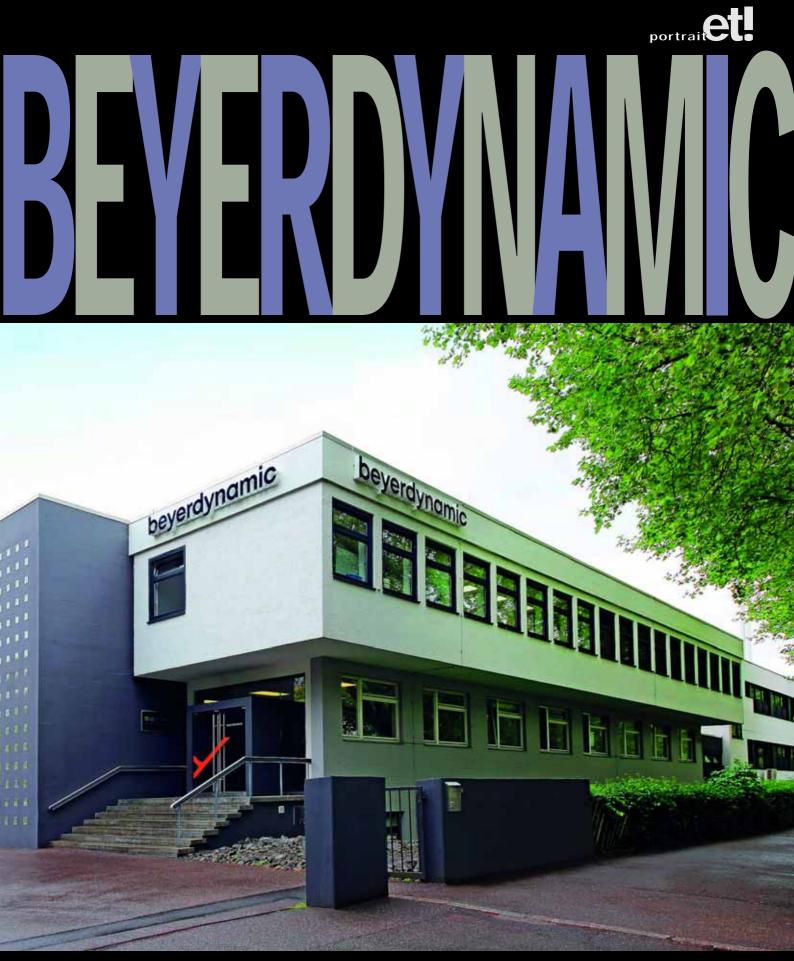
Using electron microscopes, the screen displays images of microorganisms that are too small for the human eye to see, in amazingly detailed images. The aim of the exhibition is to convey the research of the EMBL in an easily understandable way, without the need for explanations from biologists and physicists. It is intended for schools and provides a bridge to the tasks and activities of the EMBL.

"The LED wall brings microscopic images into the visible world - and how!", explains David Willrich, owner and managing director of DJW. "To see a cell less than 20 micrometers in size blown up to a width of 8 meters is an amazing experience that even impressed EMBL employees they stopped to watch the image cycle during commissioning."

Additional touchscreens and touch tables, vertical displays, and explanatory screens allow for deeper immersion in specific topics and offer extended explanations and interaction possibilities. All elements together are intended to engage, inform, and inspire the visitors of the building and contribute to a better understanding of molecular sciences.

Thanks to flexible space design, multiple uses are possible, as meeting rooms around the exhibition can be closed or opened to the exhibition space. A connection to the LED display for a computer and a connection to the existing sound system allow for use in lectures and to support speakers.

"An engaging story is based on clear communication", says Luke Marler-Hausen from Leyard Europe. "DJW was able to utilize all the advanced color features of our VX series to deliver powerful and vibrant messages that captivate the audience and fulfill the visual communication task with style."



In this year, Beyerdynamic celebrates its 100th anniversary and thus counts among the oldest headphone and microphone manufacturers worldwide. The company has experienced eventful years characterized by constant change and development, during which numerous areas were groundbreaking.

ortrait





The company headquarters in the 1950s...

Eugen Beyer, born in St. Petersburg in 1903, came to Berlin in 1921. He was fascinated by the moving images of the emerging cinema and began developing and manufacturing cinema loudspeakers, which led to the founding of the company "Elektrotechnische Fabrik Eugen Beyer" in 1924. This laid the foundation for today's Beyerdynamic GmbH & Co.KG.

In 1937, the first headphone DT 48 was released. As the first dynamic headphone - the designation DT stands for "dynamic telephone" - it accompanied generations of sound engineers and reporters. The DT 48 was part of the Beyerdynamic product portfolio until the end of 2012. In 1939, the milestone of electroacoustics was reached with the first studioready dynamic microphone M 19, which became a historic broadcast microphone for the Reich Broadcasting Corporation.

However, during the Second World War, the Berlin-based company was completely destroyed, prompting Eugen Beyer to decide to relocate to Heilbronn in 1948 and rebuild his factory there. Eugen Beyer unexpectedly passed away in 1959, and his only 26-year-old son Fred R. Beyer took over the management of the company, which he held for the next 40 years. In 1960, the company moved within Heilbronn to a new building, which still houses the company headquarters and manufacturing facilities today.

In 1962, the first wireless microphone, called the Transistophone, was released. In 1963, the newly developed directional microphone M 88 was introduced, which was selected as the only microphone for the official event during Queen Elizabeth II's visit to Australia. Even then, the directional microphone was considered an excellent choice for voice reproduction. Three years later, in 1966, the E 1000 broke through as the exclusive microphone for the first Beatles tour in Germany.

In 1965, another classic was introduced: the headphone DT 100. In the field of conference technology, the first visitor guidance system under the name "Informaphone FSE 20" was presented in 1974. Two years la-

ter, the introduction of the ET 1000 followed, the first electrostatic headphone developed and manufactured in Germany.

In 1980, the DT 880, the first dynamic headphone with electrostatic reproduction characteristics, was added to the product portfolio. Five years later, the new studio headphones DT 770 PRO and DT 990 PRO were launched. In 1997, the presentation of the world's first digital microphone MCD 100 demonstrated Beyerdynamic's innovation once again. These microphones have been in use in the German Bundestag in Berlin since 1998.

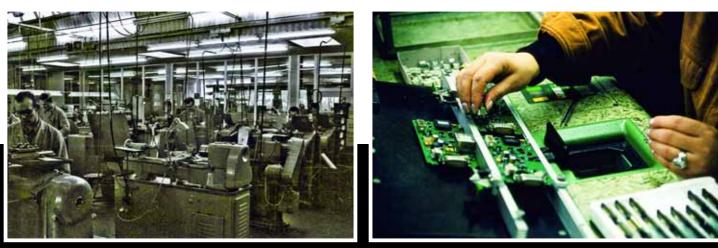
In 1998, the company introduced the first wireless conference system worldwide with the MCW 100. Up to that point, only infrared systems were available on the market. This was followed by the introduction of the MCW-D 100 conference system in 2001, where "D" stands for "digital". In 2003, the third generation MCW-D 200 was already released.

In 2005, the world's first online headphone factory was established, allowing for individual configuration of the premium headphones DT 880 Edition and DT 990 Edition. The factory still offers a wide range of customization options.

The first generation of the gaming headset MMX 300 brought sophisticated sound to gaming in 2007 and continues to impress to this day. Since 2008, the headset, currently in its 2nd generation, has also been part of Beyerdynamic's factory.

Another in-house development is the Tesla technology, which was first used in the first generation of the open high-end headphone T1 in 2009. The name is program here, as the Tesla transducers achieve a magnetic flux density of over one Tesla. The result is more precise and detailed sound. At the same time, energy utilization increases, benefiting even low-power mobile devices.

Product developments continued in the professional audio sector as well: Since 2015, the premium models DT 1770 Pro and DT 1990 Pro have set a reference standard in the field of professional studio headpho-





Eugen Beyer

Fred Beyer

nes - with integrated Tesla technology. For the first generation of the high-end in-ear headphone series Xelento, a miniaturized version of the Tesla driver was developed in 2016, which is on par with the "large" original.

With the release of the Pro X series in 2021, state-of-the-art audio technology was combined with the knowledge gained from 100 years of company history. The highlight of these headphones is the Stellar.45 driver, manufactured in Heilbronn, which delivers maximum performance in the studio headphone segment.

Finally, the first True Wireless In-Ears Free Byrd with ANC and Mosayc sound personalization were introduced. After the presentation of the first speakerphone Phonum in 2019, the new speakerphones Space and Space Max were introduced in the past two years. Since autumn 2023, the first wireless gaming headset MMX 200 wireless has also complemented the Beyerdynamic product portfolio.

Beyerdynamic is still 100% family-owned to this day, and over 85% of the headphones and microphones sold are still manufactured in Germany. In 2023, Andreas Rapp took over the leadership of the company and, with his approximately 420 employees at the Heilbronn and Talheim locations, passionately pursues the vision of always creating the best audio solutions for customers in all areas of the company - with innovative and durable products. Internationally, Beyerdynamic is represented by a sister company in Farmingdale (USA) and a branch in Shenzhen (China).















Christof Böhm

Sharp NEC Display Solutions Europe has appointed Christof Böhm as the new President and Managing Director. As of February 1, 2024, he succeeded Bernd Eberhardt. Böhm will lead the next phase of development for Sharp/NEC, in which the joint venture of Sharp and NEC will be merged under the Sharp brand. He will contribute his expertise in the field of engineering.

Toto Bröcking

Since February 1, 2024, renowned lighting designer **Toto Bröcking** has been working as a Relationship Manager for **GLP**. Bröcking brings 30 years of experience in professional design and programming, and will continue to execute a few of his own productions. He collaborates closely with Key Account Director Oliver Schwendke in Berlin, who continues to manage his contacts.

Michael Ebinger

Michael Ebinger has been appointed as Sales Director at NIYU Productions since the beginning of 2024, responsible for the distribution of the event production company. Ebinger brings several years of experience in sales as well as expertise in media technology and event production. With a degree in audiovisual media engineering, Ebinger has 15 years of experience in various companies within the event industry.

Diana Gerner

Kindermann expands its management team: Since January 1, 2024, Diana Gerner has been responsible for finance, HR, and administration. Together with Timo Meißner, she will shape the future of the manufacturer and distributor in the ProAV industry. Gerner is a true "home-grown talent": She joined Kindermann immediately after completing her studies in economics in 2009.

Gerd Holl

Recently, **Gerd Holl** assumed the role of Managing Director at **Kern & Stelly**, overseeing further growth as Regional Director DACH within the Midwich Group in the German-speaking region. Holl worked for Toshiba for many years and was one of Kern & Stelly's first business partners in the projector sector. His previous professional experiences include Electrolux and Sage Appliances.

Tobias Lang

The AV association Avixa has a new Secretary-Treasurer: Tobias Lang, CEO of the rental provider Lang AG from Lindlar. Lang was elected by the Avixa Board in a special election in December, following the sudden passing of Brad Sousa, former CTO at AVI Systems, on November 8, 2023. With this appointment, the Avixa Board of Directors for 2024 is once again complete.

Richard J. Porter

Since February 1, 2024, **Richard J. Porter** is the new CEO of **PRG**. His appointment follows the departure of Stephan Paridaen, who resigned from his position for personal reasons. Before joining PRG, Porter successfully led the tool and equipment rental division of The Home Depot, serving both business customers and DIY enthusiasts in the United States and Canada.

Michael Rabbe

Since January 1, 2024, Michael Rabbe has been the Managing Director of Epson Germany. The 49-year-old previously served as Country Manager, overseeing the sales of all business units of the company based in Düsseldorf. Rabbe succeeds Henning Ohlsson, who retired after over 20 years as Managing Director. Rabbe began his career at Epson 15 years ago as a sales manager.

Sebastian Rudolph

Sebastian Rudolph assumed the newly created role of Director Marketing & Sales at event technology service provider Aventem in Hilden, starting January 1, 2024. Rudolph initially completed an apprenticeship as an event manager at Kölnmesse, followed by studies focusing on International Management in Essen. Since 2013, the now 39-year-old has been working as a project manager at Aventem.

Florian Schwärzler

Florian Schwärzler, an experienced Campus Manager, has been appointed by the SAE Institute for its new location in Nuremberg. Since 2014, the 33year-old has been working for the SAE Institute. Previously, the native of Allgäu was active as a project manager for the Germany, Austria, and Switzerland region. The new school will be located in the Güterwerk on Sophie-Germain-Straße, not far from the old town.

Johannes Sprondel

Johannes Sprondel joins the management team of Wireworx, a Stuttgart-based expert in media technology. As a long-time specialist planner and certified procurement practitioner, the audiovisual media engineer has successfully completed many complex projects at Wireworx. He gained broad experience in TV outside broadcasting, as an audio engineer at SWR, and as a project engineer.

Marco Weissert

Marco Weissert, Associate Vice President at Shure, will now lead Shure's sales in Europe. Weissert started at Shure as the Director of Human Resources and Processes for the EMEA region, then was appointed Managing Director for Shure's direct sales companies in Europe. He later took over the management of Shure branches in the Middle East and Africa.













Dr. Sascha Dick with second place



Creating a realistic and immersive audio experience via internet streaming for home theaters? Dr. Sascha Dick tackled this in his dissertation - and was awarded 2nd place in the Hugo Geiger Prize for his results. The prize recognizes outstanding, application-oriented doctoral theses developed in close cooperation with a Fraunhofer Institute. The award ceremony took place during the Fraunhofer Society's networking event, the Netzwert Symposium, in Munich. The photo shows (left to right): President Prof. Hanselka, Dr. Maximilian Lederer (Fraunhofer IPMS, 1st place), Dr. Sascha Dick (Fraunhofer IIS, 2nd place), and Minister of Economic Affairs Hubert Aiwanger.

Ionautics is ETG member 7500



With the designation of member number 7500, the EtherCAT Technology Group (ETG) reaches a new milestone in its membership development. As a pioneer in innovative processes and products in the field of thin-film technology, Ionautics will now rely on EtherCAT. With the addition of the 7500th member, the EtherCAT Technology Group once again demonstrates that it is not only the world's largest fieldbus user organization but also the fastest-growing one. For over ten years, ETG has annually welcomed over 400 new companies and institutions. As is tradition, jubilee members of the ETG receive a certificate symbolizing their membership, as does Johan Ahlström, CEO of Ionautics (pictured).

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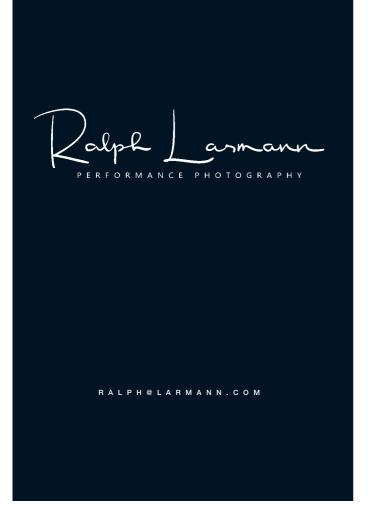
für Festinstallationen

Christie's Mike Perkins receives Oscar



Christie's senior product developer Mike Perkins, along with three other recipients, has been awarded the Oscar for Science and Development, the Academy of Motion Picture Arts and Sciences Award in Scientific and Engineering. This award was granted to him for his work on the conception and development of the Christie E3LH projection system, created in collaboration with Dolby Laboratories. The Academy's Scientific and Technical Awards honor individuals and companies whose discoveries and innovations make a significant and lasting contribution to the motion picture industry. This is already the third Academy Award for Christie.

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d&b Audiotechnik

Audionetzwerklösungen

d&b audiotechnik presents a range of next-generation audio network solutions under the banner of the Milan standard. The new portfolio includes the DS20 Audio Networking Bridge, the DS100M Signal Engine, and the powerful D90 amplifier. The DS20 Audio Network Bridge has been designed for seamless, cost-effective connection between d&b systems and the Milan network. Serving as an interface between d&b amplifiers and the Milan audio transmission protocol, the DS20 offers 16 digital AES3 output channels, 4 digital AES3 input channels, and an integrated, fully AVB-capable 5-port network switch. The DS100M Signal Engine is the Milan-enabled variant of the DS100 with Dante. Leveraging the technical capabilities of Milan, the DS100M offers an expanded feature set, including more audio channels via Milan, MADI, Word Clock inputs, and more. The new flagship amplifier, D90, also enables audio networking via Milan. In addition to maximum speaker performance, the amplifier ensures lower internal temperatures at maximum output power.





Kling & Freitag Scala

"Scala" is the new immersive audio processor from Kling & Freitag. The processor features 128 inputs and outputs via Dante network and a powerful rendering engine capable of calculating multiple mixes in various playback formats in real-time. It is therefore easily possible to render multiple independent immersive systems with precise source positioning and achieve consistent results. In addition to redundant power supplies, the processor also offers complete system redundancy (with a second machine) and provides modern control options via OSC and Ember+. An optionally available cue player offers the possibility to play material in many channel and object-based 3D formats. An optional immersive reverb solution is also nearing release

Coda Audio

Linus 6.4 Verstärker

The new Linus 6.4-iD system amplifier is the first development of Coda's newly established amplifier and electronics research and development team. Based on groundbreaking new technologies, it aims to expand the Linus DSP system amplifier platform. With its features, the Linus 6.4-iD is the suitable driving source for all Coda Audio speaker systems (except for line arrays and Sensor Control subwoofers). It is fully integrated into the Linus Control Remote-Control Software, enabling complete control and monitoring over the network. Furthermore, the Linus 6.4 now also offers the possibility of control via smartphone through the newly introduced Linus app. Linus 6.4-iD is a network-capable DSP system amplifier for installation applications with four channels, combining 4 x 1500 W output power in a compact 19"/1U housing. Advanced Class-D amplifiers with DC-coupled DACs, as well as an efficient SMPS with PFC, ensure minimal heat generation. The PCB layout integrates DSP, the fourchannel power electronics, and the SMPS switching power supply on a single board.



Blaze Audio

Constant Beamwidth Loudspeaker (CBL)

Blaze Audio has introduced the Constant Beamwidth Loudspeaker (CBL) series. With a compact form factor that minimizes installation effort, the CBL series consists of two models: CBL528 and CBL523. The CBL528 features a wide, symmetrical horizontal 180degree radiation characteristic and provides gain shading in the mid-high range through its eight vertically arranged 2-inch drivers, allowing for a uniform and controlled vertical 45-degree radiation characteristic from 420 Hz to 18 kHz. The speaker features four proprietary 5-inch low-frequency drivers with a frequency response up to 54 Hz. With its BiAmping design for system integration, the CBL528 is particularly suitable for fixed installations, such as in sports arenas or conference centers. The CBL523 features three vertically mounted 2-inch mid-high drivers and two 5-inch low-frequency drivers with a frequency response up to 71 Hz. It is suitable for front fill or under-balcony applications or as a compact speaker system.

New components

A Dante-enabled digital 2-channel receiver in half-rack width is the latest addition to Sennheiser's Evolution Wireless Digital (EW-DX) microphone system.



Audio specialist Sennheiser complements the EW-DX microphone system with the EM 2 Dante, a Dante-enabled digital 2channel receiver in half-rack width, and additional components. The digital UHF wireless microphone system for professional live productions, whose first products were launched last year, is scalable and thus meets the requirements of various applications.

The products now being released also include a cascading network charger and an active directional antenna for wall mounting. In addition to the introduction of this new hardware, Sennheiser has also made software updates for Control Cockpit, the Wireless Systems Manager, and the Smart Assist App, enabling seamless integration and support for the new hardware components.

The EM 2 Dante offers a variety of network modes and can be integrated into existing workflows. With a switching bandwidth of up to 88 MHz, Sennheiser's equidistant spacing method in standard mode allows the use of up to 146 channels and up to 293 channels in Link Density mode.

Cascading network charger

In early 2023, Sennheiser already launched the CHG 70N network charger with two slots. Now, the audio specialist presents the successor, CHG 70N-C. This new charger enables cascading of up to five network chargers.

Also new is the AWM antenna for wall mounting, an active directional antenna specially designed for seamless integration into the microphone system. It can be connected to any stationary EW-DX receiver or the EW-D ASA antenna splitter. There are three variants: AWM UHF I (470-694 MHz), AWM UHF II (823-1075 MHz), and AWM 1G8 (1785-1805 MHz).



Central software

Sennheiser offers the ability to set up and control audio applications through central software to cover a variety of scenarios. Particularly for companies or educational institutions using the EW-DX system for lectures or meetings, "Control Cockpit" version 7.1.0 now provides adequate support for the latest EW-DX products. The software provides an overview of all network-enabled devices, consolidates all relevant status information, and allows easy adjustment of one or more devices simultaneously.

For use in multi-channel live audio environments such as music or theater performances, Sennheiser Wireless Systems Manager 4.7.0 supports the setup, monitoring, and control of all EW-DX products in use. With the new 2.1.1 version of the Smart Assist App, Sennheiser also presents a convenient solution for setting up smaller setups.

In addition to the EW-DX TS 3- and 5-pin table transmitters in all frequency ranges, a four-channel Dante receiver in full 19-inch rack width is expected to be released around mid-2024. "We are delighted with the impressive response to EW-DX and want to offer our support in expanding the EW-DX systems. At the same time, we also aim to reach out to everyone else with the versatile capabilities of our latest components", explains Michael Altemark, responsible Product Manager Wireless Solutions Business Communication at Sennheiser.

> www.sennheiser.com/ew-dx-business www.sennheiser.com/ew-dx-professional



Arri Trinity Live

Arri introduces Trinity Live, offering another tool that can impart cinematic aesthetics to broadcast applications. Trinity Live is not a standalone product but an upgrade option for Trinity Gen.1 - Arri's first-generation body-worn camera stabilization system. The upgrade kit, consisting of new hardware, wiring, and connectivity, optimizes the system for live productions and enhances its functionality within multicam systems as well as with broadcast applications from other providers. Improved connectivity is a key feature of the upgrade: Four new 4G video interfaces and a shielded 10-gigabit Ethernet line enable the new position of the wireless video link. The connectors for these new video lines require a completely new center post, a post connection, a top-stage connection box, and a wiring harness - all of which are included in the upgrade kit. Overall, Trinity Live now offers five 4G interfaces. The four new ones feed the wireless video link with up to four quad-link signals (4x 3G) or with two video lines.





Display QE98C

With the QE98C display, Samsung offers a supersize standalone display. At 98 inches, it combines minimalist design with low depth. Thanks to its reduced, timeless appearance, the display can fit into almost any environment. When mounted directly on the wall, it presents itself almost like a piece of art. The Quantum Processor 4K also enables upscaling of various content to 4K UHD resolution. Even low-resolution content can be presented in high-quality image quality. The display impresses with fine details and intense color reproduction. Thanks to easy installation and operation as well as versatile customization options, it can be used in a variety of settings - from retail to restaurants and hotels to conference and meeting rooms

Sony Crystal LED-Sortiment

Sony recently introduced its 220-inch Immersive CH Series. The 220inch display of the CH series, with a pixel pitch of 1.2 millimeters, offers an impressive experience of color, texture, and depth. This is made possible by the highly efficient Super-Fine LED technology. Displays of the CH series are ideal for exhibitions, conference rooms, and screening rooms. Also new is Crystal LED Flux, exclusively available for the European market - a movable Crystal LED stand that transforms any office space into a space characterized by creativity and collaboration. It is easy to move and adjust in height and provides space for all necessary devices and accessories. Also new are two optical signal amplifiers: the Fiber Optic Extender ZRA-T1 and ZRA-R1 are suitable for signal transmission over long distances for Crystal LED displays. They are compatible with both the BH and CH series and enable transmission distances of 300 meters. "We are committed to making the highest quality solutions accessible to end-users with different needs and requirements", according to Sony





Eyefactive

Toucscreen-Lösungen

Eyefactive recently introduced modern touchscreen solutions. The highlight is a 55-inch multitouch display equipped with maximum brightness and object recognition technology. The premium touchscreen features PCAP multitouch technology with 40 touch points, providing good responsiveness and precision. In addition, the display supports Eyefactive touchscreen object recognition. The touchscreen has a brightness of 1000 cd/m2, ensuring good visibility even in illuminated environments - with a contrast ratio of 4000:1 and 4K resolution. Furthermore, the display is equipped with optical bonding technology, which improves durability and visual performance. Eyefactive also presented a large-format 86inch touchscreen with Ultra-Slim IR technology. The display offers seamless integration with IR object recognition technology, allowing users to create interactive experiences in special sizes.





Stromverteiler-Systeme nach Maß

www.indu-electric.de

Elation Proteus Hybrid Max

The Proteus Hybrid Max is the official successor to the Proteus Hybrid. The addition of "Max" refers to the increased light output and longer lamp life in a more compact yet more extensively equipped IP Hybrid moving light. The Proteus Hybrid Max achieves its 22,000 lumens with the help of the Philips MSD Platinum Flex 500 lamp, with a lifespan of up to 4000 hours, combined with a highly coated 170-millimeter front lens. The "Max" in the name also stands for the features and a significant increase in speed in the individual functions and rotation, both on the pan and tilt axes. This applies not only to the zoom but also to the CMY color mixing system, variable CTO, as well as a complete range of projection and effect options. Four prisms on two levels, dual frost plus dual gobo wheel, and three animation wheels complete the FX package in an extremely compact and lightweight housing. Like its predecessor, the Proteus Hybrid Max is a true hybrid with perfect spot and beam characteristics. It generates extremely powerful beams, sharp gobo projections, and rich washes. Thanks to its extensive effects package, the Proteus Hybrid Max is one of the most flexible fixtures on the market and once again sets the bar higher in the outdoor moving light category. It features the innovative Sky Motion system to use the fixture as an effective searchlight without the need for a special lighting control. For this purpose, multiple devices can be connected, providing instant access to a variety of movement patterns by simply assigning IDs, with their size, speed, and color easily adjustable via the display.





Orbiter-Beam-Optik

Arri introduces the new Orbiter Beam Optic, further expanding the accessories for the LED spotlight system. The beam optic is the first in Arri's LED lighting portfolio. A new optical concept was developed specifically for this reflector. The light intensity level within the defined, narrow beam angle of the Orbiter Beam is comparable to that of the Arri daylight spotlight M-Series M18. For the first time, these intensity values can be achieved with a high-quality LED source with a full color spectrum, making it the brightest full-color LED spot light on the market. This parallel beam of light is suitable for long distances in cinematic applications. The new Orbiter Beam combines this highly concentrated 4° beam of light with extremely homogeneous illumination - an ideal solution for creating a natural light illusion from a distance. Despite its large aperture, the Orbiter Beam has a simultaneously compact (approximately 573 x 548 x 548 mm) and lightweight (about 5.9 kg) housing. The diameter of the reflector, at 530 mm, is similar in size to that of an M90 fixture

^{Claypaky} Rhapsodya

With the brand-new Rhapsodya, Claypaky aims to set a new standard in lighting for demanding theater/studio and live applications. Rhapsodya is an RGBAL LED moving head controlled by a specially developed firmware algorithm. In terms of optical quality, color management, and whisper-quiet operation (even at full power), the Rhapsodya is an evolution of the Sinfonya. However, the Rhapsodya also stands out with a modern, sleek product design and double the power compared to the Sinfonya. In addition to the innovative features it shares with the Sinfonya, such as Accuframe, a precise framing system with two focus planes, Tonedown for whisper-quiet operation at just 27 dB, Absolute Position Control for advanced PAN/TILT capabilities, and the Frost module Lineguard for extremely homogeneous imaging, the Rhapsodya takes a significant technological step forward. This is thanks to new features such as Accutune, which offers precise control of the multicolor LED engine with a new algorithm, providing vibrant, rich colors optimized for both stage and TV applications. With Colostring, the moving head also features individual LED control for a wealth of complex, dynamic graphic and color effects. Its optical system offers a zoom range from 6° to 60°





High End Systems Ministar

The Ministar fixture by High End Systems (ETC) offers exceptional versatility and performance at an affordable price, further complementing the offerings for small to medium-sized venues. Matt Stoner, Product Manager for Automated Lighting, highlights the key features of the Ministar: "What sets this fixture apart are the two color wheels of Versacolor technology. They provide a spectrum of 60 pure colors via a single control circuit. With this wide range, users can create fantastic looks." Versacolor is complemented by Quadratech - an innovation that harnesses the power of four colors in projection. Matt Stoner says, "Quadratech revolutionizes the generation of visual effects - both in washes and aerials". The Ministar is equipped with a 300W LED and has a light output of over 9700 lumens. The feature set includes two gobo wheels (for gobo morphing and texture manipulation), variable frost for soft edges and washes, a prism for theatrical applications and aerial effects, and fast pan & tilt function for dynamic movements. Particularly noteworthy is the sophisticated zoom function from 6.5° to 48°, housed in a lightweight design of just 16 kilograms.

New lighting solutions

Cameo presents several new models from the Moving Head series Otos, Opus, and Azor. A particular highlight is the Oron H2 IP65 Moving Head with Phosphor Laser Engine.

Oron H2. The Oron H2 is an IP65 Hybrid Moving Head based on a 260W Phosphor Laser Engine, offering a light output of 260,000 lux at a distance of 20 meters and a narrow minimum beam angle of 0.6° . Nevertheless, thanks to its zoom range of 0.6° - 32° , the Oron H2 can also be used for spot applications and other lighting tasks. With 19 fixed and 12 rotating gobos, linear CTO, two prism planes, and CTO color mixing, the laser moving head leaves little to be desired in terms of creativity.

Otos Wash. Cameo expands the OTOS series with three new models: W12, W6, and W3. The Wash Moving Heads are equipped with individually controllable RGBL LEDs and each feature a separately controllable FX LED effect ring for creative use of white tones and colors. A special feature of the new series is the Multi-Zoom function, allowing up to three zoom levels to be individually controlled depending on the model.

Opus X4. The Cameo Opus X4 is the most powerful moving head ever developed by Cameo. With a 1400 Watt powerful LED engine, the Spot Profile Moving Head produces an impressive 50,000 lumens while being only minimally larger than the X Profile. Furthermore, it offers a wide zoom range of $5^{\circ}-55^{\circ}$, +/- 60° rotatable framing shutters, two gobo wheels, and an animation wheel. The CMY color mixing is complemented by a linear CTO and a +/- green correction for precise use in broadcast applications.

Azor. With the Azor SP2 (Spot Profile Moving Head) and W2 (Wash Moving Head), Cameo expands the Azor family with two lighting professionals for flexible use in medium-sized applica-



tions. The SP2 is based on a 300W LED light source with 13,000 lumens of luminous flux and a wide zoom range of 5° - 50° , complemented by the advantages of a classic spot with motorized framing blades (+/- 60° rotatable) on four levels. The W2 combines seven individually controllable 40W RGBL LEDs and a zoom range of 4° - 50° for classic wash looks. A special feature is the Eclipse Burst effect: behind a dark filter are four segment SMD LEDs that provide strobe and pixel effects.

10000000000000000

ROBe

ZUVERLÄSSIG BEI JEDEM WETTER





Diese Ausgabe des ETNOW und damit auch diese Anzeige sind umweltfreundlich und klimaneutral gedruckt. Besuche uns: Stand: Halle 12.1 - Dto. D11, D13, D Showtruck: Preinellande P12 - C43

iSeries

prolight+sound

Sommer Cable SC-Vector Plus 0.8L/3.7DZ

With the new UHD video cables SC-Vector Plus 0.8L/3.7DZ from Sommer Cable, the cable manufacturer once again employs its proven construction of two dense, tinned CU braided shields for 100% coverage and shielding against external interference. This time, in combination with a more compact interior consisting of 3.7 mm robust low-loss Skin-Foam-PE insulation and 0.70 mm inner conductor with 19 x 0.16 mm individual strands; optimized for a small outer diameter of 6.1 mm in a notch-resistant, cold-flexible, heat- and UV-resistant PUR jacket for high durability - all without the use of PVC to avoid toxic gases in case of fire and without plasticizers for sustainable material use. Due to its compact design, the cable fits on almost any cable drum and into any cable duct, and can be easily assembled with common 0.8/3.7 digital-capable BNC connectors; it is suitable for outdoor use and generally under adverse conditions, such as in mobile

large-scale transmissions. The cable is used for data transmission of analog and digital HD camera systems, for digital image processing, or for digital audio applications in professional broadcast/OB van/studio environments, in high-frequency technology, in SAT antenna construction, or for professional media technical fixed installations.

EtherCAT-Klemme EL6821

The Beckhoff EtherCAT Terminal EL6821 allows the connection of up to 64 DALI/DA-LI-2 slaves and 64 DALI-2 input devices. Configuration and parameterization of the DALI participants can be performed flexibly and easily using TwinCAT 3 System Manager. The programming of the EtherCAT Terminal is conveniently done via TwinCAT 3 function blocks. The EL6821 also includes an integrated, switchable DALI bus power supply with a guaranteed output current of 220 mA. The galvanically isolated input voltage is supplied via an EtherCAT power supply terminal EL9562. The EtherCAT Terminal EL6821 is certified according to the DALI-2 standard. Thus, a maximum of 64 DALI control gears and 64 DALI control devices can be seamlessly integrated into a superior EtherCAT network in a compact terminal factor of 12 x 100 x 68 mm (W x H x D). The commissioning and application of the EtherCAT Terminal are supported in various ways: With signal LEDs for status indication and two digital inputs, commissioning is simplified. Configuration and parameterization of the EL6821 and DALI participants are flexibly and easily performed using the TwinCAT 3 System Manager. The proven TwinCAT 3 library TwinCAT 3 PLC Library Tc3_DALI is available for programmina

Contrik

Power-Multicore

Contrik, a brand specialized in power distributions of the Neutrik Group, introduces the new range of Power Strip Multicore Stringer Boxes. This includes six models with Harting E16 connectors, which allow for single-phase 6-channel separation or separation and linking with Neutrik Powercon True1 Top or Schuko Type F connectors. The models are labeled either X (Xtreme Protection) or XO (Xtreme Outdoor Protection). X provides high mechanical protection (IK) and XO provides high mechanical protection (IK) as well as high protection against environmental influences, enabling seamless connection of loads in both indoor and outdoor applications. The Contrik proprietary Easylen housing ensures high mechanical IK protection (up to IK 10+) with a high degree of flame resistance, temperature resistance, UV protection, corrosion resistance, and non-conductivity. Contrik's expanded Power Multicore cable assemblies of the CKPE series now offer 6- and 8-channel Harting E16 and 6-channel Socapex SL 419compatible connectors as well as a Socapex SL 419-compatible to 6 x Powercon True1 single-phase Power Multicore splitter cable. These provide high IP protection ratings when plugged in: IP65 for Harting E16 connectors and IP68 for LKS 19 connectors

Klotz



Netzwerkkabel C7PLRP

The newly developed, flexible network cable C7PLRP enables transmission lengths of up to 100 m and is therefore suitable for mobile applications that until recently were typically reserved for installation cables. With its elaborate and robust construction CAT7 - S/FTP - AWG23/7 - 600 MHz with continuous outer braided shield and foil-shielded pairs, this mobile cable is the right choice when high reliability and fast data transmission are required. The C7PLRP is designed for demanding applications in live entertainment, Pro AV and broadcast areas, as well as for industrial use. Low attenuation allows transmission lengths of up to 100 m, e.g. for 10GBase-T, audio networks such as Ethersound; AES67, Dante, Ravenna, and many more. Video networks such as AVB, SMPTE ST2110, and DMX light controls are also established areas of application for this CAT7 cable. The C7PLRP meets all requirements for Category 7 patch cables according to ISO/IEC 11801, EN 50173-1, IEC 61156-6, and EN 50288-4-2. With a small diameter of only 8.5 mm and high flexibility, the cable is easy to handle and is particularly suitable for mobile applications with RJ45 or Ethercon connectors indoors and outdoors, as well as for effortless use on cable drums. The robust, extremely abrasion-resistant, black PUR jacket is also flame-retardant, halogen-free, oil-, microbe-, and chemical-resistant, and provides stability even under extreme conditions up to -40°C.

Team Straubenhardt 2024

SOMMER *TIMES*

A quarter of a century...

simply good vibes. Since 1999, we have not only been soldering but also making our first contacts. We are happy that we are connected with you.

> Despite the advancing digitalization and further development of radio technologies, but also in times of crisis, as we have experienced time and again, we still need **cables** and **signal connectors** in large quantities, whether analog or digital. Still, cables offer the **best transmission guarantee**, **signal quality and data security**.

> > We look back on **25 very exciting** and **positively moving years with you** and would like to thank you for your loyalty. **Your valuable suggestions have always helped us** optimize ourselves and our product range.

2024-03

We would like to express our gratitude to everyone involved with a special anniversary promotion: Starting from February, you will receive monthly product highlights at a special price. We look forward to the next 25 years with you!

At the beginning of the year, we would like to share our latest news and SOMMERly product highlights.

With this in mind, we wish you happy browsing and **simply good vibes**.

Ŧ 🞯 🕑 in



Simply good vibes.

All best,

Rainer Blanck CEO of SOMMER CABLE





Musicians became cable experts ...

Back in 1999 we, Rainer Blanck and Friedhelm Sommer, founded the Sommer cable GmbH – together with some confidants being tinkerers around the cable specialist Pascal Miguet, thoroughbred musicians, sound people, electronic engineers and event specialists.

We didn't feel as a start-up – although we were precisely this – driven by the question: how do we manage to design cables and connectors so that their sound quality and handling thrill the users in every respect?

> So we became known for high-quality bulkware cables, developed for the most varied applications, standards and requirements and supplemented by matching connectors, connection cables, signal distribution systems or electronic components.

> Today we are one of the leading cable manufacturers and offer a uniform, professional full assortment for the audio, video, multimedia, broadcast, and hi-fi sectors. Besides top-notch quality, great reliability and exceptional diversity, it is important to us to recognize trends early and develop future-proof solutions, maintain vibrant relationships and implement individual wishes.

The foundation of our solutions competence lies in our attitude: the passion for what we do.

It is found in every employee and thus in every facet of Sommer cable. How we do it? By forming a team together with our employees and our customers. We make the talents of our staff the talents of our company and the demands of our customers our own. This is exactly what makes the difference in the industry these days.

With this personality, our close customer relationship and qualified consulting, Sommer cable fascinates customers from the entire pro-audio sector: architects and designers, studio, media and event technicians – and, of course, musicians. Simply everybody who shares our passion.

We stand for connections that inspire. "Simply good vibes".

Sincerely, your



Friedhelm Sommer Founder of SOMMER CABLE

> **Rainer Blanck** CEO and Founder of **SOMMER** CABLE





Storage for our premade cables: from the hook to the automated small parts warehouse!

li

2019

SOMMER≅CABLE

20.2

2004

2017

2018

STORE

Showing our colors - in 2020 and 2021 we were part of the Night of Light to support the event industry.

YEARS

2020/2021

61

≋CABL

Today, the cable assembling, and system production employees are a large, well-coordinated team.

Cablo on the road – the green duck has been by our side since 2019.

Trade shows past and present - You can regularly find us at international trade shows (such as Prolight + Sound, Frankfurt; Integrated Systems Europe, Barcelona; InfoComm, Las Vegas).

1999 - 2024

2006

Simply good vibes.

2023

2008

00

We leave no leaf unturned for our mailings – from Rap Rabbits to underwater and leather trousers – everyone is having fun at our photo shootings!

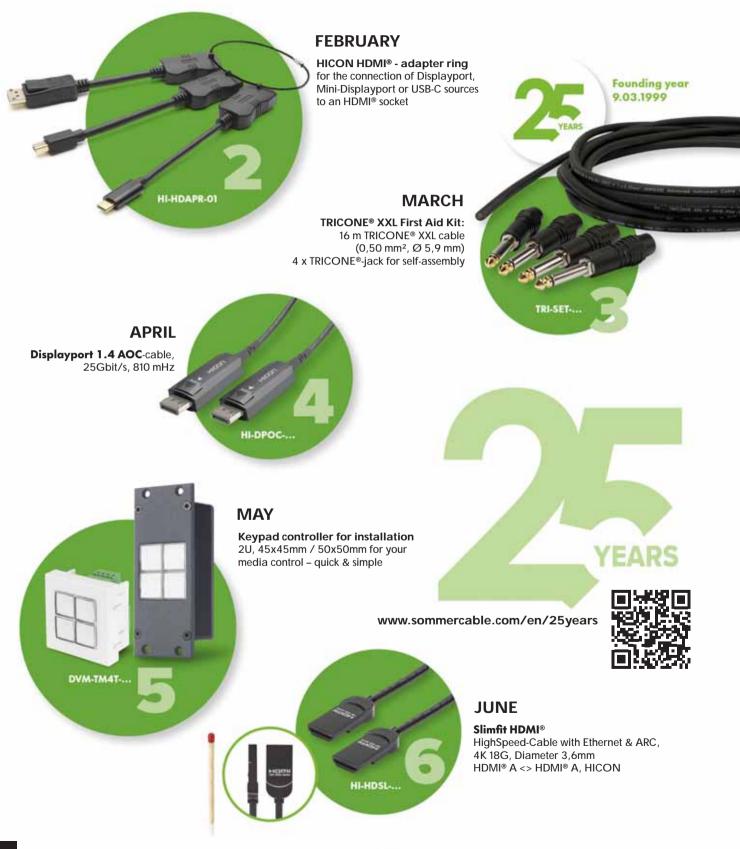
2016

2005

SPECIAL ANNIVERSARY PROMOTION 2024

We're turning 25 - let's celebrate!

Every month, you can find a product highlight in our B2B shop at a special price.



SOMMER CABLE



NETWORK CABLES

CAT.6A Armored - "the 10G flex lasso"...

protects with its steel reinforcement the delicate interior 10G-CAT.6A construction. The armored design enables a high resilience with an unprecedented flexibility

in network cables. The cable falls and lies like a slightly thicker microphone cable - ideal for extremely resilient connections at the studio, on stage or in other rough, harsh environments! Despite the big mechanical advantages there's no need to cut corners as to the technical values. So this is an AWG28 U/FTP construction with an outside diameter of 7.3 mm and 100% shielding density provided by real copper wires. The sturdy RJ45 connectors are equipped with a **50 µ gold plating**.

The highly elastic structure allows a very small bending radius of 50 mm. The overall construction guarantees the adherence to the CAT.6A performance up to 500 MHz and also the compliance with the POE+ requirements (802.3at) for at least up to 30 m of patch cable length. The NEUTRIK etherCON NE8MX / NE8MX-B protective sleeve can be **retrofitted** anytime to the patch cable which is assigned according to TIA568B. Moreover, the cable is equipped with two unshrunk 50 mm clear shrinking tubes for individual labeling.



ORDER NO.	LENGTH	
HI-C6ACU0200	2,00 m	
HI-C6ACU0300	3,00 m	
HI-C6ACU0500	5,00 m	
HI-C6ACU1000	10,00 m	
HI-C6ACU1500	15,00 m	
HI-C6ACU2000	20,00 m	
HI-C6ACU3000	30,00 m	

A x01684



A x01686





Clear shrinking tube for personalized labeling

CAT.6A Highflex patch cable Even the curviest banana will be amazed ...

when the SC-MERCATOR CAT.6a Highflex patch cable with only 6 mm (0.23 in.) in outer diameter and an extremely small bending radius of <20 mm (0.78 in.) can wind its way through narrow patch panels, data cabinets and touring racks. And this in spite of its sturdy, robust PVC jacket plus S/FTP construction with a braided shield and AL/PT foil screen around the 4x2xAWG26/7 wire pairs. The overall design is guaranteed to meet the CAT.6a performance up to 500 MHz.

The TIA 568 B standardized ready-made C6AFU patch cable comes with ultra compact 25 mm (1 in.) short RJ45 connectors and two 50 mm (2 in.) clear unshrunk shrinking tubes for your individual labeling. The NEUTRIK NE8MX/NE8MX-B etherCON cable plug protector can be retrofitted anytime, ideal for the robust cabling of touring racks.

ORDER NO.	LENGTH
C6AFU0025-SW	0,25 m
C6AFU0050-SW	0,50 m
C6AFU0100-SW	1,00 m
C6AFU0150-SW	1,50 m
C6AFU0200-SW	2,00 m
C6AFU0300-SW	3,00 m



22 mm shorter than C6AB-...

SOMMER == CABLE

C6AFU built into the NF8MX-B

Our GTCs apply

PRO SERIES

with robust metal flex tubes for protecting the wires. We use our flexible, universal SC-OCTOPUS with fire-retardant, reelable PUR sleeve – especially suitable for mobile applications. The cable is fitted with four LC or four HI-FIBER4-MC connectors – in addition, it is optimally protected by a robust, flexible metal tube. The different versions are available in any desired length, optionally also on a SCHILL drum, in multimode or single mode. Please tell us your required configuration!



Any length available

Optionally available on drum
 Multimode or single mode
 All connector versions LC, SC or ST – request your desired configuration!

4 x LC <> 4 x LC 50/125 μm - multimode OM3 including **metal flex tube** per wire

ORDER NO.	CABLE DRUM	LENGTH
O3LY-M04/00-0500	-	5 m
O3LY-M04/00-2500	-	25 m
O3LY-M04/00-5000	-	50 m
O3LYGM04/00-1H00	GT310	100 m

ADVANTAGES AT A GLANCE:

- Robust design with metal flex tube
- Notch-resistant PUR sleeve
- Available in any configuration

HDMI®-AOC-ARMORED CABLE

The HDMI® knight

protects even the most delicate HDMI® cables with its steel sleeve. The **armoured design** makes it extremely durable. Thanks to the **integrated stainless steel corrugated tube**, the cable can **withstand tensile forces of up to 80 kg** – the strain relief of the connectors can take a maximum of 65 kg. Despite these extreme values, the cable is just **5.8 mm thin** and has a **minimum bending radius of just 20 mm**. The connectors are fitted with our tried and tested **Glandmaster protective sleeves** for this purpose during transport – the cap is protected against loss with a stainless steel rope. Thanks to **AOC** (Active Optical Cable) **technology**, the transfer of the high speed contents is based on glass fibers – this facilitates a **maximum transfer distance of up to 100 m**. ORDER NO. HI-HAOC-1000 HI-HAOC-1500 HI-HAOC-2000 HI-HAOC-3000 LENGTH 10.00 m 15.00 m 20.00 m 30.00 m





ORDER NO. HI-HAOCG5000* HI-HAOCG7500* HI-HAOCG1H00* LENGTH 50.00 m 75.00 m 100.00 m

ADVANTAGES AT A GLANCE:

- 18G UHD performance across distances of up to 100 m
- Extreme mechanical durability
- PUR sleeve material
- Glandmaster protective sleeves for protecting the connectors
- 50/75/100 m available on a robust SCHILL drum[®]
- 5.8 mm cable diameter

sommercable.com



SC-ELEPHANT SPM3215

🐼 STAGE 🚿 MOBILE 🚿 STUDIO 🚿 INSTALL 🗷 ELA ANALOG OFC

The power of a whole herd of elephants...

promises the new 32-core **SC-ELEPHANT SPM3215** loudspeaker cable. This cable is used to connect line array loudspeakers in sound reinforcement technology to the new generation of 16-channel amplifiers, which address each speaker in the cabinets individually.

Of course, the **32 x 1.5mm²** cores can also be combined individually to control and operate smaller sound systems.

Another area of application for these cables is machine and robot control.

FREE SAMPLE AVAILABLE



APPLICATIONS:

- Professional and semi-professional PA/sound systems with 16-channel amplifiers
- Control cable for machines and robots

PRODUCT BENEFITS:

- Torsion-free stranding
- Small diameter (20.3 mm)
- Highly flexible at low temperatures
- High number of bending cycles due to . fine-wire structure
- Loss-free transmission due to low impedance
- Oil-repellent against standard oils
- UV-resistant and suitable for permanent outdoor installation

TECHNICAL DATA	SPM3215
Jacket, diameter:	PVC 20.3 mm
Inner Conductor:	32 x 1.5 mm ² (AWG15)
CU-strands per core:	48 x 0.19 mm
Conductor insulation, diameter:	PVC 2.4 mm
Temperature range:	–20 °C +60 °C
Fire load per m:	2.83 kWh
Weight per 1 m:	795 g
Packaging:	bulk cables
ELECTRICAL DATA	
Conductor resistance:	12 Ω
Insulat. resistance per 1 km:	100 ΜΩ
Operating/test voltage:	300 V/2,5 kV

ORDER NO.

490-0051-3215

The perfect connection solution for large sound reinforcement systems, such as the L series from L'acoustics.

TOURLOCK



37-pole version (12 channel), arrangements 28 - 21

COLOR

black

DESCRIPTION	ORDER NO.
🚺 Installation plug (male)	HI-LK037MP
🗾 Installation plug (female)	HI-LK037FP
🛐 Cable plug (male), cable outlet M32x1,5	HI-LK037MV
🚺 Cable plug (female), cable outlet M32x1,5	HI-LK037FV
Seal cap for male connectors	HI-LKCAP-M37
👩 Seal cap for female connectors	HI-LKCAP-F37

Subject to changes • Our GTCs apply



SPEAKER CABLE MULTICORE 32 X 1.5 MM² >>> CONNECTION SOLUTIONS

SC-ELEPHANT SPM3215 – Connection systems

Our new 32-core, highly flexible yet durable **SC-ELEPHANT SPM3215** multicore speaker cable with torsion-free stranding is perfect as a reliable **connection solution for large sound reinforcement systems**, such as the L-series from L-Acoustics. Here we combine the speaker cable with our **HICON** Tourlock connectors with **gold-plated crimp contacts** and offer two different versions, one with a tried and tested anti-kink screw connection or alternatively with an aluminum screw connection including a stainless steel strain relief mesh. Custom lengths and special configurations are easily possible. Please contact our technical support team by phone under +49 7082 49133-10 or by e-mail to support@sommercable.com.

Also available as **fan-out cable**, designed with full **SC-ELEPHANT SPM825**, connected via innovative ultrasonic splicing technology in a Glandmaster protective housing.



ELEPHANT SPM3215 speaker cable

TOURLOCK LK37 male with sleeve ↔ TOURLOCK LK37 female with sleeve, HICON (corresponds with article SC32 from L-Acoustics)

ORDER NO.	LENGTH
ETLZ-0500	5.00 m
ETLZ-1000	10.00 m
ETLZ-1500	15.00 m
ETLZ-2500	25.00 m
ETLZ-5000	50.00 m

For the version with aluminum screw connection incl. stainless steel strain relief mesh, replace the "-" in the 5th position of the order number with an "N". Order example for length = 50 m: ETLZN5000

Speaker fan-out cable SC-ELEPHANT SPM3215 with SPM825 fan-out

for the connection of LK08 speaker systems via the LK37 SPM3215 system. **TOURLOCK LK37 male without sleeve <> 4 x TOURLOCK LK08 female with sleeve, HICON** (corresponds to article SC32-4DO from L-Acoustics)

ORDER NO. ET4D-0100J ET4D-0100T **LENGTH SPM3215** 1.00 m 1.00 m

plus FAN-OUT LENGTH SPM825 1.00 m 2.00 m

For the version with **aluminum screw connection incl. stainless steel strain relief mesh**, replace the "-" in the 5th position of the order number with an "**N**". Order example for length = SPM3215 = 2.00m, fan-out length 2.00m: ET4D**N**0200T

SP-BOXX

The Speaker-Boxx **LA-7** is used to connect classic LK08 and NL4 wirings with the LK37 SPM3215 system. The Boxx is based on our classic SYSBOXX system, has the same modular design and is ultra-robust.

TOURLOCK LK37 male HI-LK037MP ↔ 8 x 4-pole Speakon installation socket NL4MPXX + 2 x TOURLOCK LK08 female without sleeve, HICON (corresponds to item BOB32 from L-Acoustics)

🚺 order no. la-7

AWG11] • LSP-performance [OFC] • by SOMMER SCABLE GERMANY

SC-ELEPHANT ROBUST

S STAGE & MOBILE & STUDIO & INSTALL & ELA & HIFI

Extra rugged for daily stage use ...

we improved the jacket stability on the 4.0 mm²/AWG11 **SC-ELEPHANT** series. Furthermore, it is flexible, robust, crush--resistant, easy to reel and, of course, reusable time and time again. Now the jacket surface is also slick and easy to keep clean. We have customized the outer wire diameter to make it easy to work with common speaker multi-pin connectors (CA-COM 8-pin, NL8, LKS19, EP5).

A particular highlight of the **SC-ELEPHANT SPM1640** is its capacity to handle 8 speaker lines in only one cable. A number of tailor-made prefab cable solutions can be found under "Multicore & Power Distribution Systems."

FREE SAMPLE AVAILABLE!

Sectional drawing see website.

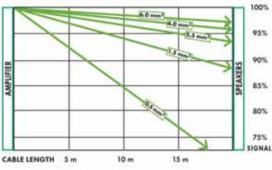


APPLICATIONS:

• Professional PA/sound reinforcement systems

PRODUCT ADVANTAGES:

- Loss-free transmission due to special wire stranding
- Highly flexible and stage-ready, easy to reel
- Compatible with CA-COM 8-pin, NL8, LKS19, and EP5 connectors
- Easy to work with thanks to good insulation and clear numeric identification
- PUR version transversely watertight



Power handling chart: power loss in loudspeaker cables of various cross-sections as a function of the cable length



To avoid kinking, we have provided the 8-wire version, **SPM840** (PVC), with a special filler and a Softflex PVC jacket.

Ø mm	mm ²	Ø mm	mm ²	Ø mm	^{mm²}	Ø mm	^{mm²}
11.0	4x4	18.5	8x4	16.4	8x4 (Cca)	26.0	24x4

TECHNICAL DATA Construction:	SPM440 (4LIY4.0 mm ²)Y	SPM840 PVC/PUR (8LIY4.0 mm ²)Y	SPM840 FRNC/CCA (8LIY4.0 mm ²)Y	SPM2440 (24LIY4.0 mm ²)Y
Jacket, diameter:	11.0 mm	18.5 mm	16.4 mm	26.0 mm
Jacket material, insulation:	Standard in PVC, FRNC version	halogen-free + flame-retardant, l	PUR version flame-retardant + self	-extinguishing
Inner conductors:	4 x 4 mm² (AWG11)	8 x 4 mm² (AWG11)	8 x 4 mm² (AWG11)	24 x 4 mm ² (AWG11)
Copper strands per conductor:	224 x 0.15 mm	128 x 0.20 mm	48 x 0.31 mm	133 x 0.19 mm
Conductor insulation, Ø:	3.75 mm	3.75 mm	4.0 mm	3.65 mm
Temperature range:	PVC+FRNC: -25 °C+70 °C /	PUR: -30 °C+70 °C		
Fire load per m:	0.85 kWh	2.25 kWh	2.25 kWh	3.77 kWh
Weight per 1 m:	246 g	570 g	570 g	1500 g
Jacket color:	PVC+FRNC: Dlack			
Packaging:	per m	per m	per m	per m
Fire load per m: Weight per 1 m: Jacket color:	0.85 kWh 246 g PVC+FRNC: ■ black	2.25 kWh 570 g	570 g	1500 g

ELECTRICAL DATA

Cond. resistance per 1 km:	< 4.5 Ω	< 4.5 Ω	< 4.5 Ω	< 4.5 Ω	
Insulat. resistance per 1 km:	> 5 MΩ	> 5 MΩ	> 5 MΩ	> 5 MΩ	
Operation/test voltage: PVC+FRNC: max. 300 V/2 kV					

ORDER NO.	PVC	490-0051-440	490-0351-840		490-0051-2440
ORDER NO.	FRNC/CCa	490-0051-440FC		490-0051-840FC	
ORDER NO.	PUR	490-0251-440	490-0351-840P		

SPEAKER CABLE MULTICORE 24 X 4.0 MM² >>> CONNECTION SOLUTIONS

SC-ELEPHANT ROBUST – Connection systems

The **ELEPHANT SPM2440** speaker multicore is the ideal connection solution for modern amp racks with 12 power channels, as offered by many system manufacturers. All 12 channels are brought to the system via just one cable and connected using a single plug-in process using the upmarket Tourlock HI-LKS25 connector (size 32) from **HICON**. This means that even very large sound systems can be wired with little effort. The fan-out solutions fit perfectly to systems from manufacturers such as d&b, L-Acoustics, or ADAMSON.

Custom lengths and special configurations are easily possible.

Please contact our technical support team by phone under

+49 7082 49133-10 or by e-mail to support@sommercable.com.

ELEPHANT SPM2440 speaker cable

TOURLOCK LKS25 male with sleeve + TOURLOCK LKS25 female without sleeve, HICON with aluminum screw joint incl. strain relief mesh

ORDER NO.	LENGTH
ED7TU0750	7.50 m
ED7TU1500	15.00 m
ED7TU2500	25.00 m
ED7TU3000	30.00 m
ED7TU5000	50.00 m

ELEPHANT SPM840 speaker fan-out cable

ORDER NO. EV58-0100 EV59-0100 V7B-0360

TOURLOCK
 TOURLOCK LKS25 female without sleeve
 TOURLOCK LKS25 female without sleeve
 TOURLOCK LKS25 male with sleeve

FANOUT

3 x NEUTRIK NLT8FXX-BAG speakON 3 x TOURLOCK LK08MVR male with sleeve, HICON 3 x TOURLOCK LK08FV female with sleeve, HICON

2 x01802

LENGTH

optionally comes with protective bag

1.00 m 1.00 m stepped lengths (1.60 m/2.40 m/3.60 m)



ELEPHANT SPM440 speaker fan-out cable

ORDER NO. **E47D-0320 E47F-0320** TOURLOCK TOURLOCK LKS25 male with sleeve TOURLOCK LKS25 male with sleeve

FANOUT

6 x NEUTRIK NLT4FXX-BAG 6 x NEUTRIK NLT4MXX-BAG



LENGTH

stepped lengths (1.20 m/1.60 m/2.00 m/2.40 m/2.80 m/3.20 m) stepped lengths (1.20 m/1.60 m/2.00 m/2.40 m/2.80 m/3.20 m)



4-CHANNEL CAT SYSTEMS: SYSCAT4

ETHERCON-SPLEISSADAPTER – SYSCAT4

Our popular stage-proof **CAT cables** are also ideal for the simultaneous **transmission of up to four analog, AES/EBU or DMX signals**. With the splice adapters presented here, this is possible in a robust form. We use our robust and very flexible **SC-SEMICOLON 2** digital patch cable in combination with the CAT.6a EtherCON full metal connector from **NEUTRIK** and **HICON** or **NEUTRIK** XLR connectors. The RJ45 socket is housed in a solid 3-mm steel plate. The channel numbers are clearly readable - in SOMMER style - on the connectors.

Matching floor boxes and 19" patch units are available.

Special configurations are easily possible. Please contact our technical support team by phone under +49 7082 49133-10 or by e-mail to support@sommercable.com.

Channel 1 = pin 4+5Channel 2 = pin 3+6Channel 3 = pin 1+2Channel 4 = pin 7+8





SYSCAT4 cable splice EtherCON + XLR, HICON/NEUTRIK

		-
	ORDER NO.	VERSION
	SPY-E3241	EtherCON NE8FDX 🕈 4 x HICON XLR 3-pole male
	SPY-E3242	EtherCON NE8FDX + 4 x HICON XLR 3-pole female
	SPY-E3251	EtherCON NE8FDX + 4 x HICON XLR 5-pole male
	SPY-E3252	EtherCON NE8FDX + 4 x HICON XLR 5-pole female
I	SPY-E1241	EtherCON NE8FDX + 4 x NEUTRIK XLR 3-pole male
	SPY-E1242	EtherCON NE8FDX 🕈 4 x NEUTRIK XLR 3-pole female
	SPY-E1243	EtherCON NE8FDX + 4 x NEUTRIK XLR 3-pole unisex/Convertcon
	SPY-E1251	EtherCON NE8FDX 🕈 4 x NEUTRIK XLR 5-pole male
	SPY-E1252	EtherCON NE8FDX 🕈 4 x NEUTRIK XLR 5-pole female

SYSCAT4 Floor stagebox

	ORDER NO.	DESCRIPTION
2	SBE-1240	EtherCON NE8FDV + 4x XLR 3-pole female + male parallel

SYSCAT4 19" 1 RU patch panel SYSPANEL

	ORDER NO.	DESCRIPTION
	SBE-1249	1 x EtherCON NE8FA 🕈 4 x XLR 3-pole female + male parallel
а	SBE-1250	2 x EtherCON NE8FA + 2 x 4 x XLR 3-pole female + male parallel





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SOMMER *E*CABLE

BINARY 234 AES/EBU MKII

These pre-assembled cables are ideal for transmitting the 110 Ω AES/EBU 2 DMX512 data format and ensure an error-free data transfer even over longer distances of up to 100 m/330 ft. We use the BINARY 234 AES/EBU MKII cable with 100% shielding and black **HICON** XLR connectors in a robust full metal version or **NEUTRIK XLR** connectors. For the DMX line with return channel we use our **BINARY 434 DMX512** cable with dual shielding (braided cross mesh + foil) and black 5-pole connectors from HICON or NEUTRIK. We can also supply the BINARY 234 AES/EBU MKII with 5-pole connectors with 3 pins assigned.

If not stated otherwise, we supply the cable in black.

For all those who do not need a cable box or want to avoid waste, there is the possibility to order our cables without packaging. To do this, replace the "-" in the 5th position of the order number with an "A". Order example for Binary 234, XLR 3-pole female <> XLR 3-pole male, WITHOUT CARDBOARD: B2CEA0250.

Optionally also incl. unshrunk clear shrink tubing in 5 cm length ("-" replace with "R") or in 8 cm length ("-" replace with "8").

Color and order code:	■ black: SW	🔳 blue: BL	
XLR male ↔ 3-pole XLR fema	ale, HICON		With transparent code ring for your personal labels!
ORDER NO.	LENGTH	E:452	
B2CE-0250	2.5 m		SUMMERCIALE
B2CE-0500	5.0 m		HI-X3CM-M
B2CE-0750	7.5 m		HI-X3CF-M
B2CE-1000	10.0 m	Ax00825	Customize
XLR male 🕈 3-pole XLR fema	ale, NEUTRIK		Your Cable
ORDER NO.	LENGTH	国体教室	Contraction (Martin Contraction)
B20Q-0250	2.5 m	1000	SOMMEREIGANE
B20Q-0500	5.0 m		NC3MXX-BAG
B20Q-1000	10.0 m	自然如影	NC3FXX-BAG
B20Q-2000	20.0 m	₽x00826	
XLR male ↔ 5-pole XLR fema	ale, 3-poles wired, HICON		
Allocation: Screen to pin 1, – to p	in 2, + to pin 3		
ORDER NO.	LENGTH		
B2GS-0250	2.5 m	20 Mar	
B2GS-0500	5.0 m	网络新闻	HI-X5CM-M
B2GS-1000	10.0 m		HI-X5CF-M

2 x00827

XLR male ↔ 5-pole XLR female, 3-poles wired, NEUTRIK

Allocation: Screen to pin 1, - to pin 2, + to pin 3

B2GS-2000-..

ORDER NO.	LENGTH	I \$:558 I
B2Y7-0250	2.5 m	i San and
B2Y7-0500	5.0 m	
B2Y7-1000	10.0 m	
B2Y7-2000	20.0 m	₽ x00828

20.0 m

BINARY 434 DMX512

For the DMX512 line with return channel we use our **BINARY 434 DMX512** cable with dual shielding (braided cross mesh + foil) and either black HICON 5-pole or NEUTRIK 5-pole XLR connectors, each with a 5 cm/2" piece of transparent heat-shrink tubing per side for your personal labelling.

Color and order code:	■ black: SW	🔳 grey: GR
BINARY 434, XLR male + 5-po	le XLR female, fully wire	d, HICON
ORDER NO.	LENGTH	
B4GSU0250	2.5 m	
B4GSU0500	5.0 m	
B4GSU1000	10.0 m	
B4GSU2000	20.0 m	₽x00829
XLR male & 5-pole XLR female, fully wired, NEUTRIK, black housing		
	IFNOTU	CONTRACTOR INC.

ORDER NO.	LENGTH	回始就回
B4Y7U0250	2.5 m	
B4Y7U0500	5.0 m	
B4Y7U1000	10.0 m	
B4Y7U2000	20.0 m	₽ x00830

using

Our GTCs apply

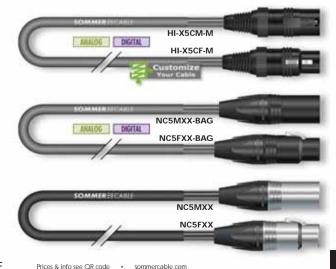
XLR male XLR female 5-p	oole, fully wired, NEUTRIK	, nickel-plated hou
ORDER NO.	LENGTH	
B40HU0250	2.5 m	本的最近
B40HU0500	5.0 m	16. A 16.
B40HU1000	10.0 m	回到的是新
B40HU2000	20.0 m	🔎 x00831

Subject to changes ·





The cable is available in black or grey in compliance with the VDE 0812/VDE 0207 standard. If no color is specified, we supply it in grey according to VDE.





HICON is a German company which produces high-quality connectors and components in Germany, some other European countries as well as in Asia (Taiwan). HICON is regarded as highly innovative, and the company also offers complex custom solutions for the media engineering sector.

HICON delivers a huge range of high-quality connectors at fair prices. By the way, the **HICON** connectors are known for their high numbers of mating cycles and easy handling which is why they are already used in countless TV and broadcast stations.

To ensure a long-lasting and reliable quality, the mating cycles are tested by means of a special-designed automatic machine made by SOMMER-TECHNIK.

With transparent code ring for your subsequent individual lettering!



We grant a 5-year warranty on

HICON connectors!

HICON PRO strain relief



HICON BASIC standard strain relief systems



to buy brand-name quality because poor connectors often have high contact resistance values and thus dash the benefits of a SOMMER CABLE

Make sure to check the following points: · a decent gold-plating or coating

- (cheap connectors often have only a gold-colored lacquer finish!)
- a massive pin with no disruption due to a rivet, pressing etc.

Before purchasing a connector, you should always make sure

low contact resistance values

good cable

Simply good vibes.



Simple audio and video connections without soldering ...

this is what the new line of HICON SCREW & PLAY connectors has to offer.

This high-grade series of jack, RCA/phono and BNC connectors is ideal for the individualists, the impatient or the untrained ones among us.

Those who want to assemble or repair a cable on the road in a quick, safe and uncomplicated way will love these sets where in most cases one only needs to strip the cable with a sharp pocket knife. The cable is then plugged into the connector and safely locked by tightening a screw or by a collet strain relief.

> Most connectors housings have a groove to attach color code rings for distinction and quick overview.



... for the solderless DIY assembly!

- Gold tip Wrench size 8
 - Pin for inner conductor Groove for color code rings HI-UC
 - Clamp sleeve for shield contact
 - Trumpet strain relief

TRICONE XXL



Subject to changes

SOMMER == CABLE

TRICONE – double crimping is better than single crimping!

A big hand was given to the new mounting system which allows HICON-designed jack connectors to be assembled and provided with a dual hex crimping without any solder, gas and almost no significant contact resistances! With a whopping **230 newtons** the **strain relief forces** of this cable/connector combination are far superior to other cable connections.



HICON connectors are developed by reknowned connector professionals, among these are also members of the SOMMER CABLE team who assist with advice and support and lots of experience.

Let there be light ...

because our development team has also done an excellent job in terms of optical fibers: the **HICON HI FIBER** connector fits all commercially available fiber optical cables. With a little practice and our toolcase you can even carry out an on-site repair yourself in case of average. Our road-proof **HICON HI FIBER** connection system is based on four optical **LC** fiber lines which are protected by a robust, compact metal housing technology. It consists of a cable plug and an installation socket in

the compact D flange format which can also be used as a universal cable coupler for extension (cascading) purposes. The **HI-FIBER4-FD** socket may also be used to connect the **HICON HI FIBER** system with up to four conventional LC cables (or else two LC-duplex cables) and link it to existing LC systems – simply plug in the LC and you're ready to go! The **HICON HI FIBER4-MC** cable plug can be fitted with up to four LC connectors which are assembled after inserting the cable and then plugged into the quad fixture. The seal cap and a spring-loaded protection sleeve save the sensitive fiber system from dirt and damages.



The production of top-class high-frequency BNC connectors for the 12G-UHD broadcast transmission is a precision mechanical challenge that only very few makers in the world are up to. Among other things, HICON has specialized in the development and production of these technically demanding connectors and offers a wide range of models which stands out by a high number of mating cycles (>500), a high accuracy of fit and compatibility with other connection systems and cable types. The UHD connectors feature robust, hard gold-plated contacts, self-centering pins and low tolerances. They are easy to work with, antiskid and visually sophisticated.



HICON NOISEFREE 6.3 mm Jack Plugs

Here's good news: no more popping noises!

The cracking noise that occurs when plugging in a jack plug can be avoided if you give it an advance ground contact. Thanks to a brief muting at plug-in, those notorious "turn-on popps" and other annoying noises are suppressed. Not only are they unpleasant to the ears, in the worst case they can even blow out speaker diaphragms. To prevent this from happening, plug the **HICON NOISEFREE** jack plug into the guitar and connect it with a beautiful **SOMMER** CABLE guitar cable of your choice.

For their **NOISEFREE** connectors German manufacturer **HICON** uses a proven system which has been reliably doing its duty for decades: inside the pin a hardened and hard gold-plated springloaded steel contact is gliding which is known for its low rate of failures.

Noisefree plugging & unplugging

These are available in a straight **(HI-J63M14)** or angled **(HI-J63MA14)** version. The housing is made of sturdy, treadable brass finished in black and has a large cable inlet which can take even very thick guitar cables (max. outside diameter 7 mm).

The interior trumpet-shaped milling acts as the sleeve support.

A common language for a perfect interaction and the safe transfer of information.

HDBaseT as the **transmission standard for audio, UHD video, control signals incl. power supply** (PoE up to 100 W) interconnects your single HDBT components via a network cable to form a **system controlled by you**, and this with almost zero latency. As an **HDMI[®] and HDBaseT adopter**, *SOMMER* CABLE offers you a complete HDBaseT assortment, cabling solutions & professional guidance from a single source. You can find our complete HDBaseT range online in our B2B shop.

The 3rd generation is equipped with new, practical features:

- Down-scaler
- EDID & HDCP management
- Video keep-alive function
- Test pattern generator
- CEC control
- Audio de embedding analog & optical
- Extensive diagnostic functions

HDBaseT Extender system

for long HDMI distances of up to 70 m

The 3rd generation **CARDINAL DVM** HDBT extender system **DVM-HDBT-EX07** ensures a stable transmission of 4K60 HDMI® signals over **Iong distances** of up to 70 meters via only a single CAT line. All common standards like HDR, HDCP (up to V2.2), 4K 60fps 4:4:4, 3D, CEC as well as PCM and bitstream audio can be processed. In addition, a bi-directional RS232 and infrared communication enables display and projector control. The devices are built into an ultra-flat housing. Transmitter and receiver are available individually or as a set including mounting accessories, R232 adapter cable and IR diode/receiver.

ORDER NO. DVM-HDBT-EX07-T3 DVM-HDBT-EX07-R3 DVM-HDBT-EX07-P

DVM-HDBT-EX07-S3

DESCRIPTION

HDBaseT transmitter (single device) HDBaseT receiver (single device) Power supply, for connection to transmitter or receiver HDBaseT extender set incl. 1x power supply

USB-C CONNECTION SOLUTIONS

2 x01688

USB 3.2 / USB 4

The super flexible high-end USB cables with a charging power of up to 240 W and max. data transfer rates of 40 Gbit/s excel by a visually attractive textile sheath made of a **nylon/cotton fabric** which is firmly glued to the cable jacket for fixation and to prevent slippage or detaching. The internally fully extruded USB connectors with their slim high-quality **aluminum housing** guarantee a secure fit and a rugged consistency. E-marker chips located in the USB-C plug communicate with the connected devices to avoid overloading. The series comprises 40 Gbit/s USB4 Gen3x2 (HI-U4CC), 20 Gbit/s USB3.2x2 (HI-U3CC), 10 Gbit/s USB-A & USB-C (HI-U3AC) and USB-A & USB-A versions (HI-U3AA) as well as matching extension cables (HI-U3CF, max. 2 m) which may be used optionally with a KST-USC-ADAP **clip-in Keystone housing** (white or black) for permanent installation. For this the female cable connector is simply clipped in from behind.

- USB 3.2 Gen 2x2, USB C male ↔ USB C male, 20Gbit

 ORDER NO.
 LENGTH ORDER SUFFIX

 HI-U3CC-...
 0,50 m (0050), 1,00 m, 2,00 m, 3,00 m
- Image: Display Stress
 USB C male ↔ USB C male, 40Gbit

 ORDER NO.
 LENGTH ORDER SUFFIX

 HI-U4CC-...
 0,50 m (0050), 1,00 m, 2,00 m
- USB 3.2 Gen 2x2, USB C male ↔ USB C female, 10Gbit suitable for USB-C clip-In (KST-USC-ADAP-...)

 ORDER NO.
 LENGTH ORDER SUFFIX

 HI-U3CF-...
 0,50 m (0050), 1,00 m, 1,50 m
- Image: Signal state stat
- USB-C adapter, plastic, Keystone clip-in, only for HI-U3CF-... ORDER NO. COLOR KST-USC-ADAP-SW black KST-USC-ADAP-WS white
- USB 3.2 Gen 2x2, USB C male ↔ USB C male, 20Gbit HIGHFLEX version with silicone jacket

 ORDER NO.
 LENGTH - ORDER SUFFIX

 HI-U3CS-...
 0,25 m (0025), 0,50 m, 1,00 m, 1,50 m, 2,00 m

USB 4 Gen 2x2 Adapter

-	ORDER NO. HI-U4-FF	DESIGN USB-C female ↔ USB-C female
Z	HI-U4-FF HI-U4-MF	USB-C female & USB-C female
	HI-U4-MF90H	USB-C female + USB-C male 90° angled horizontally
8	HI-U4-MF90V	USB-C female + USB-C male 90° angled vertically

Image: Stress of the stress of the

HI-U3AC-... 0,50 m **(0050)**, 1,00 m, 2,00 m max. cable length 2 m

 Image: USB 3.2 Gen 2x1, USB A male ↔ USB A male, 10Gbit

 ORDER NO.
 LENGTH - ORDER SUFFIX

 HI-U3AA-...
 0,50 m (0050), 1,00 m, 2,00 m

USB-C-AOC 3-in-1 up to 15 m

For USB-C cable runs >3 m the **HI-UAOC** cable series with built-in **AOC technology** ensures a stable and reliable transmission and full functionality over distances of **up to 15** m. Thus, the cable supports 10 Gbit/s USB 3.2 signals (downward compatible to USB 1.1/2.0), combined with **4K60 video signals** (DP alternate mode) and **60** W of charging power. All that with only **6 mm** in diameter and an extremely flexible, supple structure.

USB 3.2 Gen 2x1, USB C male ↔ USB C male

Subject to changes .

ORDER NO. HI-UAOC-... LENGTH - ORDER SUFFIX 5,00 m (0500), 6,00 m, 7,00 m, 8,00 m 10,00 m, 15,00 m

Our GTCs apply

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USE DATE

60V

Bring a SOMMER vibe to your own home.

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SOMMER CABLE

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Installation & Conference



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03/2024

SOMMER CABLE based in Straubenhardt/Germany was founded in 1999 and is now one of the leading suppliers of professional high-quality cable and connection technology with a focus on the audio, video, broadcast, studio and media technology sectors. The product range including the in-house brands HICON, CARDINAL DVM and SYSBOXX covers cable bulk ware, connectors, connection cables, individually adaptable distribution systems and electronics.

B2B shop with over 25,000 products is available 24/7.



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ACCESSALAREAS

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trade shows & events





Claudia Kwiecinski (ET.Now), Kerstin Horaczek (Messe Ffm)



Daniel Imiola, Ralf Zoller (B&K Lumitec)



Oliver Winkler, Marcel Vranken (LMP) with Claudia Kwiecinski



Jörn Nettingsmeier (VDT), Sebastian Oeynhausen (Pan Acoustics)



Sebastian Wittrock, Thomas Mehlhorn (L-Acoustics)



Marcus Rembold, Daniel Zimmermann (d+b)















Marcel Fery (TSE) Oliver Nachbauer (Creationpark)



Frederik Afif (Elation)



Marco Kuhnmünch, Christoph Wöhler, Jürgen Freitag (K+F)



Marina Prak, Erik Baum (Roe Visual)



Haris Hotovic, Oliver Nachbauer, Emre Can Oefke (Creationpark)



Claudia Kwiecinski (ET.Now)





Record for the anniversary

The latest edition of Integrated Systems Europe, abbreviated ISE, the world's leading trade fair for audiovisual media and system integration, excelled in all aspects and proved to be "Your Destination for Innovation".

Integrated Systems Europe 2024 was the most successful edition in its 20-year history. The trade fair, held at the Fira de Barcelona Gran Via, attracted around 74,000 visitors from 162 countries - a record since the founding of the fair in Geneva in 2004. This represents an increase of 27 percent (%) compared to the 2023 edition. There was a significant increase in participants from key AV market areas such as Germany, Belgium, Poland, and China. On Wednesday (January 31), the fair counted exactly 51,617 visitors, the highest number ever recorded on a single day at ISE, surpassing the previous record by almost 22%.

The total number of registrations amounted to 95,396 with 172,627 visitors over the four days. The number of visitors on Friday reached 24,528, a record for the fair since its expansion to four days.

MEINGIG. MEINTRAUM. INEINGIG. MEINTRAUM.

Fernweh? Werde Teil der Mein Schiff Crew und bewirb dich jetzt um einen Job bei sea chefs als:

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werde ^{Teil} der **Mein Ochiff** CreW KOMM' EINFACH VORBEI! STAND B58 Halle 12.0 auf der PLS 2024

ettrade shows & events





Of all visitor groups, 24,815 people (33.6%) attended ISE for the first time, with 46.92% of first-time visitors coming from Spain. The total number of visits over the four days amounted to 172,627, with participants spending an average of 2.2 days at ISE 2024. Daily visitor numbers on Tuesday, Wednesday, Thursday, and Friday all reached a new record for the respective days at an ISE edition. Over 80% of visitors came from the commercial sector.

Visitors represented a wide range of professions, with CEOs, C-suite executives, and directors making up a significant portion. Four out of five visitors stated that they had either made the final purchasing decision, influenced the decision, or made recommendations.

In addition to record hotel occupancy, bars, and entertainment venues in the city (and no taxis in the morning!), exhibitors reported an unprecedented rush to the stands at the largest ISE fair ever. ISE recorded the highest number of exhibitors (1408) and the largest exhibition space (82,000 sqm).

ISE 2024 was a testament to the innovation of the pro-AV and system integration industry. Exhibitors from around the world presented cuttingedge solutions ranging from advanced display technologies and immersive audio systems to intelligent automation and collaborative communication tools.

Mike Blackman reflects

Mike Blackman, Managing Director of Integrated Systems Events, commented: "In the 20-year history of ISE, we have experienced the transformative power of innovation and collaboration within our community. ISE 2024 not only reflects the cutting-edge technologies that shape our industry but also bears witness to the enduring spirit of creativity and camaraderie. As we celebrate this milestone, we look forward, along with our co-owners AVIXA and CEDIA, to continuing our commitment as a global platform for industry experts."

The educational component of ISE 2024 was exceptional. Conference sessions, workshops, and keynote presentations by Academy



Award-winning director Sharmeen Obaid-Chinoy and leading digital artists Jeroen van der Most and Sofia Crespo provided valuable insights into new trends, market dynamics, and technological breakthroughs. Renowned speakers shared their expertise on topics such as artificial intelligence in AV, sustainable design, and the future of remote collaboration in conferences and on exhibition stages. A total of 363 speakers participated in the ISE program with conferences, presentations, and panel discussions. The conference program developed by AVIXA and CEDIA covered the key vertical markets of the AV industry, including content production and distribution, control rooms, digital signage, live events, smart buildings, and smart home technology. Participants had the opportunity to engage in meaningful discussions and gain actionable knowledge to stay ahead in the rapidly evolving industry.

The celebration of the 20th anniversary of ISE added a special touch to the event. Commemorative events, retrospective installations such as the ISE Time Tunnel and the Vintage Audio Museum, as well as tributes to industry pioneers underscored the incredible journey of ISE. This not only evoked a sense of nostalgia but also highlighted the resilience and adaptability of the industry in the face of technological advancement.

As the industry reflects on the success of ISE 2024, anticipation grows for the future of pro-AV and system integration, driven by innovation, collaboration, and shared commitment to pushing boundaries and enhancing user experiences. With the next ISE scheduled to take place in Barcelona from February 4 to 7, 2025, industry experts can look forward to another unparalleled experience celebrating the achievements of the industry and setting the course for its further growth and development.

Already, it is evident that ISE 2025 will be even larger than the recordbreaking ISE 2024, as the number of exhibitors who have rebooked their stands has increased by over 10% compared to the previous year. The very strong demand for exhibition space has prompted ISE to expand its offering by opening Hall 8.1, thereby enhancing opportunities for presenting innovation and engagement. The booking process has been open to new exhibitors since March 1, 2024.





ettrade shows & events



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The first time...

For Mott, provider of mobile stage elements, stages, and platforms, the ISE 2024 was the premiere as an exhibitor. The team reports on its experiences.



"The journey and connection to the exhibition grounds were quite clear and easy to find. However, in Barcelona, and who would have thought: If you have questions or want to communicate with Spaniards on-site, the employees (regardless of the area) often have poor English skills and then speak Spanish." The Mott team had booked the "Plaza Espanya" hotel with good train connections to the exhibition grounds. Since the shuttle bus to the fair only ran between 10 a.m. and 12:30 p.m., it was not an option for exhibitors.

Prior to the fair, exhibitors were informed by the fair that Halls 1 and 2 would open at 9 a.m. to counteract the long waiting times in the entrance area in recent years. However, visitors were not informed about this. (Editor's note: The press was also not informed.) Official opening hours were also listed on the ISE website from 10 a.m.

"So we, as exhibitors, were ready almost every day just before 9 a.m., but on almost all days until about 9:45 a.m., we had not a single visitor in Hall 1." However, the halls filled up quite quickly from 10 a.m. Mott was able to welcome numerous visitors to the booth, including many international visitors. "However, most of them came from Spain and Portugal."

Quite noticeable was the relatively long lunch break ("siesta") as well as the fact that more and more visitors and interested parties did not have business cards anymore and preferred to retrieve their data via the QR code on the visitor badge. "We did not book the option to scan the data via QR code at the ISE because the price for it was simply too high."

According to Mott, there is still room for improvement with the team at the exhibition grounds: For example, the cleanliness of the toilets was not okay compared to the Prolight + Sound in Frankfurt, and visitors had to leave the exhibition grounds from 6 p.m. onwards and were also very strictly asked to do so. Delivery and setup were clearly communicated by the ISE, and there were fixed contact persons.

"However, I noticed that people who stood at a booth for a longer time to have a drink were instructed by security to leave the exhibition grounds. This behavior is not known to me personally from German trade fairs. However, registered booth parties were allowed to take place undisturbed."

Mott's expectations of making as many international contacts as possible were met - and that is the primary goal of a trade fair of this magnitude. "Overall, we had a very positive impression and are curious about what will come out of the contacts we made." Like all other exhibitors, the company noticed the re-booking tactic of the fair: "Of course, it was strategically clever to book the booths for next year immediately. Within a certain period, you were allowed to book a booth for next year and were thus also forced to do this within the specified period."





For beginners and experts

The Truss Academy of Global Truss celebrates its 10th anniversary this year. The first event of the anniversary year took place at the Thomann music store.

Since 2014, the Truss Academy has been offering suitable workshops and seminars to impart knowledge about trusses and rigging in event technology. Whether for beginners or experts - at the Truss Academy, everyone finds their suitable training. Over the past ten years, the Truss Academy has trained hundreds of professionals from the event technology industry and has made a significant contribution to improving safety and quality in the event scene by promoting expertise and knowledge.



In January 2024, the first seminar of the anniversary year took place - a three-day seminar to obtain expertise in lifting gear and truss systems in event technology. The seminar was held in the training rooms of Thomann music store in Treppendorf. The training was fully booked with over 40 participants. A great success for both participants and organizers, demonstrating that the demand for further education remains high.

A significant reason for the continued success of the Truss Academy is also the renowned instructors, including Dr. Ing. Jan Keppler, owner of the structural engineering firm "vom Felde & Keppler". With his many years of experience and comprehensive knowledge in the field of structural engineering and event technology, he is an outstanding expert. His practical experience and academic expertise make him a valuable instructor for Truss Academy participants.

Also among the instructors is Dipl. Ing. Klaus Köberle, an experienced rigging expert from the Olympic Park in Munich. His work in one of Germany's most significant event venues has given him a unique perspective on the challenges and requirements of the industry. Additionally, his practical knowledge and ability to convey complex topics understand-ably contribute to his effectiveness as an instructor.

Niklas Adler from Global Truss expressed enthusiasm for this success: "The Truss Academy has had ten successful years, not least due to the significant contribution of our instructors and their expertise and dedication. We are pleased that our participants can benefit from their knowledge."

The Truss Academy now also offers the possibility of hosting a seminar or workshop on-site with customers. For more information about these in-house training sessions, contact Niklas Adler at www.trussacademy.com.

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Standingatthemachineeverydayforall mylifeimusedtodoitandineeditlitsthe onlythingiwantitsjustarushpushcash

Boris Blank celebrates world premiere of his solo album "Resonance" in Dolby Atmos at the Munich Dolby Cinema. Over 300 fans and guests accompanied the latest work of the pioneer of electronic music in an immersive setting.

On February 15, 2024, a special kind of world premiere took place at the Dolby Cinema in Munich: Boris Blank, founder and mastermind of the Swiss cult band Yello, personally presented his new solo album "Resonance" to more than 300 fans and industry guests - in Dolby Atmos sound. The unique listening event in the premium cinema hall of the Mathäser Filmpalast was hosted by the label IAN Records, distributor Virgin Music, and Dolby.

With Yello, Boris Blank has been shaping the development of electronic music for over four decades. As an established solo artist, the sound visionary has anchored his immutable DNA in global pop culture, which is still regularly cited by modern acts today. With "Resonance", Boris Blank now releases his third studio album - a mix of ambient, trance, and electro. The twelve tracks on "Resonance" were originally commissioned for the thermal bath "Fortyseven" near Zurich, designed by Swiss star architect Mario Botta.

Stefan Bock and Stefan Zaradi_ from IAN Records utilized the "Spatial Sound Wave" system developed by the internationally renowned Fraunhofer Institute to create an elaborately staged 3D sound landscape with meditative sounds for wellness and relaxation at the Munich MSM Studios. In collaboration with David Ziegler, Content and Partnership Relations Manager, they also created the special Dolby Atmos mix for the screening at the Dolby Cinema.

Previously, the MSM team had already mixed the Yello album "Point" in Dolby Atmos in 2020. And Boris Blank promises: All future projects will also be released in Dolby Atmos.



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Michael Herweg (Roxx)

Johannes Hunger, Uli Born (Nüssli)

Cine

Duc Nguyen, Tabea Bantes (Leat)

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Successful cooperation

The Leat X Cinec event at the end of February in the small Olympic Hall in Munich could be considered a successful networking event for the entertainment and film industry: 57 exhibitors with over 100 brands filled the exhibition space.

More than 1600 satisfied participants mingled among the stands, confirming the successful premiere of the merger between the two events, Leat X and Cinec. Once again, at this Leat event, the relaxed atmosphere and high-quality exchange among industry experts stood out.

In addition to the exhibition space, the perfectly integrated Cine Congress provided information and further education from the world of film technology, attracting many visitors with inspiring personalities such as the Oscar-nominated cinematographer Jost Vacano. Vacano, known for his work on films like "Das Boot" and "Total Recall", also received the Film & TV Camera Award on-site.

Common topics such as virtual production, sustainability, and skills shortage were discussed among related industries. The organizer was particularly pleased to see the significant presence of young talents, taking their first steps in professional networking within the industry.

Nearly 40 fortunate participants also had the opportunity, as part of an exclusive tech-focused tour, to gain insights into the extensively renovated Olympic Hall. Guided by Georg Schillay, they learned firsthand what makes the architecturally impressive arena a modern event location.

Bright's Virtual Production Studio also proved to be another highlight, immersing participants in the world of virtual production and presenting VR & AR as innovative tools for creative storytelling.

Leat X continues the success of the relatively new Leat X events with transformative character. Changing locations enable new cooperations and synergies. In the case of this year's fair, Director Duc Nguyen emphasizes the strategic importance of the cooperation with the film industry: "The merger of Leat X and Cinec has enabled all participants to access adjacent markets and thus create new synergies. The decision to host the event in Munich this year was a joint initiative with our exhibitors, with whom we are constantly in close communication. The Olympiapark, with its rich history and the numerous major events that take place here, proved to be an ideal venue for us in the event industry. Additionally, the location benefits from its proximity to the large film industry of the city of Munich."

Next up is the "major" Leatcon 2024, taking place from October 22nd to 24th, 2024, at the fixed location Hamburg in Exhibition Hall B6.

www.leatcon.com



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The ultimate guitar experience

Gibson Garage London: To celebrate the grand opening of the flagship store, alongside many visitors, Tony lommi, Jimmy Page, and Brian May also attended.



Gibson, the iconic and globally leading instrument brand, has shaped the sound across generations and music genres for over a century, making it one of the most relevant, widely played, and beloved music brands in the world. Last month, guitar maestros and the Gibson team came together to celebrate the official opening of the Gibson Garage London.

The Gibson Garage is already the ultimate guitar experience and destination for music lovers worldwide, where one can explore Gibson's 130year music history. It's the first flagship store outside the USA, following the successful opening of the Gibson Garage Nashville. The Gibson Garage London is located at 61-62 Eastcastle St, London, UK W1W 8NQ, near Oxford Street.

With its long history of craftsmanship and innovation, Gibson has become synonymous with music culture. At the Gibson Garage London, visitors can try out over 300 electric and acoustic guitars from Gibson, Gibson Custom, Gibson Acoustic, Epiphone, and Kramer, explore the entire Maestro pedal collection, and much more, all within a 4000square-meter retail space.

In the store, guitarists can design their own custom guitar in the "Murphy Lab" Custom Shop by selecting a guitar body from the wall and specifying further details.

Additionally, the Gibson Garage features a dedicated acoustic guitar room with one of the largest displays of Gibson acoustic guitars in the UK, as well as sections for electric, acoustic, and bass guitars from Epiphone and an exhibition of Kramer guitars - also the largest in the UK. Fans can get their hands on and play everything Gibson, Epiphone, Kramer, Mesa/Boogie, and Maestro have to offer. There's also a wide selection of exclusive Gibson apparel, gifts, lifestyle items, as well as equipment and accessories.

At the opening event, music icons like guitarists Jimmy Page (Led Zeppelin), Tony Iommi (Black Sabbath), and Sir Brian May (Queen), as well as singer-songwriters James Bay and Rosie Frater-Taylor, were present to celebrate the opening with a special "In Conversation" event with Jimmy Page and live music on the stage of the Gibson Garage. Music fans were lining up at the entrance from 4:00 am on the opening day. When the doors opened, the hand-signed Gibson Noel

At the opening (left to right): **Nat Zilkha** (Head of Gibson Brands), **Mark Agnesi** (Head of Brand Experience, Gibson), **Cesar Gueikian** (President and CEO, Gibson), **Jimmy Page, Brian May**, **Tony Iommi**



Gallagher '78 Les Paul Custom guitars sold out within the first 30 minutes.

The Gibson Garage London is the ultimate guitar and musician experience, offering unique British cultural discoveries at every turn and on every level. Music fans regularly experience live performances, artist presentations, autograph sessions, as well as panel discussions by musicians and artists - all on the state-of-the-art stage in the garage's basement. The Gibson Gallery, a semi-annual rotating gallery wall, showcases photography of British artists and musicians. The first exhibition opens with an exclusive collection by legendary music photographer Gered Mankowitz (The Rolling Stones, Jimi Hendrix, PP Arnold, Kate Bush, Elton John, The Jam, Eurythmics, and Oasis).

trade shows & events



Audio Pro



Perfect start

The Hamburg Open was once again the kickoff event of the broadcast and media technology industry in 2024; visitors and exhibitors alike expressed their satisfaction.

In mid-January 2024, the Hamburg Open took place again at the Hamburg Messe fairgrounds. The broadcast and media technology industry gathered for the kickoff of the year to discuss current technologies and solutions and to exchange ideas about specific use cases and best practices. Numerous lectures and panel discussions on two stages, as well as the usual informal exchange in the networking area, ensured excellent spirits among all participants - this year with an increased proportion also from neighboring countries.

With a significant increase in attendance of around 30 percent compared to the previous year, the trade fair reaffirmed its position as the leading networking event for technology and creative professionals in the German-speaking broadcast and media technology industry. The increase in the number of participants was all the more remarkable considering numerous weather-related flight cancellations at Frankfurt and Munich airports, which prevented many industry representatives from traveling to Hamburg.

Following the launch of the Hamburg Open Masterclasses last year, there was another workshop in 2024 in collaboration with the Film University Babelsberg titled "AI Tools for the Virtual Studio". Central elements of the workshop included insights into AI-driven developments for a virtual studio as well as algorithmic basics and an overview of relevant AI tools. In the practical part of the workshop, participants had the



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opportunity to experiment with various AI tools themselves and to test a use case in the context of a virtual studio.

The topic of AI also took up a lot of space in the lectures and panels on the two stages this year. To this end, the organizers entered into a partnership with the Association of Television and Film Technology (FKTG), which was then responsible for content on the topic of AI. In addition to various aspects of AI, participants also learned about cloud production, IP, HDR, audio formats, and virtual production.

The concept of the central networking area was also maintained in 2024 and further expanded with digital components. Throughout the event, visitors took the opportunity to exchange views on-site at the networking area over snakks and drinks, conduct customer discussions, or simply take a break. More industry representatives than ever before attended the traditional get-together on Wednesday evening. The special concept of the Hamburg Open and its content development resulted in high satisfaction among exhibitors and visitors. Thus, 90 percent of the approximately 170 exhibitors and 84 percent of the 2700 visitors rated the event as "very good" or "good". Over 85 percent each plan to participate in the next Hamburg Open next year. Exhibitors particularly praised the competence and decision-making authority of many visitors. "The special thing about the Hamburg Open is also the type of audience", said Claus Pfeifer, Head of Connected Content Acquisition at Sony. "We have high-quality conversations here: it's a level from the technical director to the CTO, and you don't get that at other shows of this kind."

The next Hamburg Open will take place on January 15 and 16, 2025, at the same location - in Hall B6 of the Hamburg Messe fairgrounds.



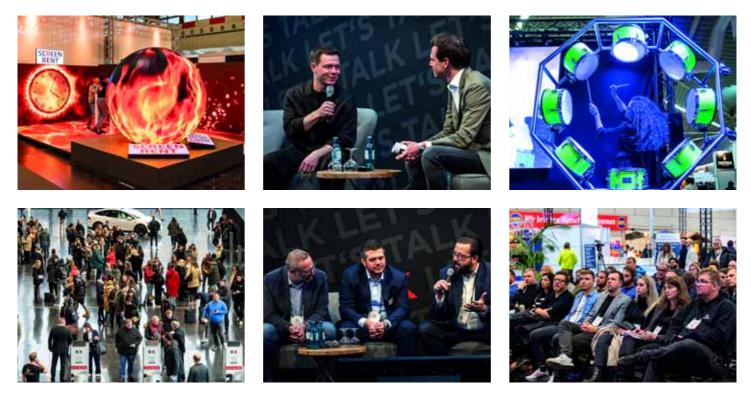
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Great industry diversity

With the start of BOE International 2024, the event industry has traditionally kicked off the new event year. Increased visitor interest and an expanded exhibitor portfolio from seven nations provided a comprehensive market overview.

From January 17 to 18, 2024, BOE International (BOE) at the Dortmund Exhibition Center once again marked the beginning of the new event year and showcased innovations and proven products from all segments of the event industry. As a catalyst for the ecological and economic transformation of the event industry towards greater sustainability, BOE introduced the new special area "Sustainable Stand - Best Practice Area", taking visitors on an inspiring journey into the future of sustainability as part of the Sustainability Experience.

The presentation of sustainable concepts by stand and exhibition construction companies was one of the highlights of BOE. By using ecological materials and developing reusable, modular system constructions, they demonstrated solutions for improved ecological balance and the path to carbon neutrality. The trade fair once again stood out this year for its industry diversity. Among the numerous renowned exhibitors were experts from various fields including professional event and conference technology, event production, and organization of conferences and congresses of various sizes.

The program, featuring numerous professional and entertaining highlights, delighted attendees with speakers such as Tijen Onaran, one of the top 100 successful women in business and an investor on the TV show





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"Höhle der Löwen" (German version of "Shark Tank"), as well as Georg Listing, entrepreneur and bassist of the world-famous band Tokio Hotel.

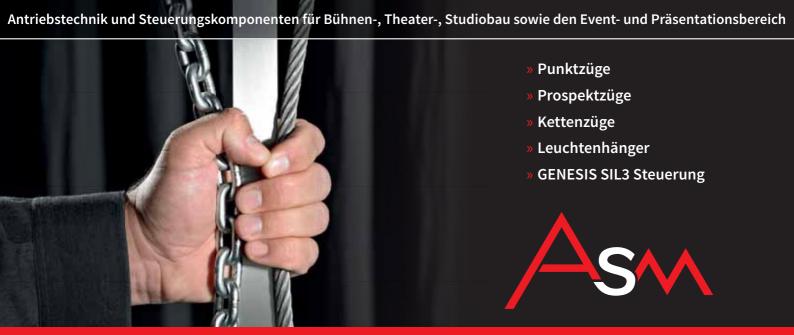
"The BOE once again brought together all the key stakeholders of the international event industry on one platform - and this within a framework that goes far beyond a mere trade show with an inspiring professional program. Whether it's new technological trends and innovations, basic equipment, or the variety of accompanying event services - here, the industry comes together in a relaxed atmosphere for successful business matchmaking and nurturing existing business relationships. We are very pleased with the overall positive feedback from this year's edition, with high international participation and an increase in both exhibitors and visitors, once again highlighting the attractiveness and significance of the established trade fair for experiential marketing", explains Sabine Loos, CEO and Managing Director of the Westfalenhallen Group.

Trade visitors are eagerly anticipating the next edition of the fair. Overall, more than 90 percent of the over 400 exhibitors have already expressed their intention to be represented at the next BOE with a booth. Around 97 percent of exhibitors stated that their expectations for this year's fair were met or even exceeded. Exhibitors particularly praised the effective networking, high frequency of professional visitors, and excellent business opportunities provided by BOE.

Brand Ex Award 2024

For the sixth time, outstanding projects of the previous year in the fields of live marketing and brand architecture were honored at BOE. Just a few hours earlier, the 22-member international jury made their decision for the first time in Brand Ex history during a live session. In the new evaluation process, a total of 46 entries out of 176 submissions were honored during the award ceremony. This year, two new awards were also presented: for the "best submitter" and for the "best project". The new three-part concept of the Brand Ex Awards received a lot of praise, from live judging to an entertaining one-hour stage show as part of the popular BOE Night, to the opportunity to learn more about winners and projects in the Brand Ex Deep Dives on the following day.

The next edition of BOE International will open its doors on January 15 and 16, 2025, at the Dortmund Exhibition Center.





Royal sound

Meyer Sound provides tailored acoustics at Dubai's luxury hotel "Atlantis The Royal" for a unique guest experience. Additionally, the company celebrated its 45th anniversary, including the introduction of a new logo.

As Dubai's newest ultra-luxury hotel, "Atlantis The Royal" offers guests an experience for all senses. The hotel, with 795 guest rooms across 43 floors, captivates with its impressive yet playful facade, while 17 restaurants indulge the taste buds. The auditory experience is equally paramount, with carefully crafted soundscapes in various communal areas faithfully reproduced for hotel guests by over 400 discreetly placed Meyer Sound self-powered speakers.

Nestled within Dubai's elegant Palm Jumeirah and surrounded by the waters of the Persian Gulf, the resort hotel was enthusiastically opened in early 2023. The hotel's developer, the Investment Corporation of Dubai, mandated that only the highest standards be considered when selecting vendors for the project. This requirement extended to Mediatech, the company responsible for the sound systems, and Ged King, the project's specialist planner. Given the mandate that the audio systems must not compromise visual aesthetics, Mediatech specified four models featuring Meyer Sound's patented Intelligent DC technology for the restaurants and most communal areas: the MM-4XP self-powered miniature speaker, the UP-4XP compact speaker, the Ashby-8C ceiling speaker, and the MM-10 miniature subwoofer. Flexible systems with digitally controlled Meyer Sound CAL column speakers were employed for the larger ballrooms.

Systech Middle East, one of Meyer Sound's partners in the region, coordinated the logistics for speaker installation and collaborated closely

with GBM, the AV and IT system integrator for the project.

In the elegant dining halls, a sound system was required to deliver powerful yet subtle audio experiences. "At Atlantis The Royal, we offer our guests tailor-made experiences", explains Richard Carter, Director of Audio Visual Facilities ATR at Atlantis Dubai. "Part of this philosophy is providing our guests with quality entertainment. The use of Meyer Sound systems to evenly reproduce and enhance conversations proves to be a significant advantage."

One particular challenge in sound reinforcement was posed by the restaurant on the 3rd floor with its 950 seats - partly due to its sheer size and partly because it aimed to represent various thematic areas. To ensure maximum flexibility, the system here was divided into 15 different zones.

Other restaurant areas, completely outfitted with Meyer Sound systems, include "Dinner by Heston Blumenthal" with 32 MM-4XP speakers and four MM-10 subwoofers, as well as the Peruvian-inspired "La Mer", where 21 MM-4XP and three MM-10 speakers were used. Similar systems are installed in "Jaleo by José Andrés" and "Ariana's Persian Kitchen". The "Cloud 22" on the 22nd floor and the nearby pool cabanas are supported by a total of 32 UP-4XP, 45 MM-4XP speakers, and 23 MM-10 subwoofers.

In most dining areas, the noise level ranges from subtle background reinforcement to pleasant foreground presence. However, in the "Reso-

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nance Bar by Heston", the atmosphere can become more lively as the sun sets and the DJ begins to play. With a dozen UP-4XP speakers supported by four MM-10 subwoofers, the level can be raised to a constant 105 dB without distortion.

For larger indoor events such as lectures, conferences, and gala dinners, Atlantis The Royal offers a 10,000 square meter ballroom, which can be divided into three separate areas by variable walls. Each of these three areas is equipped with two Meyer Sound CAL 32 column array speakers, digitally controlled for precise sound reinforcement. Additionally, each room has a pair of MM-10 subwoofers to reinforce low frequencies. When the three rooms are combined into one large ballroom, the space is further reinforced by a pair of CAL 64 speakers.

"This project presented some challenges, but thanks to the collaboration with our partners, we were able to overcome them all. Everything went smoothly until the opening", says Andrea Granata, Meyer Sound Sales Manager in the Middle East. "We at Meyer Sound were delighted



to be part of a project that raised the bar for excellent sound reinforcement in the hospitality sector."

45 years of Meyer Sound

Since its founding 45 years ago, Meyer Sound has been a pioneer in professional audio technology. For its 45th anniversary, the company undergoes a rebranding and introduces a more modern logo. Meyer Sound was founded in 1979 by John and Helen Meyer (pictured) in Berkeley, California. The mission then and now remains the same: to provide the best listening experiences for all audiences. The company's technologies - including self-powered speakers, processor-controlled speaker systems, linear line arrays, and source-independent measurement systems - have long become industry standards. Over 100 inventions have been patented, and the sound reinforcement systems have been awarded numerous prizes. Meyer Sound will continue to invest in the development of innovative technologies in the future.



etinstallations



An experience

Bose Professional, in collaboration with the integrator First Impression Audiovisual, installed a contemporary network audio solution for the leading luxury retail brand Ritual Cosmetics at their House of Rituals flagship store on Kalverstraat in Amsterdam.

The four-story lifestyle and shopping center spans over 1900 square meters, making it significantly larger than all other 1150 Rituals Cosmetics stores worldwide. First Impression commissioned Bose Professional to develop a decentralized network audio solution for the extensive sales area, seamlessly integrating into the various individual departments.

"Bose Professional not only provided a solution that met the requirements of each space but their systems also work effortlessly with Dante technology. For every objective we had, there was a solution - from speakers to amplifiers to DSPs", said Richard Berkhout, Senior Solutions Architect at First Impression.

The system consists of 80 Free Space speakers, 12 Design Max DM3SE speakers, nine Design Max DM8C-SUB subwoofers, a Free Space 3 Series II Acoustimass bass module, and an MB210-WR outdoor subwoofer. Despite their small size, the speakers deliver clear, intelligible

highs and lows, while the subwoofer and bass system provide deep frequencies without distortion.

In addition to high audio performance, the sound system at the House of Rituals had to blend into the environmental design of each floor. From the wall covered with simulated jungle leaves and the individually designed perfumery to the space for home decor and the Arabic-Asian restaurant - the sound experience immediately captivates customers and invites them into a hidden oasis in the city.

The House of Rituals, listed by Linkedin as one of the Top 10 Global Stores, is described as "an escape from the hectic city life and a holistic oasis for mind, body, and soul". The partnership between Bose Professional and First Impression ensured that the sound and environment surpassed Ritual Cosmetics' desire for powerful, integrated, and complementary audio technology to create the desired luxury shopping experience.



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With the opening of the Elbphilharmonie at the beginning of 2017, Hamburg not only gained a new postcard motif but also one of the most melodious concert halls in the world. While the focus is on the acoustics in the Great Hall, the lighting also contributes to the magic of the space. Part of the orchestral lighting for the





Pro Eight-Cells, which impress the house technicians not only with their brightness, light quality, and dimming capabilities but also with consistently reliable opera-

past four years has

been 17 Arc System

tion without a single service issue. The orchestra lighting installed for the ope-

ning of the Elbphilharmonie was originally realized only with conventional profile spotlights, resulting in relatively harsh shadows on the music stands. An area in need of improvement. The Pro Eight-Cell is the largest and brightest of the

Pro-Multicell luminaires from ETC's ArcSystem series and is excellently suited for large buildings due to its deep-beaming beams.

Kump 365 in Paderborn is back after a comprehensive renovation, offering its guests a wide range of

gastronomy, hotel, and events. The planning and implementation of the modernization measures in the audio and lighting areas were carried out by the companies Elektro Kleiner Projekt and SLM Events with project managers Benedikt Westphal, Daniel Joachim,

and Markus Kleiner. The companies were responsible for the ambient lighting and

sound installation, as well as overseeing the programming for ambient and event lighting. Joachim, Kleiner, and Westphal primarily opted for passive speakers from the IS series by dBTechnologies for the sound system. They installed a total of 26 units of the IS25T model and 8 units of the IS26T

model across the four floors. To blend them discreetly into the surroundings, they opted for a white finish.

The "Nederlandse Reisopera is one of the most traditional opera companies in the Nether-

lands. Founded in

Enschede in 1955.

the company has

been staging fully

produced operas an-

nually ever since, re-

gularly going on tour

with them. To enhan-

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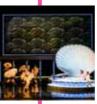
ce", they invested in

30 Source Four LED

Series 3 spotlights

from ETC. For Ame-

rican ligh-





ting designer Thomas Hase, it's his first work with Source Four LED Series 3 spotlights. Lianne Eikelenboom, the lighting chief of the touring opera, supervised the installation. 28 Source Four LED Series 3 spotlights with 25-50 zoom lenses are used in the current production, all positioned between 0 and 5 meters of stage

depth. Due to the nature of the staging and the use of mirrors on the stage, the spotlights are placed in light towers located on the left and right sides of the stage.

After upgrading its sound sy stem to an immersive 3D audio system in 2020, the Theater Erlangen is now taking the next step: automated tracking of performers using a Zactrack Smart System. Its debut took place in the Chekhov comedy "The Seagull" in autumn 2023. At Theater Erlangen, tracking data from actors, singers, and moving objects are used in the areas of lighting and sound to naturally intensify the stage action. "We use tracking data for continuous adjustment of levels in depth



and width according to the position of the performers on stage, thus creating a natural sound image and bringing together the visual and acoustic aspects", explains Christoph Panzer, head of sound. "At the same time, the automation reduces preprogramming efforts." To cover the

11 x 12 m main stage and side stage, eleven Zactrack Anchors (receivers) were installed - seven on the stage and four in the audience area.



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LED light knowledge

The most important terms of LED technology are explained in a current whitepaper by lighting specialist Erco. A summary.

What is an LED?

LED stands for "Light Emitting Diode". It is a semiconductor component that emits light when powered by direct current. The color of the emitted light depends on the structure of the LED chip and the materials used. LEDs are temperature-sensitive, dimmable point light sources that emit light semi-spherically forward.

How are LEDs constructed?

LEDs consist, in simplified terms, of a substrate on which the semiconductor layers for light generation are applied. In the case of a white LED, a conversion layer of phosphor compounds is usually applied, which is visible as a yellow surface to the naked eye. Depending on the design, a lens is used to protect the chip and to emit the light. The exact light color, color spectrum, and light output depend on the materials of the semiconductors and, for white LEDs, on the type and application strength of the phosphor in the conversion layer.

Variations in LED properties are inevitable during the manufacturing process. Therefore, LEDs are sorted afterwards according to their light color and other characteristics, a process also known as LED binning.

How does LED technology work?

Semiconductor diodes allow electric current to pass only in one direction. During operation, a fixed current flows through the semiconductor layers, and a specific voltage (forward voltage or forward voltage drop) is applied to the LED. Energy is released during the recombination of charge carrier pairs ("holes" and "electrons"), which is emitted in the form of light (electroluminescence).

What is effective heat management?

LEDs generate heat during operation, while also being very temperature sensitive. Therefore, effective heat management is necessary for high-performance and long-lasting LED luminaires. Heat-conducting circuit boards and, if necessary, heat sinks dissipate the heat, thereby maintaining the LEDs' performance over a long period.

How is white LED light produced?

White light can be produced in LEDs in two ways:

- 1. A conversion layer (phosphor) of different phosphor compounds is applied. These phosphor compounds are excited by the blue light and begin to glow. This is called "luminescent conversion".
- 2. White light can also be produced by additive color mixing of LED light in the primary colors red, green, and blue. However, due to the incomplete spectrum, the color rendering properties of the generated white light are problematic.

What LED form factors are used for luminaires?

SMD LED. In the "Surface Mounted Device" (SMD) form factor, the electronic component, here the LED, is directly soldered onto the circuit board. The circuit board is often a metal-core printed circuit board, which absorbs and dissipates heat directly at the LED. The small form factor enables miniaturized projection optics, highly defined light distributions, and narrow beam angles.

COB modules. "Chip-on-Board" (COB) technology places LED chips without their own housing directly onto a circuit board. The chip is protected from external influences by encapsulation. These LED form factors are often used for lighting purposes in conjunction with reflectors. The scattering component is therefore higher than with SMD LEDs with lens optics. The diameter of the emitting surface of a COB is a characteristic feature.

What are the advantages of LEDs?

The use of LEDs in lighting applications offers many advantages:

- Very high efficiency in light generation
- Long service life: luminaires can be operated for many years without changing the light source, resulting in low maintenance costs
- Very high operational reliability: LEDs are very robust and shock-resistant
- Minimal UV and IR components allow conservatively safe application even for sensitive objects, such as in museums or galleries
- LEDs can produce colored light with high saturation, allowing very large areas (gamut) to be covered in any color space
- Smaller form factors of LEDs offer new possibilities in luminaire design
- LEDs allow for highly precise and efficient light control
- Good controllability (dimming): With suitable operating devices, very good power control is possible.

White light can appear very different, ranging from yelloworange "warm" to bluish "cold". LED modules whose spectrum can produce these nuances of white light are called "Tunable white". A common range here is 2700-6500 K. This technology is often used for HCL (Human Centric Lighting) to mimic the variation of natural daylight or for the illumination of exhibits and architecture.

How is tunable white realized in an LED luminaire?

For tunable white, LEDs with different light colors are placed on a circuit board and controlled separately. Depending on the configuration of the LEDs, color temperature ranges from warm white (e.g., 2700 K) to daylight white (e.g., 6500 K) can be set.

To further shift the achieved spectra towards lower or higher color temperatures, white LEDs can be supplemented by red or blue LEDs.

An important criterion for the quality of a tunable white luminaire is the uniformity of system performance, light output, and color rendering in all settings. To achieve this, the LEDs used and the operating device must be optimally matched and calibrated. Both High-Power LED and Mid-Power LED are available for tunable white.

During LED production, variations in the technical properties of the LEDs are inevitable. For further marketing, LED manufacturers therefore subsequently sort their LEDs according to defined measurable aspects into so-called "Bins". The entire process is accordingly called LED binning.

What are the criteria for LED binning?

During binning, LEDs are sorted based on precise color location, light output, and forward voltage, among other factors. The color temperature is predetermined before production. The sorting criteria of LED binning are:

- The exact color location, specified as x-y coordinates of the CIE standard color chart
- The amount of light emitted by the LED, known as luminous flux, measured in lumens
- The forward voltage (volt). It denotes the voltage that drops across the LED during operation, i.e., measurable between its terminals. Together with the operating current, the forward voltage defines the electrical power of an LED.

Today, for high-quality LEDs and applications, binning of color location and color temperature is based on the SDCM (Standard Deviation of Colour Matching) ellipses. The previously common BINs defined by ANSI (American National Standards Institute) allowed significantly visible color differences.

What constitutes good LED binning?

During binning, the individual characteristics are grouped with a certain dispersion for each feature. The smaller the tolerated dispersion, the more similar the properties of the LEDs contained therein. This is also referred to as a "tighter" bin. The dispersion within a bin thus determines the consistency of light quality and efficiency for all luminaires manufactured with LEDs from that bin.

What is LED color consistency?

Color consistency indicates how close the actual light color of an LED is to the defined color location. Lighting designers should ensure that the color consistency of the luminaires used is as high as possible. This is particularly important when, for example, wall washing with multiple lumi-



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ZOOM IN



- 3

IP

naires is realized. Even small deviations in color location between luminaires can be perceived on a white wall. The SDCM value, which is unitless, is used to evaluate color consistency.

What does SDCM mean?

SDCM stands for "Standard Deviation of Color Matching". Depending on the chromaticity and size of the color deviation of different LEDs, our eyes perceive a color deviation immediately or only very slowly. Deviations to a certain extent are no longer perceived.

If areas are drawn around the deviating but not perceived chromaticity deviations for different LEDs of a color temperature in a CIE xy color diagram, ellipses are formed. An ellipse describes the limit of perceptibility of color differences. These ellipses go back to David L. MacAdam; therefore, they are often referred to as MacAdam ellipses. The size of the ellipses is standardized, and their number is communicated via the SDCM value.

Interesting: The smaller the SDCM value, the smaller the possible deviation of the light color from the specified color coordinates in the technical data of the light source.

LEDs, like other luminaires, undergo aging, which causes the generated luminous flux to decrease slightly. LED lumen maintenance describes, as a statistical parameter, how much of the original luminous flux is still emitted after a certain number of operating hours. This decrease is indicated by a Lund B value and the considered operating hours. Neither the L nor the B value provides information about the very rare total failure of an LED, the so-called "failure rate".

With the L and B values and information on the considered operating hours, the lumen maintenance of the installed LEDs is communicated.

What is the difference between lumen maintenance and lifespan?

For the determination of the L and B values, the luminous flux of an LED is measured according to the IES LM-80 standard for at least 6,000 hours. Then, according to the IES TM-21 (Projection Long Term Lumen Maintenance of LED Light Sources) standard, it is extrapolated to a maximum of 6 times the duration measured according to LM-80. To obtain values for 50,000 operating hours, at least 50,000/6, or approximately 8,334 hours, must be measured. For comparison, one year of continuous operation corresponds to 8,730 hours.

For some types of LEDs, there are now also valid measurements from which a prognosis for 100,000 hours can be calculated. The forecasts are based on certain operating conditions, e.g., ambient temperature or current. For example, with lower LED current and optimized thermal management, lumen maintenance can also be significantly extended beyond the forecast period.

Lumen maintenance predicts what percentage of the LEDs will have a certain luminous flux decrease after a certain time. Often, a specification such as L90 B10 at 50,000h is mistakenly interpreted to mean that after the specified operating hours, 10% of the LEDs have failed. However, the B value denotes the percentage of LEDs whose luminous flux is below the L value after the operating time. With a specification of L90 B10 up to 50,000 hours, these 10% of the LEDs can still have 89% of the original luminous flux. The LEDs and thus the luminaire itself can continue to operate.

Interesting: In contrast to lumen maintenance, the failure rate describes a failure rate, i.e., how much % of the LEDs have completely failed after a specified operating time. High-quality LEDs have a very low failure rate, sometimes as low as 0.1% up to 50,000 hours. This means that after 50,000 operating hours, 1 out of 1000 LEDs has failed.

What are the quality factors of a luminaire in terms of LED lumen maintenance and lifespan?

Well-designed luminaires are thermally designed to always remain below the critical operating temperature for the respective LEDs during proper operation. If an LED gets too hot, for example, due to very high current or poor thermal management, irreparable damage occurs. The design of a luminaire determines how well the luminous flux is maintained over a long period. The design of the operating device, LED module, and cooling are interdependent.

Here is a summary of the main criteria:

- Quality of the operating devices: Do they deliver the specified current throughout the operating time?
- Current for the LED: The higher the current, the greater the heat development harmful to LEDs.
- The distances between individual LEDs must be coordinated with both the optics above them and the thermal conductivity of the metal core PCB of the LED module.
- Surface and structure of the heat sink or luminaire housing must reliably dissipate heat to the environment for each approved mounting type.

Flicker (often also referred to as flicker or flickr) refers to the unwanted periodic (flicker) or non-periodic (flicker) changes in light and their effect on visual perception. These changes can refer to luminance or spectral distribution. Together, these phenomena are summarized under the term "Temporal Light Artefacts" (TLA).

What does flicker do?

Flicker can lead to irritation and discomfort. Flicker is often particularly noticeable and uncomfortable at the edge of the visual field. In the case of photosensitive epilepsy, flicker or flicker at a certain frequency can trigger epileptic seizures. Below 60 Hz, flicker is often consciously perceived, an example being the mains frequency, which is clearly noticeable, for example, with earlier fluorescent lamps. Flicker with a frequency >60 Hz is more likely to be perceived unconsciously.

What is the stroboscope effect?

The stroboscope effect can have a detrimental effect on film recordings by causing stripes to run across the image or incorrectly representing the movement of objects. This effect results from an interference between the frequency of light and the frame rate.

Another possible effect of the stroboscope effect is that moving parts are perceived as stationary or with slowed or even reversed movement. These effects occur whenever a moving part, such as the blade of a circular saw, is illuminated with a light source that itself has a certain frequency. The rotation of the saw blade interacts with the frequency of the light; depending on the ratio, the saw blade rotates incorrectly in perception, rotates more slowly, or is perceived as stationary - which can have fatal consequences for safety.

Finally, with the stroboscope effect, there is also the possibility that, for example, falling raindrops are perceived as a dotted line or string of pearls.

What can cause flicker or the stroboscope effect in an LED luminaire?

There are various causes that can trigger flicker in an LED luminaire: 1. One possible cause of flicker is load fluctuations in the power grid that are not compensated for by the electronics of the LED driver.

- 2. Another cause is that low-quality drivers convert (mains) alternating current into direct current but do not smooth it sufficiently. Periodic brightness fluctuations can thus occur, which are perceived as flicker.
- 3. Interferences within an LED driver can cause the LED luminaire to flicker or flash briefly when switching.
- 4. Another cause of flicker in LED light can be the dimming method of the driver. The constant current control (CCR) is non-critical with high-quality drivers. In contrast to pulse width modulation (PWM), which switches the LED on and off in high-frequency cycles, thereby regulating the perceived brightness. The switching frequency is usually not perceptible to the human eye. Film cameras are more sensitive here, which can lead to artifacts such as horizontal stripes in the image, especially with heavily dimmed luminaires.

Interesting: An LED luminaire is considered flicker-free when the SVM value is ≤ 0.4 and when the PstLM value is ≤ 1.0 .

When is a luminaire suitable for video?

If a luminaire is dimmed using pulse width modulation (PWM) and film recordings are made, stripes may appear in the image. Whether and how pronounced the stripes are depends on the frame rate and the frequency at which the luminaire switches the LED on and off.

Good to know: An LED luminaire is considered suitable for filming when the SVM value is ≤ 0.1 and when the PstLM value is ≤ 1.0 .

Wavelengths between 400 nm and 500 nm are particularly energetic and can cause damage to the retina of the human eye. Since this spectral range corresponds to that of blue light, it is also referred to as blue light hazard. In addition to the wavelength of the light, the intensity of the light source, i.e., the luminance, and the duration of exposure to the retina also play an important role.

What is photobiological safety in LED luminaires?

According to the Product Safety Act, all products must be safe in every respect. Photobiological safety considers risks due to emitted radiation in the visible range (light) as well as the adjacent spectral ranges UV and IR, whereby LEDs emit radiation almost exclusively in the visible range for lighting purposes.

If wavelengths between 400 nm and 500 nm with high intensity act on the retina for a certain time, irreversible damage to the retina can occur through photochemical processes. To ensure that this does not occur, the

11- 11

standard EN 62471:2008 defines the corresponding measurement methods and divides the hazard potential into 4 risk groups (RG) to which a luminaire is assigned. The risk groups determine how the respective luminaire may be safely used and which safety distances, if any, must be observed.

These are the 4 risk groups (RG)

- RG 0 and 1 are considered non-hazardous and do not require any special measures.
- With LED luminaires of RG 2, a specified distance between the observing eye and the luminaire must not be undercut for more than 100 seconds.
- With luminaires of RG 3, even a brief glance into the light source is sufficient to cause damage. Luminaires with risk group 3 are generally not allowed. The sun on a clear day would be classified as risk group 3.

What does RG 2 mean for LED luminaires?

The degree of hazard is indicated in so-called risk groups (RG). The classification of an LED luminaire into the risk groups arises from the factors of emitted radiation assessment and intensity. Measures resulting from the measurement and classification of the luminaire are prerequisites for the safe operation of the luminaire. From risk group 2 (RG2) onwards, luminaires and light sources must be labeled with a warning notice. In order to still be able to be used safely, in addition to the RG2 indication on the luminaire, a minimum distance between the eye and the luminaire must also be specified. Compliance with the distance ensures that even with prolonged staring into the luminaire, no damage occurs. Possible application restrictions may arise from the classification of an application corresponding to RG2. According to current standards, luminaires with narrow light distribution, high performance, and cold light color are often classified into RG2.

Interesting: Normally, a person ,,automatically" reacts to excessive, hazardous radiation by reflexively closing the eyes and/or turning the head away. In children, the sick, and the elderly, this reflex may not yet or no longer function. If the mentioned group of people can come near a luminaire with RG2, for example, in kindergartens, hospitals, or care facilities, it must be ensured that the viewing distance cannot be undercut.

Erco offers a wide range of publications, services, and events on the subject of light and lighting planning. Further topics can be found at https://www.erco.com/de/lichtwissen.

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Amber, lavender, and steel blue

The compelling aura of the Weimar era is palpable in "Babylon Berlin" and has contributed to the success of each of the four seasons so far. Jerry Appelt now brilliantly sheds light on these final days of the republic.

As part of the concert series "Tingel Tangel", the renowned Theater des Westens transported its audience into the atmospheric world of the 1920s and early 1930s. For the first time, the distinctive soundtrack of Babylon Berlin was performed live by the Baltic Sea Philharmonic under the musical direction of Johnny Klimek and Kristjan Järvi, with special guest appearances by Meret Becker, Max Raabe, Natalia Mateo, Madame Le Pustra, and others.

The series' images were also shown for the first time during an exhilarating stage show. This extraordinary event is a collaboration between Tingel Tangel and Sunbeam Productions. X Filme Creative Pool, the production company of Babylon Berlin, and ARD Degeto supported the project. The three-day program was partially recorded and has since been available on the ARD Mediathek.

The TV show Babylon Berlin is a German neo-noir television series. Created, written, and directed by Tom Tykwer, Achim von Borries, and Hendrik Handloegten, it is loosely based on the novels by Volker Kutscher. The series premiered in 2017 on Sky. There are now four seasons, and in June 2023, the series was renewed for a fifth season. Netflix is the exclusive streaming service for the series in Australia, Canada, New Zealand, and the United States.

The series is set in Berlin in the last years of the Weimar Republic, starting in 1929. It follows Gereon Rath (Volker Bruch), a Cologne detective tasked with dismantling a blackmail ring on a secret mission, and Charlotte Ritter (Liv Lisa Fries), a police officer by day and a prostitute by night who aspires to become a detective.

The captivating force that made the TV series so memorable also ran through all three performances of Babylon Berlin Live in Concert at the Theater des Westens. It was enhanced by nuanced and colorful lighting design by Jerry Appelt and his team, which included 12 Chauvet Professional Colorado PXL Curve 12 fixtures placed at the edge of the lower stage.

Appelt significantly utilized the pixel-mappable bar with 12 individually controlled RGBW fixtures to execute his design. "We needed a fixture capable of illuminating the orchestra from a position at the edge of the stage while also creating show effects towards the audience and cameras. The individual tilt and zoom capabilities of this fixture gave us precisely that opportunity."



Given the historical theme of the concert, it is not surprising that Appelt carefully selected shades that enhanced the imagery and mood of the film and its music. "We focused on using a correct and era-inspired color palette", he said. "We opted for tones of amber, lavender, and steel blue. I wanted to convey an 'analog' feeling that is simultaneously modern and powerful. My personal highlights of the concert were the songs 'Ein Tag wie Gold' and 'Zu Asche, Zu Staub' - both visually and musically."

Appelt worked closely with production and multicamera director Sven Haeusler (Svenson Suite) as well as his own JALD Crew, consisting of Jonas Horney (Gaffer/TV lighting supervisor), Manfred Nikitser (Lighting technician), and Torsten "Icke" Berger (Followspot operator). The team ensured that design and mood were not only evident live but also during recording. "We relied on our decades of experience in television and concert recordings", he said. "The careful selection of the luminaires we used was also an important factor. And then, of course, there was the hard work of our team."



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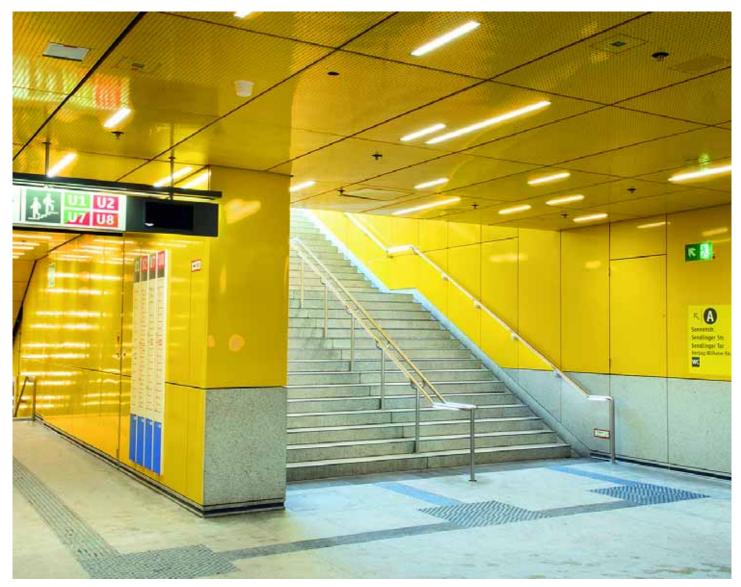




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Dynamics through color and light

The lighting concept by Ingo Maurer for the Sendlinger Tor subway station in Munich is completed and demonstrates the full creativity of the lighting designer and luminaire manufacturer.

The renovation of the Sendlinger Tor subway station in Munich, a central transport hub of the city, is largely completed. Responsible for the lighting concept is the Munich luminaire manufacturer Ingo Maurer, who has already designed several subway stations in Munich. His creative and avant-garde approach encompasses a special interplay of color and light with a high recognition value.

The innovative concept merges lighting and architecture by blurring the boundaries between light, space, and structure. Enamel-coated sheet metal wall and ceiling panels hug the platforms from above, with granite panels below, forming a cohesive design element around the stops. Recessed light elements in the ceiling accentuate the streamlined architecture of the station. Thus, the design, realized in collaboration with Raupach Architects, goes beyond the mere functionality of the space, creating an environment with unique aesthetic value.

The new station consists of two types of spaces, the platform levels and the accesses, as well as the foyer, each following its own design principles. In the former, colored enamel-coated metal panels on walls and ceilings, along with light-colored natural stone slabs on the floor and lower part of the walls, form a consistent design element on all three levels of the station, contributing to orientation and wayfinding. The established colors of yellow and blue of the local subway lines were considered in this design.

Linear light elements are used in the accesses and on the platforms, integrated flush and parallel to the direction of the subway trains into the ceilings, allowing for an optical dynamism in individual areas. In the development of the linear LED luminaires, which characterize the appearance of the entire station, a prismatic diffuser was used to improve glare control, representing a light spiral upon closer inspection.

Yellow as the dominant color guides visitors from the surface into the foyer. The underground agora as a special space deviates from the principle of the stops and accesses to meet its particular significance. The mezzanine level serves not only as access to the various subway lines but also as a connection between neighborhoods and as a shopping arcade. The lighting here considers the diverse functions as well as the height and geometry of the space, creating a timeless modern, positive, and attractive atmosphere.





Black ceiling elements provide a clear contrast to the other areas of the station. In the foyer, matte white lacquered reflector rings with flush-mounted, axially arranged LEDs hover above the visitors. Combined with cylindrical luminaires directing the light onto the white discs through sophisticated mirror technology, a safety-compliant and visually appealing illumination is achieved.

Ingo Maurer has already made a name for himself with the design of several subway stations in Munich. The Westfriedhof subway station, designed with impressive aluminum domes in the colors yellow, red, and blue, was the first project of its kind for the Munich luminaire manufacturer. Blue light sources above the domes immerse the ceiling and walls in a magical light, dramatically altering the spatial impression of the station.

Equally remarkable is the design of the Münchner Freiheit station. Ingo Maurer GmbH integrated a vibrant luminous yellow, adding a complementary contrast to the blue columns, which were adopted from the existing structure as a significant design element. This enhances the effect of the blue light on the blue columns. The extensively mirrored ceilings also add a playful element to the station and visually double the height of the light columns.

For over 50 years, Ingo Maurer GmbH has been developing and producing exceptional design luminaires in Munich. Additionally, the company has made its mark internationally with the realization of design commissions in both private and public sectors. Among the most well-known designs for serial production are Bulb (1966), the low-voltage system YaYaHo (1984), and the winged lamp Lucellino (1992). The lighting and interior design of the Radisson Collection Hotel in Tsinandali, Georgia (2018), the installation for the Issey Miyake fashion show in Paris (1999), the lighting of the blast furnaces of Belval in Esch (2013/2022), the lighting concept for seven tram stations in Karlsruhe (2022), and the UNICEF Crystal Snowflake in New York City (2004present) are just a few highlights on the long list of commissioned works and spectacular pieces for private clients and public buildings.

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The magical glow

The lighting designers from Bartenbach bring a whole new light to the wine cellar of Schloss Gobelsburg Winery in Lower Austria. Details of the planning.

Schloss Gobelsburg Winery, nestled in the picturesque vineyards of Lower Austria, is renowned not only for its excellent wines but also for its rich history dating back to the year 1171. In a bold fusion of tradition and innovation, the winery has partnered with the renowned lighting design company Bartenbach. The result is a harmonious symbiosis between light art and wine, illuminating the beauty of the historic buildings and the fascination of the wine in an entirely new light.

In planning the lighting for Schloss Gobelsburg Winery, the experts from Bartenbach were tasked with reconciling the historic architecture and wine production. The goal was to preserve the atmospheric mood of the castle and enhance the quality of the visitor experience and wine production through modern lighting concepts.

The lighting designers began their work with a detailed analysis of the architectural features of the castle and the wine production facilities. Both the natural lighting conditions and the specific requirements of each room and area were taken into account.

The lighting design at Schloss Gobelsburg Winery emphasizes the special atmosphere of the castle by creating a mood-enhancing lighting scheme. The thoughtful lighting not only highlights the historical details but also brings the rooms to life and gives them a unique character.

In the cellar, where the wines mature to perfection, targeted lighting accents were used to highlight the structure of the barrels and create an ambiance that invites guests to linger and enjoy. The tasting rooms received cozy lighting to enhance the well-being of guests and intensify the enjoyment of the fine wines.

In pursuit of a connection between design and sustainability, Bartenbach has set new standards. In addition to the aesthetic aspect, special emphasis was placed on efficient lighting. Bartenbach employed state-of-the-art LED technology to minimize energy consumption while ensuring optimal illumination.

This decision not only improved the environmental footprint of the winery but also contributed to the preservation of delicate wines since LED light emits virtually no heat.

Bartenbach's lighting concept for Schloss Gobelsburg Winery is more than just a simple lighting solution. It creates a sensual atmosphere that immerses visitors in a fascinating and magical connection of light and wine. The thoughtful lighting design highlights the architectural intricacies of the historic buildings and harmoniously connects them with modern wine production.

Thanks to the partnership with Bartenbach, Schloss Gobelsburg Winery has not only revolutionized its lighting technology but also solidified its position as a pioneer in tradition and innovation within the wine industry. The concept impressively demonstrates that the right use of light can tell an extraordinary story and capture the essence of a place. Thus, Schloss Gobelsburg Winery will continue to offer enchanting and unforgettable experiences for its visitors in the future.







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Phenomenal frenzy

Germany's most successful singer, Helene Fischer, broke all records with her tour in 2023. She performed seven times in a row at the Lanxess Arena in Cologne. Wireless technology from the Sennheiser Digital 6000 Series ensured good clarity throughout.

During the show, Helene Fischer switched between three Sennheiser handheld transmitters SKM 6000 in different looks: one gold and two platinum special editions created captivating light reflections on stage. All handheld transmitters are equipped with the Sennheiser true condenser capsule MMK 965-1.

For her acrobatic performances, Fischer used a headset microphone and the compact Sennheiser bodypack transmitter SK 6212. The lightweight mini-bodypack is water- and sweat-resistant and allows for up to twelve hours of operation. A second headset/mini-bodypack combination was assigned as a backup to a separate channel.

Five additional vocalists (3 x backing vocals, 1 x guitar, 1 x keys) were mic'd with SKM 6000 on the "Rausch" ("Frenzy" in German) tour; a sixth transmitter of the same type served as a safety reserve and was available as a separate channel on the desks. The transmitters communicated in the frequency ranges A1-A4 (Helene Fischer, 470-558 MHz) and A5-A8 (backing vocals, 550-638 MHz) with a total of six Sennheiser dual-channel receivers EM 6000, featuring high spectrum efficiency due to equidistant frequency grid, True Bit Diversity, and display of link quality among their features.

On the "Rausch" tour, the Sennheiser Wireless Systems Manager provided all the essential information for the operation of the wireless technology at a glance. Two Sennheiser charging stations L 6000 with matching insert slots were available for the battery packs, which were also connected to the Wireless Systems Manager.

The frequency manager

Svenja Dunkel is one of the most renowned experts in the use of wireless technology at live events. It may be less known that she is also a performer, with extensive circus experience, passionately combining her performances with drums and percussion.

With such a versatile background, Dunkel fits perfectly into Helene Fischer's inner circle of crew members: she knows the challenges of acrobatic show elements from her own experience, understands what is important, and knows where to best place bodypack transmitters and in-ear beltpacks. Outsiders occasionally underestimate this aspect and don't consider what happens when artists entangle themselves during their performances and cover the antennas. Additionally, beltpacks can be bothersome during specific tricks, and nobody should get tangled in microphone or in-ear cables. Ensuring that the attachments and pokkets for beltpacks hold securely while Helene Fischer floats upside down at dizzying heights is essential - and avoiding direct contact with water as a show element, as electronics don't mix well with water, is also obvious. "Taking care of the wireless doesn't end with the artist but rather with the artist and their performance", says Dunkel.





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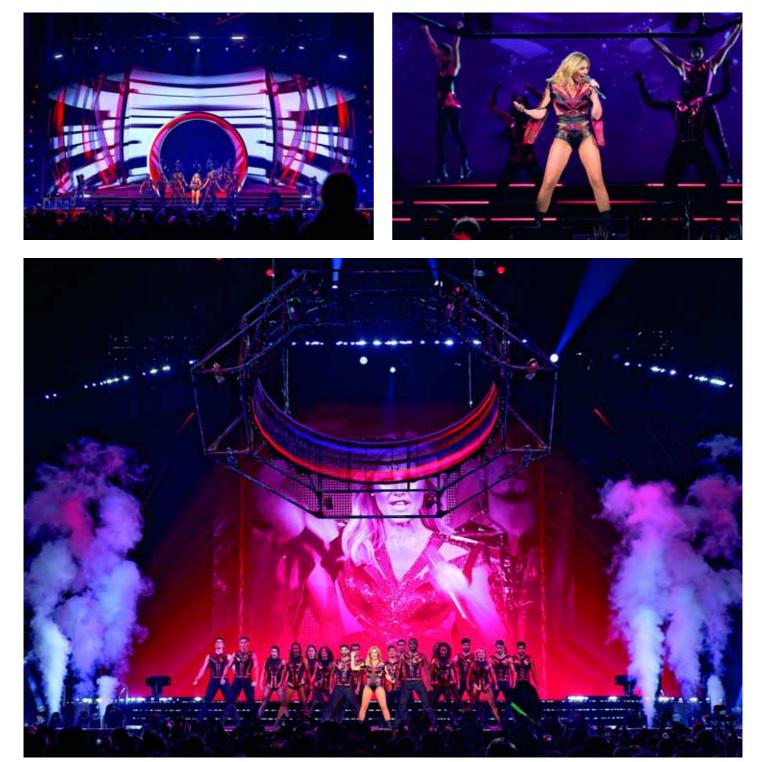
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rentalet.



Dunkel has been working regularly for Helene Fischer for many years. However, the title "frequency manager" only inadequately describes her responsibilities: during Helene Fischer's performances, Dunkel literally has her hands full. One of her hands is often clad in a soft white glove, which is practical for handling Helene Fischer's custom handheld transmitters, whose housings were elaborately adorned by a jeweler in a craftsman-like process with a bright gold and a significantly darker platinum look. "Rhodium black", notes Svenja Dunkel for the correct designation, emphasizing that Helene Fischer has been touring with the Sennheiser Digital 6000 Series since 2017/18.

Handheld transmitters under extreme conditions

"Thomas Holz, our direct contact at Sennheiser, took care of the special editions of the SKM 6000 handheld transmitters", reports Dunkel. "I asked him to produce at least two pieces of each variant, as the handheld transmitters are extremely stressed during Helene's performances: we have water, fire, and wind in the show, and of course, dancing artists perspire significantly - anything can happen, so it's good to have replacements on hand when needed. Additionally, the handheld transmitter with a platinum look is not quite easy to handle: for example, I can't clean it with alcohol as it could damage the coating. So, I usually try it with a soft fabric glove and occasionally a few drops of baby oil. However, it's unavoidable that the appearance deteriorates over the course of a tour, especially since Helene wears rings on her hands - one handheld transmitter won't suffice for a five-month



tour. We're equipped with two gold-colored and three SKM 6000 in platinum optics."

Helene Fischer uses resin on her hands for her acrobatics, which is an additional stress factor for the handheld transmitter housings: "The resin sticks extremely!", Dunkel knows. "There's a lot of action happening with Helene on stage, and everything happens 100% live - considering all the stress factors, I can only say that Sennheiser's material holds up remarkably well to the intense challenges!" By the way, it's not just the handheld transmitters that endure a lot at Helene Fischer's shows - the compact SK 6212 bodypack transmitters face similar conditions.

"Helene's concerts are a kind of performance-circus-live-rokk'n'roll-pop show", Dunkel comments. "The evenings are quite long and include a break of about thirty minutes, during which a mobile stage is set up in the middle of the arena. The performances start promptly at 8 p.m. and end around 11:15 p.m. Although the battery packs easily survive this time span, I change them during the break for Helene's handheld transmitters as a precaution and always have a spare battery in my pocket. It's not really necessary, but it gives a sense of security. The battery packs for the Sennheiser SK 6212 bodypack transmitters are not changed during the show."

Monitor mix

Holger Wild has been working regularly with Helene Fischer for 17 years and has witnessed the artist's meteoric rise from the beginning. On the "Rausch" tour, Wild realized the monitor mix using a digital console without additional outboard equipment,















while his colleague Alex Spengler at the FOH position used external 19" preamps to process Helene Fischer's voice. "My motto has always been: Keep it simple!", says Wild.

To convey the audience reactions to the stage performers, Wild used two Sennheiser MKH 416 shotgun models as ambient microphones, placing them about four meters above the ground. "In principle, I try to simulate Helene's ears with these microphones", explains Wild. "I deliberately place the MKH 416 quite far away from the audience because if someone stands near the microphone and enthusiastically claps or, in the worst case, whistles loudly, it would sound quite unpleasant at close range. Ultimately, my goal is for the sound to be as if Helene didn't have earplugs in. I ensure that she always knows exactly what's happening in the audience, and of course, I continuously adjust the ambient part of the mix to match the events in the hall."

Regarding the true condenser capsule MMK 965-1, Wild says: "Helene has been using the MMK 965 for a really long time now. She's totally used to it and has developed great microphone technique for her handheld transmitter. In the meantime, we've experimented with other capsules, but we always came back to the MMK 965."

Wild listens to his workplace with closed Sennheiser HD 25-1 II headphones, which is somewhat surprising, as many monitor mixers typically use the same in-ear monitors as the artists they work with. "My approach is that a monitor mix must sound good on any connected system", says Wild. "The people on stage use very different headphones, and when mixing a music production in the studio, it should work on playback systems from a car stereo to an expensive hi-fi system. With the Sennheiser HD 25-1



II, I have a wonderful mobile monitoring solution that I've known inside out for years."

Wild summarizes his philosophy for working at the monitor desk: "It's no use if one channel sounds fantastic but the mix as a whole isn't convincing. If you listen closely to the individual channels in my mix, they might not sound great on their own, but in the overall picture, they work perfectly. I used to tweak a lot at the desk, but now I believe you just have to let the wave flow the mix must live, otherwise, it becomes clinical, and that's not what I understand as good sound." During the Rausch tour, Wild was supported by Jürgen Erhard on a second monitor console.

15+ years

Thomas Holz, Sennheiser Relationship Manager: "During the tour, I spoke with Helene Fischer and her manager Uwe Kanthak and we found that Helene has been touring with Sennheiser wireless microphones for more than 15 years. The Sennheiser SKM 2000 handheld transmitters she used earlier - including the bright and dark custom models adorned with thousands of Swarovski crystals - have now retired, as have the gold and platinum-plated 2000 series handheld transmitters. However, Helene has remained loyal to the Sennheiser MMK 965 true condenser capsule in large diaphragm technology throughout all these years. Personally, I believe that the MMK 965 harmonizes perfectly with Helene's voice, and looking back on 15 extremely successful years, one can probably quote a well-known saying: Never change a winning team!"





The biggest music night

Cohesion recently celebrated its Grammy debut with the use of audio products that had previously proven themselves on tour with renowned artists.



At the Grammy Awards, the "biggest night in music", only one PA system was allowed, one that was most preferred by the world's most successful touring artists: Cue Cohesion was the choice. ATK Audiotek, a brand of Clair Global, deployed a Cohesion system to celebrate a year of fascinating live performances and record sales. According to the manufacturer, Cohesion products stand for "sound at the highest level while minimizing system footprint".

Jeff Peterson, FOH Production Mixer at ATK Audiotek, set up 56 CO12 speakers, 32 with a horizontal coverage of 80° and 24 with a horizontal coverage of 120°. The CO12 offers a maximum sound pressure level of 150 dB and horizontal control over a very wide range. The primary delays consisted of 32 CO10 speakers in four arrays, each with eight CO10s per array. The upper level of the arena was covered by 36 CO8 speakers in six arrays, each with six CO8s per array.

A dozen CP218 II+ subwoofers were flown alongside the CO12 to deliver pulsating bass. Each self-powered CP218 II+ is equipped with 9000 W of onboard power. Additionally, two CP218 II+ subwoofers were used on the ground at the main stage, supplemented by two self-powered CP6+ point source speakers for front fill. Since in addition to the thousands on-site, millions of people worldwide were watching, camera placement was central to the system design. As Cohesion products were developed to provide higher output and flawless intelligibility in a form factor comparable to or smaller than market alternatives, they were the ideal solution for a setup that allowed uninterrupted sightlines for both participants and television viewers alike.

Among the live performers at the 2024 Grammy Awards were Dua Lipa, Billie Eilish, Luke Combs, Burna Boy, and Travis Scott - as well as the legendary Billy Joel, celebrating his 50th anniversary on stage this year. In the end, Peterson was very pleased: "The event was a complete success. The audience, producers, and audio team were all equally thrilled."

Cohesion has been operating under this name independently since 2023 and is headquartered in Lititz, Pennsylvania, USA. The product line



The team (left to right): Arnie Hernandez, System Engineer, Clair Global; Andrew Fletcher, FOH Technician; Craig Robertson, FOH Technician; Leslie Ann Jones, Recording Academy; Jamie Pollock, FOH Music Mixer; Shaun Clair, Vice President of Sales, Clair Global; Jeff Peterson, FOH Production Mixer, ATK Audiotek.

includes the CO series of line arrays, the CF series of point source speakers, a range of powerful subwoofers, and monitors. Additional products to expand the range are in development. In the touring and live event industry, Cohesion has long been established and has toured with artists such as Bad Bunny, Eagles, Journey, Black Pink, BTS, Morgan Wallen, Garth Brooks, Phish, The Weeknd, Iron Maiden, and U2. Now, Cohesion is also available for exclusive installations worldwide. Cohesion was previously the proprietary brand for the rental division of Clair Global.





Music for the masses

From 0 to 100: Joining the 17,000 spectators at the sold-out TikTok Festival "In The Mix" were approximately 33.5 million television viewers. The event was powered by a Cohesion audio system.

Presented at Sloan Park in a suburb of Phoenix, "In The Mix" showcased a blend of music and social media stars. The team from ATK Audiotek, a brand of Clair Global, deployed a Cohesion system that had to be tailored to the intricate design of the production.

To focus the audience on the 360° stage in the center of the stadium, no visual obstacles were allowed to obstruct the view. The audio design also had to manage clearance for video towers and a roaming Spidercam intended to capture dynamic live shots for the TikTok livestream. In short, Hamish Hamilton, winner of the BAFTA Award, and the event producers from Done + Dusted in collaboration with Yellow Studios demanded that no speaker towers or similar structures be erected on or near the main stage.

"They wanted to see nothing, but it should sound good", says Andres Arango, Account Executive at ATK Audiotek. ATK deployed a hybrid system of flown and ground-based line arrays. Eight clusters of ten CO12 speakers each were flown from four towers positioned sufficiently far from the center of the stage to ensure clear sightlines for all spectators - both onsite and in front of screens. The flown system was supplemented by eight strategically placed ground towers, each with two CO12 speakers, and an additional eight ground towers, each with four CO10 speakers, to ensure continuous sound coverage for all participants.

"Given the constraints imposed by the design, the coverage we achieved was outstanding", says FOH Mixer Jeff Peterson. "Every area of the audience had crystal-clear, high-quality sound - as desired, without compromising the sightlines of the audience or the cameras."

The main Cohesion system was complemented by 48 CP218 II+ selfpowered subwoofers arranged in twelve towers of four units each to enhance the low-frequency performance. Twenty self-powered CP6+ point source speakers were used as supplementary front fills to complete the system.

Artists at "In The Mix" included Charlie Puth, Niall Horan, and Cardi B. DJs entertained the crowd between sets, and influencers roamed the stadium throughout the day to give live interviews.

Remarkably, the festival drew 9.6 million fans watching live on Tik-Tok, officially making it the most streamed broadcast of all time on the platform. Additionally, a one-hour exclusive show featuring special behind-the-scenes footage was aired on Disney+ and Hulu.









Like a blizzard

A custom backdrop and a gigantic lighting rig from GLP with 600 GLP X5 Atoms on 150 tree-like towers opened up new possibilities for the BlizzCon designers.



GLP has set a lot in motion for the two lighting designers, Mat Stovall and Manny Treeson, when it came to staging the Blizz-Con 2023 (BC23) of video game developer Blizzard Entertainment at the Anaheim Convention Center in Southern California. For the first time since 2019, the venue was redesigned to utilize all four huge halls, allowing fans early access to the latest updates for all major Blizzard games (World of Warcraft, Overwatch, Diablo, and Hearthstone) via playable stations. Additionally, the arena was transformed into a stage where keynotes, speaker panels, trailer presentations, as well as the spectacular opening and closing ceremonies took place and were livestreamed worldwide.

To keep up with the next generation of video game technology, Stovall and Treeson, who regularly work with GLP lights, turned once again to the German manufacturer to request a unique lighting package. The two designers work for the production company Zed Ink. Their idea was not just about lights but a complete scenic solution that could be used at BlizzCon and future Blizzard-Activision events.

"It started with me telling them that we would be bringing our Impression X4 Atom to the new X5 platform. For the enthusiastic Atom users, it was music to their ears", says Mark Ravenhill, president of GLP Inc. According to Manny Treeson, they wanted to move away from the traditional approach with miles of cables and trusses in the ceiling. Under the leadership of Erin Hearne Williams, the creative director of BC23, a corresponding working group was formed.

"We all put our heads together", says Treeson, "and then the idea of some sort of ground-based architectural tree with integrated lighting, capable of carrying weights, banners, decorative lanterns, and other elements, began to take shape more and more. Stovall worked hand in hand with production designer Stephen Leonhardt to develop the design for these trees."

The idea was to build 150 of these tree-like banner-carrying light towers, each containing four X5 Atoms, for a total of 600 pieces. Ravenhill met with the technical team in Germany, which believed they could handle the task within the given timeframe. Marc Rapp, head of project management at GLP, had the right people for the design, manufacturing, wiring, and completion of the scenic components ready to go.

The fact that the Atoms for BlizzCon would be based on the X5 platform was particularly interesting for Mat Stovall, as he was tasked with implementing the scenic lighting. He admits, "Since these towers are almost five meters high, we were very excited about the prospect of getting the Atoms as X5 versions because they are significantly more powerful than the predecessor."

"We knew we would be under time pressure with manufacturing. The fact that GLP was able to take on both the lights and the manufacturing of these light trees, then package them so they could be installed really quickly and efficiently, is what made us believe in this idea in the first place."

The tower design was revised several times and finally powdercoated in the appropriate colors before being fitted with lamps and wired. Final assembly took place at GLP in Los Angeles. This created surreal environments for the various gaming areas. Finally, Mat Stovall supplemented the Atom towers with GLP Impression FR1 and FR10 Bars as well as scenic elements for the various games, while adding banner lighting with Impression X4 Bar 20. Inside the main halls, Christie Lites provided lighting and peripherals.

In the arena, Manny Treeson took over the responsibility for the lighting of this part of BlizzCon. He opted for the Impression FR1, another small, versatile light from GLP, which was integrated into the three-dimensional structures of the stage, supported by X4 Bars 20 lining the front edge of the stage, and groups of JDC1 as effect and wash lights.

The complete arena rig was provided by Illumination Dynamics. It was in continuous use throughout the event, including for all speaker panels. Since the panels were streamed worldwide, specifying lights with proven broadcast performance was crucial for Manny's design.

Arena lighting team

Lighting designer: Emanuel Treeson Lighting director: David Mann Lighting programmer: Joe Watrach TouchDesigner programmer: Pete Thornbury Head electrician: Bill Lehmkuhl

Halls lighting teams

Hall A (Diablo) Lighting director: Hilda Kane Programmer: David Patrick

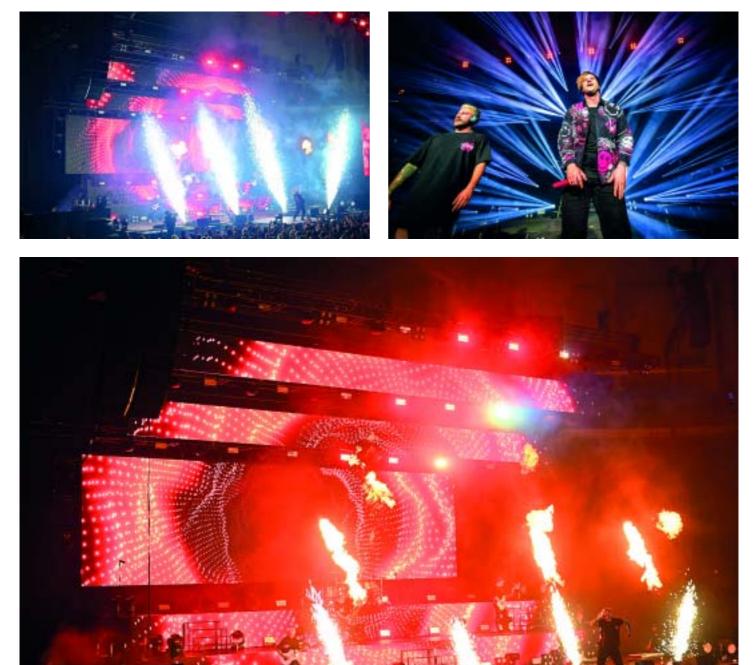
Hall C (Overwatch)

Lighting director: Scott Baier Programmer: Chris Osborne

Hall D (World of Warcraft, Hearthstone)

Lighting director: Mikala Baird Programmers: Eric Barth, Jason Mack, Zach Matusow Crew chief: Asher Nelson











Thunder & Lightning

Electric Callboy meet the spirit of the times and captivate essentially everyone on their "Tekkno" arena tour, which has been running since 2023. It's hard to resist the blend of metal, techno, and pop. "The whole thing is just infernally fun - especially live", says production manager Patrick Unger (2morrow Lights).

When the band started in 2010, their metalcore party train quickly gained momentum. Despite their style mix, within the metal scene where Eskimo or Electric Callboy are located, they grew into a global phenomenon - they cause just as much frenzy at Wacken as they do in Japan. Being excluded from the ESC preselection certainly didn't harm the band - quite the opposite.

"After many years on the smaller stages of the world, the beginning of 2023 marked Electric Callboy's first arena tour. Since we've all grown with the band, this presented the production with the same challenges as the artists. But it was clear to everyone involved: we wanted to take the motto 'Tekkno' around the world with all our senses", explains Unger.

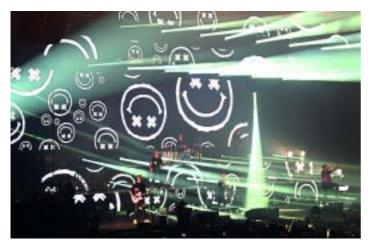
After many hours of shared exchange on inspiration and technical possibilities, they settled on Unger's design, as seen in the arenas today. "To create a coherent concept from the stage design, we also had to deal with topics like pyrotechnics and live cameras for the first time. So we developed a harmonious interplay of light, video content, live camera images, and pyrotech-















nics with our creativity and the know-how of our experienced partners. We have continuously developed our project over the past years to perfect our vision."

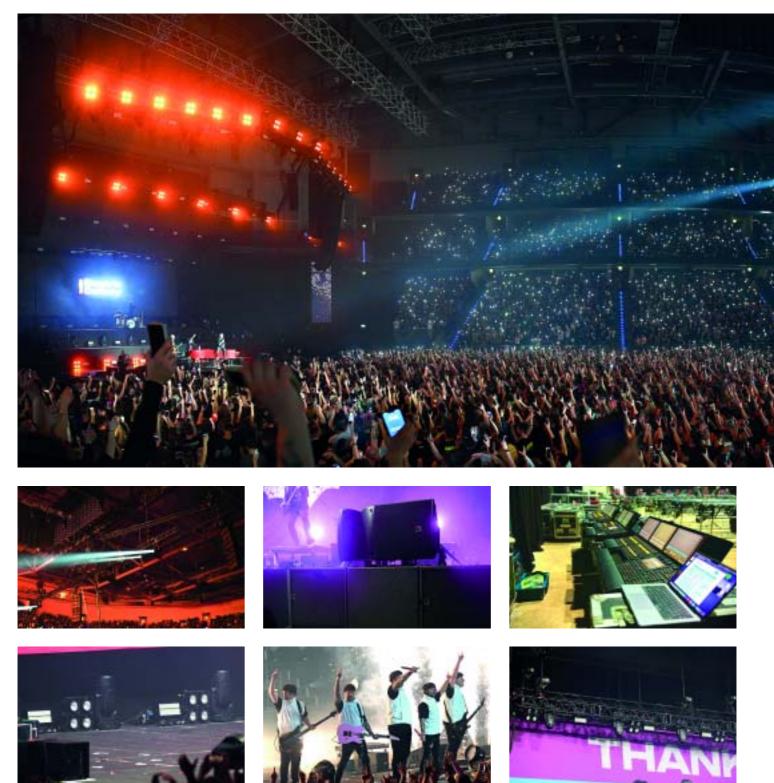
"I have been working directly for the band since 2016 and now see myself not only as a lighting/set designer but also as a link between the band and the various service providers. For all shows where we don't have a full production (everywhere except the arenas), I still take on the production management. However, this only works because we have been a well-coordinated team for a long time, and thus each individual works excellently and above all independently", adds Patrick Unger.

However, it was a long road from the basic idea - the word "Tekkno" and the associated ideas. There were endless discussions in WhatsApp groups about techno clubs and huge EDM concerts, as well as many elaborate ideas. "The whole thing just needed to be 'translated' from the club/party concept onto a stage for six people", says Unger, "and always with an eye on the technical possibilities and the budget."

As with many major tours, Unger also relied on a mix of products from different manufacturers in the design.

"The Robe BMFL Blade + Followspot LT provides good light output mixed with beautiful color reproduction and pleasant light distribution. From Roxx, I chose the Cluster B4 WW, which blend very nicely with conventional blinders and, from my point of view, can keep up in all respects. Additionally, they can score with 'gimmicks' like strobe or pixel control. The Martin Mac Quantum Wash delivers a perfect blend of light quality and quantity, similar to the BMFL."





"I probably don't need to say much about the Robe Mega Pointe: at the beginning of 2023, it was the best lamp for me to create impactful beam looks, classic spots (with a limited zoom range), and gobo looks with one device, without compromising on colors or brightness. Also, here the CMY mixing and fast pan/tilt were important for the show."

"The GLP JDC-1 is simply a fantastic lamp - in 68ch mode, you have many possibilities with pixel effects etc. to also pick up looks from the LED wall again. Here too, the decisive point was to 'kill two birds with one stone' and also be able to rely on quantity."

The band acquired the LED-Tek P4 Pro 4.81 mm themselves due to the good price-performance ratio. "We needed a cost-effective solution to be able to rely on our 'eye-catchers' even in a 1000-capacity club. So it made sense to invest in our own wall, which we can access independently of local conditions and existing walls at any time", says Unger.

In addition to Patrick Unger (lighting, set, video design), the team included Felix Mangoldt (lighting, video, pyro-system assistance worldwide), Dominik Sabolovic (Sound FoH), Nils Labenz (Sound Monitor + Backingtracks), Oliver Schillo (camera direction), Elias Rosing (white light), Björn Bruns (stage manager), and many others. Partners of the tour(s) included TDA-Clair, who took care of the technical part (light, sound, video) and shone with their know-how. Fog-SFX was responsible for the pyrotechnics. MB-Media supported Unger (2morrow Lights) as a production agency at the arenas, and Pieter Smit, along with Absolute Touring, took care of the logistics. Schillobros provided









In the left image: Oliver Schillo (camera direction) and Elias Rosin (white light). Above: Patrick Unger (lighting, set, and video design).

the camera production, and Contra Promotion is the concert promoter and promoter of Electric Callboy in Germany. Management is handled by Exact Management.

Since early 2022, the Electric Callboy family has been on the move. After the arena tour 2023 (DE/CH), there was a club tour (EU/US/AUS) and festivals in Europe and the USA. At the beginning of 2024, the arena tour followed, and then it's back on a club tour in the USA, before a plethora of festivals await in the summer (https://www.electriccallboy.com/#tour).

Lighting material list (excerpt):

4 Robe BMFL Blade (white light)4 Robe BMFL Followspot LT (white light - followspot for singer)33 Roxx Cluster B4 WW (blinders)

14 Martin Mac Quantum Wash (alley lights)
74 Robe Mega Pointe (effect spot/beam)
59 GLP JDC-1 (strobe and color wash)
2 grandMA2 Fullsize (FoH + backstage)
60 sqm back wall LED-Tek P4 Pro 4.81 mm (band-owned)
33 sqm LED wall 4.81 mm strip ceiling
32 sqm LED wall 4.81 mm strip floor
30 sqm LED wall 4.81 mm IMAG screens

Electric Callboy – Set Arena GSA 2024: Tekkno Train/MC Thunder II (Dancing Like A Ninja)/Spaceman/Hate/Love/Everytime We Touch/ The Scene/Castrop X Spandau/Arrow Of Love/Best Day/Hypa Hypa/Parasite/Acoustic Set/Hurricane/Fuckboi/MC Thunder – Pump It/Mindreader/We Got the Moves



Trilogy of sound

The monitor engineers of Enrique Iglesias, Ricky Martin, and Pitbull explain why they chose Klang's IEM mixing system for one of the biggest tours in Latin American music.

Latin pop superstars Enrique Iglesias, Ricky Martin, and Pitbull have joined forces for the "Trilogy Tour", a North American arena tour that took the singers to shows in 37 cities between October 2023 and March 2024. After a successful first leg with sold-out concerts lasting until mid-December, the second half of the tour, produced by Live Nation and supported by Sound Image/Clair Global, continued since the end of January with four performances in California before heading east across the continent. Thanks to the talent and charisma of the headliners, the tour was a tremendous success, but three invisible performers - a trio of Klang Konductor immersive In-Ear Monitor mixing systems (IEM) - also contributed to ensuring that the three bilingual superstars and their accompanying bands could deliver a spectacular four-hour fiesta at every stop.

Eddie "El Brujo" Caipo has been working with Enrique Iglesias as a monitor engineer for 11 years, currently using his Klang Konductor alongside a Mac Mini and an Avid S6L-32 console. He sends prefader/post-mute direct outputs via MADI to maintain his entire plugin processing, creating his mixes - a total of 21, some of which run in the Klang app - and then routing them back to a stereo pair of inputs sent to the desired aux mix for the IEMs. His console receives timecode to trigger snapshots and simultaneously sends MIDI to the Konductor to trigger the snapshots in Klang.

"I've always focused on making my artists and band members feel like they're not wearing IEMs by using mid-side processing spreaders, etc., but with Klang, it's like trying to use just a stereo imager or spreader", says Caipo. "Klang allows me to separate the instruments so they can run quieter overall, which is a much better experience for the listener. The band has always loved my stereo mixes, but after using Klang, everything is even more enjoyable."

Ricky Martin's monitor mix has been in the hands of César Benítez Seilhamer since 2021, who at that time used a DMI Sound card with a Digico Quantum 5. A year later, he upgraded to a Klang Konductor with two MADI-B DMI cards connected to the same console, adding a controller on stage for the drummer to have quick access to his own IEM mixes. He creates 16 immersive mixes and 48 total mixes from 124 input channels, noting that ,,the Konductor and Quantum 5 are able to handle this amount of data and still leave room for more", says Benítez, who controls his immersive mixes both natively on the console and via the Klang app on an external computer screen. ,,The integration between Klang and Digico is so user-friendly that I can make changes directly from the console during our shows and soundchecks."

"The Klang platform has changed my workflows. Everyone can focus on their performance, not on the mix. And I can easily mix much more complex shows with a high number of inputs in 3D without feeling like I have ears or headphones on."

As the third monitor engineer of the "Trilogy Tour", Matt Holden has been an integral part of Pitbull's team since January 2015. He uses a Digico Quantum 5 and recently upgraded from a DMI Sound card to a Konductor with an optical card. He primarily controls Klang through his console and uses the external touchscreen monitor for setup and visual representation. Holden reports, "Using Klang has made my job easier because now I can create a natural-sounding mix without needing more plugins to enhance the stereo image, and because I need fewer EQs to eliminate the mix's blur."

"Klang has helped me a lot in preparing for a tour. Once we finished rehearsals, there were hardly any requests from the band during the show - very relaxing with 75 to 100 shows per year. Being on tour with César and Eddie was a learning experience that was a lot of fun."

> The three from the "Trilogy Tour" (left to right): Matt Holden (Pitbull), Eddie Caipo (Enrique Iglesias), and César Benítez (Ricky Martin)





Impressive in every aspect...

On Beyoncé's "Renaissance World Tour", Monitor Engineer James Berry relies on DPA microphones. Meanwhile, the organizer shows greed...

The tour is one of the most successful worldwide in recent years; the last leg alone included 56 stadium concerts where Beyoncé presented her current Grammy-winning album "Renaissance". Working with an artist of such high caliber, James Berry, Beyoncé's monitor engineer for 20 years, had high expectations for his sound setup, which needed to impress not only at the live shows but also in the recently released film "Renaissance: A Film by Beyoncé".

Berry turned to DPA for solutions that could withstand rain and sunshine, including the new 2017 shotgun microphone. "We had conducted some beta tests with the 2017, and it proved to be a suitable audience microphone", explains Berry. "The clarity and range were so pronounced; we could cover more area without distortion over the PA. I didn't have any of those high-frequency distortions that you sometimes hear with other shotguns. Plus, I didn't have to filter this shotgun microphone as much as others - and that's rare."

The 2017s were particularly helpful for the live recordings of the shows in Houston, Texas, for the film. "We flew twelve 2017s from the catwalk ceilings to capture the upper levels of the stadium", explains Berry. "The small size of the microphones really helped to hide them within the camera platforms and the FOH."

Berry also used the 4017 shotgun and 5100 surround sound microphones for the audience, as well as the 4099 instrument, 4011 condenser cardioid, and 4055 kick drum microphones in the band.

The team hung 4017 shotguns from the ceilings and placed them in additional locations in the room. To authentically capture the full energy of the audience during recording, Berry and the team had to integrate the unique stage set of the tour (very wide with a catwalk in the middle) as best as possible. Sixteen 5100s were used in a sequence to capture the audience in front of Beyoncé.

While the sound recorded by surround microphones was particularly suitable for the film, the 5100 was selected for Beyoncé's in-ears. "A few band members also used this sound, but the feed was mainly for Beyoncé", Berry continues. "She wants to feel the audience and be part of it, so

that was our main task during setup. We placed the 5100s downstage to capture the audience in front of the artist, and the 2017s on the distant side to capture the upper seating areas. Overall, we had about 128 channels of audience microphones for our recorded shows, powered by the 5100s and shotguns."

To control the DPA sound, the Renaissance Tour team used five Digico SD7 Quantum consoles. A large Digico Opticore Loop was also powered by the DPA 5100s, with the second loop mainly containing the audience microphone setup.

D+B Audiotechnik GSL Series speakers projected the sound into the stadium. For outboard devices, Berry had Waves on the computers and Universal Audio UAD on the console. The DPA 5100s and Klang's immersive mixing processors were used to achieve the best possible sound for Beyoncé and the other stage musicians equipped with Wisy-com in-ears.

After more than two decades in the touring industry, Berry has already worked with various well-known artists such as Stevie Wonder, Jennifer Hudson, Kings of Leon, or Lauryn Hill. When not on tour, the sound engineer enjoys sharing his technical skills and experiences with audio professionals in the USA - alongside touring, his second passion.

Editor's Note: Despite the good quality of the equipment, the rapid sellout of all tickets per venue led to the sale of up to an additional 20,000 (!) tickets per show with the note "listening only" (behind the stage without sight) for outrageous prices (up to \$200), sparking intense public discussions in the USA about Queen B and her organizer Live Nation. Normally, these seats with restricted views are reserved at a reduced price for blind or visually impaired individuals - not so with Beyoncé: Due to high ticket demand, everyone had the opportunity to purchase these tickets. For many, Beyoncé's legendary show is the focal point of the concert - after all, one could "just" listen from outside the venues, according to general criticism. However, even the sightless tickets were "immediately gone"...







Vibrant memoirs

Madonna hires Eighth Day Sound for the 80-day "Celebration World Tour". After 40 years at the forefront of pop culture, she reflects on her live performances and looks ahead.

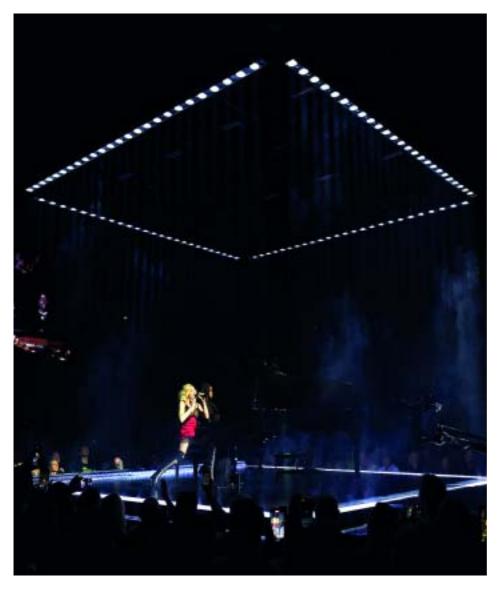
At the helm of live sound is FOH mixer Burton Ishmael - personally selected by Madonna after hearing his work with Post Malone. Ishmael on his "choice": "It's very nice to be asked directly by the boss to go on tour. Madonna is an exceptionally smart artist, and there can be a lot of pressure on a world tour. Fortunately, I have the great crew of Eighth Day Sound behind me - all experts."

He says that one of the main tasks at FOH is to repeat a process that has already been done in the studio: "My job as a live engineer is to ensure that the music translates to the arena. The elements contained in the songs should not only be heard but also felt - a step beyond the technical part of mixing. Emotions are the key", he explains. "I have to transfer Madonna's energy to the audience and vice versa - through and through my mix."

Lauren D'Elia, vocal producer and Madonna's "additional pair of ears" when she's on stage, explains: "I met Madonna in the studio as an audio engineer and vocal producer and was called upon for her last tour to help her bring the recordings of 'Madame X' to the live stage. For this tour, I'm doing the same, but with a setlist that encompasses her entire career. It's a huge undertaking, and I'm working with Carl Golembeski, a fantastic vocal FX engineer." "Right from the start of rehearsals, Carl and I sat down and went through the setlist. We listened to the original recordings and remixes and revised the various vocal passages for each song based on our findings. Once Madonna arrived, she took the microphone and we fine-tuned together. This includes various reverbs for each song, delays, and other effects that enhance the overall color and flavor of her live voice on record."

Madonna's vocals are heard through her Sennheiser 6000 microphone with a 435 capsule. D'Elia continues: "For 'Burnin' Up', we added a bit of distortion, and for 'Die Another Day', we added some phasers and a hard-tuning setting. We constantly strive to replicate the vocal atmospheres of the original records and complement them with the background vocals arranged and recorded by Musical Director Kevin Antunes with Kiley Dean and Munchie."

Carl Golembeski adds: "I've built a real-time vocal FX performance system to replicate the album compositions as accurately as possible. In 2021, I had the opportunity to use it at Madonna's shows. We worked with studio technicians and producers to review the songs and see how they could be replicated. The older compositions that Lauren hadn't worked on had to be implemen-



ted in a contemporary way without losing the energy of the originals. Once we decided, we create the changeable performance aspects, so that I can replicate the live dynamics in real time as needed. 'Live to Tell' and 'Rain' have beautiful washed-out delays."

Musical director Kevin Antunes explains how this desire for authenticity has shaped the live sound for the "Celebration" tour. "For me, it's an honor to be on stage with Madonna every night. Supporting her live vocals and guitar performance, the audience experiences the original studio multi-track recordings in the highest quality. The original sounds from every decade have been reinterpreted with new arrangements and additional musical elements."

"The approach is always cinematic because Madonna's shows contain so many kinetic, visual elements through dance and video content. Sound design elements and new musical parts help round out the overall mix. By the way, Madonna's children also perform on stage: David (acoustic guitar), Mercy (piano), Estere (DJ sample pads), and Matthew Jamal (cello). The tour's musical instruments are carefully supported by Bakkline crew chief Robert 'Bongo' Longo, Madonna's longtime guitar technician Tommy Simpson, and multi-track playback technician Glenn Erwin."

Unusual PA

At FOH, Ishmael explains how Madonna's music producer Stuart Price significantly influences the selection of detailed audio offerings. When it comes to equipment, everything is "smartly" chosen, he says, as he stands behind his Avid Venue S6L digital mixer. "I really like this console, it's so intuitive. L-Acoustics is also a system that I always choose. It's the system I started with and had great success with, so I don't want to change that. The PA here is a bit unconventional, but it allows the artist full freedom of movement."

Systems engineer Andy Fitton tunes the L-Acoustics K2 system and works closely with PA technicians Nate Peterson, Tom Lawn, Harrison Travaglino, Ellis Montgomery, and Francesco Grassi. From L-Acoustics, Dave Brooks and Chris "Sully" Sullivan provide the corresponding remoS C H N I C K S C H N A C K S Y S T E M S

-Dot

Für besondere Aufgaben zum **Beispiel die Beleuchtung von** Acrylstäben oder das Kreieren harter Schatten und noch einige andere, benötigt man ganz besonders helle LEDs. Der winzige aber lichtstarke LED P-Dot kann unkompliziert installiert und sehr einfach angesteuert werden. Seine 4 LEDs, rot, grün, blau und weiß, wurden sorgfältigst ausgesucht, um die bestmögliche Lichtgualität zu erreichen.

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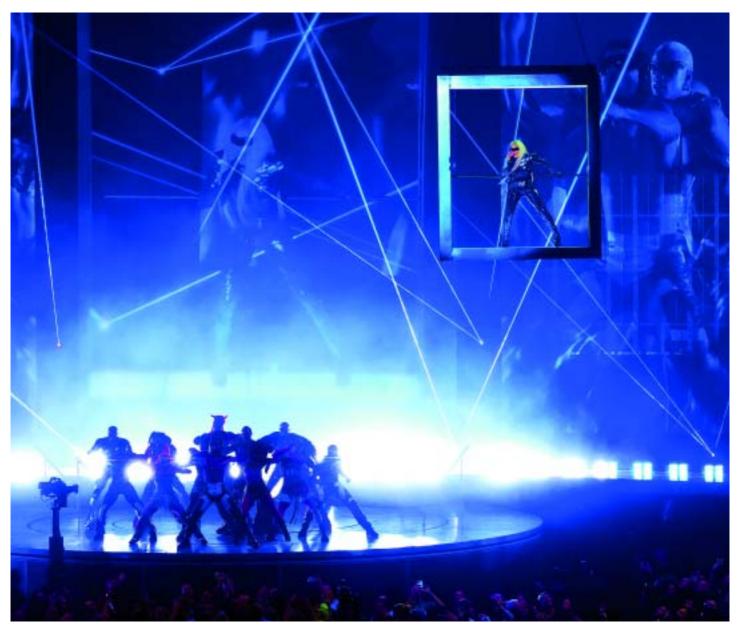
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te application support. The design includes K2 main speakers and KS28 subwoofers. Outfill and side hangs are K2 with KS28 side subs and Kara II for rear hang speakers and centerfills. The ground system consists of KS28, X8, and Kara II, totaling 206 speakers. The system uses 81 L-Acoustics LA12X amplifiers and two L-Acoustics P1 processors.

Fitton comments: "The design sits in between an in-the-round system and a traditional endzone PA, where the stage is on one side of the arena. We wanted a more distributed audio system to avoid stage interference and place the speakers closer to the audience, so the ratio of direct signal to reverberation is higher and the PA pushes outward into the arena." To achieve this, the main speakers are positioned approximately in the middle of the house.

Fitton creates 3D room models using L-Acoustics' Soundvision software and arranges the speakers to achieve consistently good sound throughout the venue. After the design is created and flown, the Smaart tuning software and LA Network Manager control the volume, EQ, and delay times of all speakers individually to create a consistent representation of the mix throughout the range of each venue.

Monitor engineer Matt Napier has been by Madonna's side for 19 years, during which he has spent many tours with Eighth Day Sound. He says, "The crew, especially my monitor technician Roger Bammann and comms technician Katlyn Mountain, are a great help. In my opinion, the crew makes the concert, and Eighth Day has assembled a top-notch crew for this tour."

Appropriately named audio crew chief Frank Peoples agrees: "This tour is like working with a group of friends for me. Optimism among all involved is more important than ever on these tours, and with the support of Eighth Day Sound, our audio team is doing great work."

"It's always nice to be re-engaged by artists you've worked with before - and with Madonna, it's a fascinating journey. Her shows are always technologically challenging, especially when dealing with the acoustics of arenas", he says about dealing with Madonna's preferences for Wisycom and JH Audio in-ear monitors. As a longtime Digico user, this tour marked Napier's first time mixing on a Quantum 338.

Madonna's "Celebration World Tour" ends on April 26, 2024, in Mexico City.

Setlist: Act I - It's A Celebration/Nothing Really Matters/Everybody/ Into The Groove/Causing A Commotion/Burning Up/Open Your Heart/ Holiday Act II - The Storm/Live To Tell/The Ritual/Like A Prayer Act III - Living For Love/Erotica/Justify My Love/Hung Up/Bad Girl Act IV - Ballroom/Vogue/Human Nature/Crazy For You Act V - The Beast Within/Die Another Day/Don't Tell Me/Mother and Father/I Will Survive (Gloria Gaynor)/La Isla Bonita/Don't Cry for Me Argentina (Evita) Act VI - Madonna/Bedtime Story/Ray of Light/Take a Bow Act VII - Billie Jean (Michael Jackson)/Like a Virgin/Bitch I'm Madonna/Celebration



Under electricity

For the umpteenth time in 2023, the grand music festival took place at Stuttgart's Castle Square. On behalf of the event company, Meevi-Rent was responsible for the power supply and emergency lighting at the main venue on Castle Square, using the flexible aluminum cables Alukaflex from Engst Kabel.



The particular challenges of this assignment in Meevi-Rent's hometown included cramped space conditions, tight deadlines, and challenging weather conditions. Additionally, there were last-minute additional requirements. For several years now, Meevi-Rent has been relying on the flexible Alukaflex aluminum cable, which is excellently suited for these deployments due to its low weight and high flexibility. Not only does the cable significantly contribute to cost and time savings during installation compared to copper cables, but it also aids in transportation.

For power supply, multiple sets of Powerlock-compatible Alukaflex Connect were used, totaling approximately 3600 meters of cable. The total weight of Engst's Alukaflex for this quantity of cable is around 3.5 tons. Using a comparable copper version would have weighed around 6.8 tons - roughly double the weight, which would need to be transported and installed by employees in tight spaces.

This example clearly demonstrates the potential for savings achieved by Alukaflex cables solely through weight reduction and thus transportation compared to copper. Furthermore, they have a positive impact on the CO2 footprint. Because Alukaflex uses higher quality materials for insulation and sheathing, allo-



wing for a conductor temperature of 90°C, the same cross-sections can be used concerning current-carrying capacity compared to a standard H07RN-F 60°C copper cable.

Special one-pole bi-metal round plug-in devices compatible with Powerlock, rated for 400 A and 600 A, are used for Alukaflex Connect. Due to increased safety expectations in the event sector, the system underwent an electrical long-term test before market introduction. Test specimens with conductor cross-sections of 120 sqmm and 240 sqmm were subjected to the maximum permissible current for over 3500 hours, followed by an additional 500 hours of continuous threshold load and a short-circuit current test.

The resistances of the crimp and plug connections, repeatedly measured during the long-term test, confirmed their durability. This also met a requirement of VDE 0100-520 (Installation of Low Voltage Systems), stating that the temperatures at a terminal (in this case, a press connection) must not exceed the permissible temperature of the conductor insulation of the cable used. This is often not guaranteed when using a standard rubber-coated copper cable H07RN-F, which is designed for conductor temperatures up to 60°C, as the temperatures of the connectors can be significantly higher at permissible currents.







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Back to the roots

Large halls, big stages, grand performances. Songs on the radio, major television shows - things of the past. Revolverheld return to the clubs and to their roots without an official album, but with a significantly harder musical style.

The trigger was likely the weariness of the mainstream, the dead-end of heavy rotation, in which the band known for their ballads had been stuck for years. So they said to themselves, "How about making an album that feels like it used to? Rock music. No frills. No 'keeping the lights on'. No big promotional phase, no streaming, no singles, no radio. Just music, just the fans, small venues, hard music." And thus, the album "R/H/1" was born, initially available only to ticket buyers. Live performances intensified the few remaining old songs on the setlist.

Such an endeavor must, of course, be supported live by appropriate lighting and sound. On behalf of the band, production manager Oliver Windprechtinger (1314 Productions) assembled a

team to handle the technical aspects of the tour. "Due to the small clubs, I had to work with a limited budget in planning. Additionally, there were logistical constraints. So we used the PA and house lighting provided locally at each venue."

Lighting setup was supplemented with equipment from GLP and Elation. Corresponding control desks for lighting and sound were also brought in. "For sound, I like to use reliable products with which we have had good experiences in all areas. Lighting is a more flexible product."

The team included Kike Köchling (TMin), Matthias Scholl (FOH), Sören Lentz (Mon), Sebastian Anders (LD), Kerrin Gall (LD Sys), Paddy Bieler, Nikki Bieler, and Jörg Schmitt (Backli-



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ne). Other involved companies were TDA Clair (Technology), Rock'n'Roll Trucking (Trucking), and Berlin Rock Coach (Nightliner).

Equipment list (extract) Sound:

2 Avid-Live S6L-24D Surface, digital mixing console

2 Avid-Live Engine E6L 144 in, 64 out, 24 VCA, 16 x 16 Matrix

1 Avid WSG-HD Waves SoundGrid Option Card

2 Yamaha MSP-5 Active Reference Speakers

1 Avid S6L Stage 64 Stagebox, 19"/10HE 8 Shure PSM-1000 IEM per channel in-



cluding 2x bodypack receivers 2 Shure AD Axient Digital Handheld Systems, per channel 2 Shure KSM137 Microphone 2 Sennheiser MKE 600 Camera Microphone with supercardioid pickup pattern 1 Shure Beta 91A Microphone 1 Shure Beta 52A Supercardioid Dynamic Microphone

Lighting:

13 GLP Impression X4 Bar 20 (including 1 x Spare)

12 GLP JDC-1 (including 2 x Spare) 4 Elation Cuepix WW2 LED Blinder (including 1 x Spare)

1 grandMA 2 Light Lighting Control Console



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5



A Super Bowl on steroids

In early January, Qatar hosted the opening ceremony of the AFC Asian Cup at the Lusail Stadium in Doha, attended by 88,000 people, making it the largest stadium in the Middle East. LD Roland Greil utilized products from Ayrton, Elation, and Roe Visual.

Organized by the Asian Football Confederation (AFC), the Asian Cup brought together 24 national teams from Qatar to crown the men's football champion of Asia. Unusually for a football tournament, the ceremony was of unpredictable magnitude, featuring a stage in the middle of the field with a set that included sand dunes, colorful costumes, and stunning visual elements around a central motif of huge mirrored elements. Simultaneous-ly broadcasted in the Middle East, Asia, and Australasia, the 21-minute visual extravaganza "Mirrors, The Lost Chapter from the Book of Kelileh Wa Demneh" was a triumph of theatrical story-telling. Equally impressive was the speed at which it was dismantled by 700 stagehands in just 27 minutes. Their choreography was as precisely coordinated as the preceding performance before the tournament's first match began.

Roland Greil was commissioned by Katara Studios' executive producers to deliver the entire lighting design, including pre-visualization, programming, and ultimately the delivery of the lighting components of the show, along with the creative and technical teams.

"It was like the Super Bowl on steroids!", says lighting designer Roland Greil, who was brought in by the design and production agency Sila Sveta and utilized over 450 Ayrton lights as the main elements of his design. "From the outset, our goal was to create a theatrical lighting design that matched the cinematic approach of Katara Studios' producers", explains Greil. "The show was an extremely complex, spectacular, but very theater-heavy piece with a detailed plot and magnificent costumes. We needed a rig that could support the story on stage and create magical looks for 80 percent of the time, but also provide additional firepower to create some big looks for the remaining 20 percent of the live broadcast and reflect the joy and excitement for the game of football in the region."

To counter the limitations of stadium rigging positions, Greil worked with technical director Shannon Gobell in choosing lighting positions. 45 Ayrton Domino Profiles and 80 Ayrton Huracán Profiles were installed along the perimeter of the field at level 0 at a height of 1.6 meters, with a range of 40 to 50 meters. "These instantly gave us traditional theatrical side lighting without obstructing the audience's sightlines but were high enough to fire over the heads of security teams at the edges", explains Greil. "The fixtures were our workhorses for key light, side light, and visual effects for backgrounds."

"In the middle of the stands at level 4, we found another lighting position, which we filled with 110 Domino Profiles for additional key light from a distance of 80 to 90 meters. Domino Profiles are essentially an IP version of the Huracán Profile, so I could use both. In the Arab world, lighting for the live audience is as important as lighting for worldwide transmission, so it is most important to set the central light correctly to achieve both."

Another 67 Domino Profiles were installed along two upper catwalk trusses at a height of 90 to 100 meters to provide two high lighting positions to illuminate the audience for backgroun shots. 96 laser-based Ayrton Cobra lights were installed on the stadium roof to extend the effect of the fireworks filmed by over-





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head drones and a helicopter camera. "We also used the Cobras to create some beautiful looks that worked from inside the stadium by positioning them to create a sort of light roof over the open stadium, which could also be perfectly seen from the inside." On the stage, Greil integrated 54 Ayrton Domino Washes into the floor, which he used to illuminate the stage elements.

Traditional follow spots were replaced by a Follow Me system, which worked in conjunction with the Huracán and Domino Profiles at level 4. "In fact, we were able to calibrate each of the over 450 Ayrton fixtures in the overhead rig and select any desired light or light combination to act as follow spots", says Greil. "This was very beneficial for the broadcast as we could select multiple lights to ensure we had the exact perfect angle for the transmission and live performance at all times. This first performance of a Follow Me system at a major stadium event worked flawlessly. We were able to track performers across an entire football field, not just on a defined stage in the stadium."

"Given the scale of the show, we illuminated the entire ceremony with relatively few lights", concludes Greil. "In total, there were 54 Domino Washes, 224 Domino Profiles, 80 Huracán Profiles, and 96 Cobras, along with an additional 244 moving lights, all of which could handle the enormous throw distances effortlessly. Thanks to this and great collaboration between all departments, we were able to overcome the challenges of lighting a huge profile event in a stadium."

According to Greil, for large outdoor shows of this caliber, essential features in choosing lighting are brightness and beam power. "You need ranges of over 100 meters and accordingly powerful fixtures. In this case, I used the Elation Proteus Brutus. The Proteus Brutus is a 75,000 lumen wash light with a 1200W peak field LED engine. As far as I know, it's the brightest wash beam on the market, which is a tremendous help for a show like this. We used it as a workhorse at various light positions." These positions included 18 units on each of the four catwalks and 32 units on a circular truss at approximately 60 to 70 meters in height.

Additionally, Greil relied on the Proteus Excalibur, also from Elation. "It has a large-diameter front lens, creates a beautiful beam, and performed very well in the stadium." 56 Excaliburs, distributed across four upper balconies with 18 units on each of the four catwalks, were used to create large visual panoramas. The entire lighting for the AFC Asian Cup was provided by PRG Middle East.

LED panels from Roe Visual

Creative Technology utilized LED panels from Roe Visual to bring the organizers' stunning vision to life. The event featured five clamshell-shaped screens, each with a height of 12 meters. The screens, forming five huge petals, consisted of a total of 600 Roe Visual BP2V2 panels. The panels allowed the audience to understand the background of the story and follow the song lyrics. "The show was designed to look beautiful from every perspective in the stadium. The five screens allowed for a 360-degree view, corresponding to the number of regional associations that make up the AFC", said Magriga Kamiyeva, show producer from Sila Sveta.



The screens displayed the mascots selected by the 24 participating national teams to represent their countries. "We chose the Roe Visual BP2V2 to deliver the fascinating visual content as they exhibit excellent behavior in front of the camera", commented Riaan Gomes, Senior Project Manager at Creative Technology.

The BP2V2 have already demonstrated their color accuracy in many Netflix shows, influential movies, and popular television programs. The behavior in front of the camera and the stable performance of the BP2V2 provide both cameramen and actors with an excellent working environment.

Lighting Design: Roland Greil

Stage Design & Visuals Creative Director: Artur Kond/Sila Sveta Katara Studios Executive Creative Director: Ahmed Al Baker General Producers: Alexey Rozov & Alexander Us Katara Studios Executive Producer: Mahmoud Hamaky Producer: Magrifa Kamayeva Show Director: Slava Kualev Broadcast Director: Marek Mill Technical Director: Shannon Gobell Associate Lighting Design: Troy Eckerman LX Programmer & Studio Associate: Michael Kuehbandner LX Programmer: Markus Neubauer Design Assistant & Spot Caller: Tom Levin Audio Design: Scott Willsallen Staging & Automation: Stage One LX Vendor: PRG Middle East Audio Vendor: Agora Rigging Vendor: Es:Me



Part of the team (left to right): Markus Neubauer, LX Programmer II & Keylighting; Troy Eckerman, Associate LD; Roland Greil, Lighting Designer; Michael Kuehbandner, Studio Associate & LX Programmer; Tom Levin, Design Assistant & Spotcaller.

et

GRAMMYS

Location: Crypto.com Arena, LA Company: Shure

Specification: Once again this year, the biggest music night relied on Shure. To flawlessly transmit sound to 16.9 million viewers, 28 channels of the Axient Digital Wireless System and eight channels of the Axient Analog System were utilized. Artists relied on PSM 1000 In-Ear Monitoring Systems for their performances, with a total of 190 bodypack receivers used throughout the evening. Additionally, the SM58 and the 565SD, along with the latest microphone innovation, the KSM11, were employed.



SISTER ACT Location: Seevetal. Hamburg Company: Groh PA, Ledtek Specification: For the musical production Sister Act, Groh PA utilized an LED wall from Ledtek. Six freestanding elements measuring 1 x 4 meters were seamlessly integrated into the stage set. There were a total of 7 performances in front of approximately 3000 guests. Alex Kühl was responsible for the video production. On stage, the P2+BL Pro 2.9mm LED wall from Ledtek was used, built with 100 x 50 cm elements, eight pieces per column. The signal was scaled by a Novastar VX1000 Scaler at the FOH (Front of House).



START UP THE FUTURE

Specification: The "Start Up The

Future" event marked the kick-off of

Württemberg and was combined with

an award ceremony by the VDMA. It

featured exciting presentations, an

ches. B&B provided equipment for

prints, and stage furniture, and ma-

naged stage and ambient lighting as

well as sound, including micropho-

nes, media players, and DJ equip-

ment.

innovation challenge, and six pit-

the stage set, including a 98-inch

flat-screen, various large-format

Company: B & B Eventtechnik

the Allianz Industrie 4.0 Baden-

Location: Code N, Stuttgart

CONDOR NIGHT

Location: Technikhalle 7. Düsseldorf **Company:** Sinus Eventtechnik Specification: The .. Condor Special Night" took place in Technikhalle 7 at Düsseldorf Airport. Over 200 guests gathered to bid farewell to Ralf Tekkentrup. The highlight of the evening was the ceremonial presentation of the new Condor aircraft Airbus A330neo - with the new lettering "thank you tecke". In just one day of setup, a portion of Hall 7 was transformed into an event space with catering area, bar, and stage for guest speakers. Sinus was responsible for the entire technical implementation, including the support for the live band Glow.





RIOT GAMES

Location: TV-Studio, Berlin Company: NIYU

Specification: In Berlin Adlershof, NIYU transformed the former LEC Studio into a flexible TV studio specifically tailored to the needs of Riot Games (eSports). The new Riot Games Arena now offers an enhanced arena and fan experience, along with new broadcasting and production capabilities controlled from the central Riot Games EMEA Broadcast Center in Dublin, Ireland. In addition to technical planning and infrastructure implementation, NIYU served as the general contractor for all tasks related to event production.



ROBBIE WILLIAMS

Location: Open Air, A-Schladming **Company:** Getec Eventtechnik Specification: To kick off the ski season, Robbie Williams performed in front of 25,000 spectators on a 50-meter-wide stage at the foot of the Planai Mountain. An L-Acoustics system consisting of K2 for the main PA (including Kara II as Downfill), Kara II Hangs as Outfill for the balconies, a total of 18 Kara II as Frontfill, and three A10 Focus as Lip Fills on the catwalk was used. The 30 KS28 subwoofers were arranged in a 1:1 Cardioid setup. Getec utilized a combination of Robe iForte and BMFL Wash Beam for the ,,deco lighting".



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Photo of the century

Margot Friedländer leading the 32-member Kickline of the Friedrichstadt-Palast Berlin, captured on the largest theater stage in the world - in costumes by Jean Paul Gaultier.



A Jewish German, whose family was murdered and who herself barely survived the Holocaust. A palace with Jewish roots, which became the largest propaganda and operetta theater of the Third Reich - and today stands for freedom, diversity, and democracy. Its trademark since the "Golden Twenties": the 32-member Kickline, whose founder was also a Jewish German. A photo with history and attitude.

Especially in these times, it is also a photo of hope: In the Kickline, today, 30 women and two gender-fluid individuals dance, representing all skin colors, all ways of loving, all religions from Christianity to Judaism to Islam. People from 28 nations work at the palace, including from Ukraine, Russia, Belarus, Israel, and Arab countries.

The "Century Photo" was taken on December 15, 2023, the last day and climax of Chanukah, the Jewish Festival of Lights. Following the photoshoot, there was a personal meeting with the ensemble and a conversation between Margot Friedländer and Artistic Director Berndt Schmidt in the Grand Ballet Hall.

Schmidt on the creation of the photo: "As a young woman, Margot was a comparsa in a theater during the Nazi era in the then Jewish Cultural Association. She loves culture, the palace, and our revues. That's why I gave her the 'Century Photo' full of hundred-year-old stories for her 102nd birthday: a strong, unbroken woman at the head of strong women and gender-fluid individuals. We will hang the picture in large format at our palace: so that this radiant, beautiful woman is always and forever with us. The image is also a daily reminder of Margot's mission, to stand in solidarity with minorities. Only where diversity can flourish is there freedom."

The costumes of the Kickline from the current Grand Show "Falling In Love" were designed by the French top designer Jean Paul Gaultier. The ensemble of the palace is a living example of Margot Friedländer's continuous appeal to our humanity: "We are all equal - there is no Christian, Muslim, or Jewish blood. There is only human blood. Be human!"

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since 1996 The Entertainment Technology magazine is published 8 times/year (4 printed issues, 4 digital issues).

Publisher

kwie.medien Fichtestraße 18 · D-30625 Hannover phone: +49-511 55 40-48 · fax -40 Mail: redaktion@etnow.de

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Introduced as a modular system and configurable into different sizes, SkyPanel X offers native soft, native hard, and open-face lighting. SkyPanel X sets a new bar not only in terms of dimming and color science, but also in light output and beam quality for medium to long throws. With up to 4,800 lux at 10 m / 32.8 ft and eight pixel zones per LED panel; dynamic CCT range of 1,500 K – 20,000 K; RGBACL full-spectrum light engine; wireless control; integrated power supply; advanced networking possibilities; and an IP66 rating, the SkyPanel X is an all-weather lighting solution tailored to existing workflows.



www.arri.com/skypanelx

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ALESISI MCCLOCH

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