MOVE

The magazine for show technology **01|2026**

70 years of the Eurovision Song Contest
Interview with Ola Melzig, production manager

LIME
AS AN LED COLOR

Network technology and ArtNet
Basic knowledge for use in event technology

KIDS at the controls
Interview with Emma Fletcher from KIDS RAVE

SONIC J-100 JET

- HOUSING DESIGNED ACCORDING TO IP-X3 LEVEL PROTECTION
- IP-53 LEVEL PROTECTIVE DESIGN HIGH-SPEED TURBO FAN
- VOLTAGE PROTECTION
- JET-STYLE DIRECTIONAL FOG BURST
- FAST RESPONSE & CONSISTENT PERFORMANCE
- OPTIONAL WIRELESS/W-DMX CONTROL MODULE

Antari FOG MACHINE

EDITORIAL

Dear gentle reader,

this year, the spring season looks a little different than it has for the past 30 years: With the end of Prolight+Sound, the popular industry reunion in Frankfurt will also disappear. Nevertheless, in this issue we once again present the latest product innovations from the lighting and sound sectors and provide background information on current trends in the industry.

This spring also marks a special anniversary for an event series that people tend to either love or hate: The Grand Prix Eurovision de la Chanson – or, as the singing competition is officially known today, the Eurovision Song Contest – turns 70 this year. To celebrate this milestone, we take a look back at the colorful history of the event. In our interview, Ola Melzig, who has shaped the ESC as production manager for 25 years, talks about the challenges he encountered over a quarter century of television history.

There is also an anniversary for all technology enthusiasts: The white LED has now been around for 30 years. In this issue, you will find a look back at the beginnings of LED technology and its development. In addition, we explore whether laser shows can replace fireworks, listen closely to irregular time signatures in music, share DIY tips on proper soldering and speak with the founders of KIDS RAVE, an initiative dedicated to supporting young DJ talent around the world that is particularly close to our hearts.

In short, this issue of MOVE once again offers a wide range of topics related to event technology and the live event industry. As always, we wish you enjoyable reading and a successful summer filled with great events.

Your MOVE editorial team

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THE NEW FIELD SALES REPRESENTATIVES

EUROLITE LED IP TMH-B250 and LED IP TMH-S250: Two Outdoor Moving Heads with Clearly Defined Roles

With the LED IP TMH-B250 and the LED IP TMH-S250, EUROLITE expands its portfolio of weatherproof moving heads with two powerful models designed for professional outdoor use. Both fixtures are based on a 250 W COB LED in cold white and are housed in an almost identical, robust enclosure. Thanks to the IP65 rating, they are designed for permanent outdoor use and operate reliably even in heavy rain.

Despite their shared technical foundation, the two moving heads follow different concepts. The TMH-B250 is designed as a dedicated beam fixture, while the TMH-S250, as a versatile BSW moving head, covers a significantly broader range of applications.

EUROLITE LED IP TMH-B250 Moving Head Beam

The EUROLITE **LED IP TMH-B250** produces an extremely narrow and highly intense beam with a beam angle of just one degree. This makes the fixture ideal for long throw beam effects and precise outdoor accents. A gobo wheel with 13 static gobos is available to structure the beam. This is complemented by a color wheel as well as an additional color filter on a separate wheel. This filter provides further color options and also integrates a frost filter, which can be used to soften the light when required.

For additional variations in the beam effect, the TMH-B250 is equipped with two rotating prisms. An eight-fold prism multiplies the beam in a circular pattern, while a honeycomb prism with 24 cells arranges the image in a honeycomb structure. Both prisms can be used individually or in combination to create impressive, highly multiplied beam effects with a long-range effect.

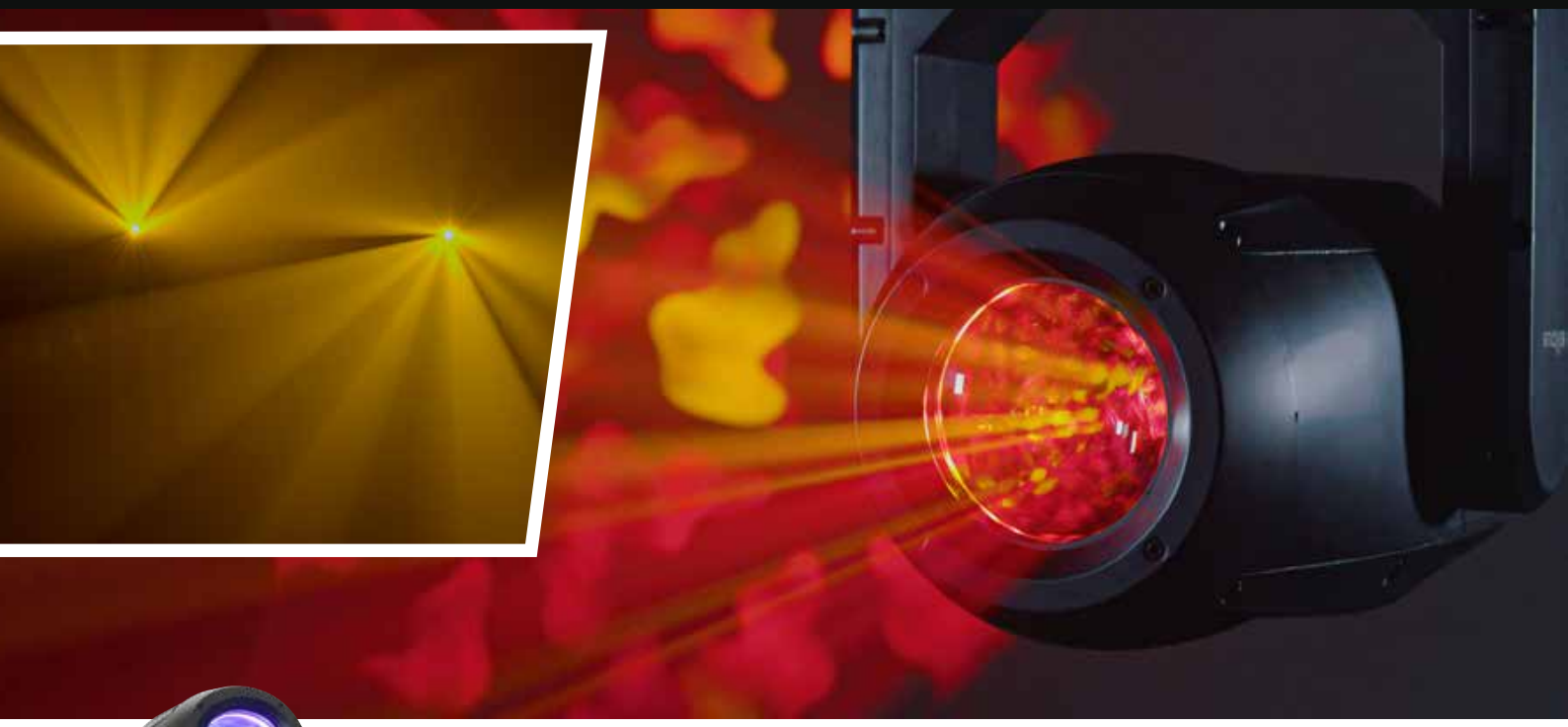
To the product

Technical specifications

Power supply:	100-240 V AC, 50/60 Hz
Power consumption:	310 W
IP classification:	IP65
Power connection:	IP T-Con input and output
LED type:	1 x 250 W COB (chip-on-board) cold white (CW)
Max. TILT movement:	250° exact positioning (16 bit resolution)
Max. PAN movement:	540° exact positioning (16 bit resolution)
	auto position correction (feedback)
Flash rate:	1 - 20 Hz
Equipment:	Multicolor effect filter; focus motor-driven; frost filter; color wheel;
	gobo wheel with static gobos; prism 24-fold rotating;
	prism 8-fold rotating
Gobos:	Gobo wheel with static gobos, 13 gobos und open
DMX channels:	14; 16
DMX-connection:	3pin and 5pin XLR
Control:	DMX; master/slave function; sound to light via microphone
Beam angle:	1°
Dimensions (WxDxH):	32.0 cm x 22.5 cm x 52.0 cm
Weight:	16.35 kg

EUROLITE LED IP TMH-S250 Moving Head Beam/Spot/Wash

To the product



The EUROLITE **LED IP TMH-S250** is designed to be significantly more flexible. With its motorized zoom range of 4° to 35°, the fixture can be used as a beam, a classic spot or a wide wash. Combined with motorized focus and a frost filter, the TMH-S250 covers a wide range of applications and clearly positions itself as a BSW moving head.

For image design, the TMH-S250 features two gobo wheels, one with static gobos and one with rotating gobos. Both can be layered on top of each other, enabling complex projections and dynamic texture effects. In addition, a rotating four facet prism is included, multiplying the image in a square pattern while remaining projection friendly. The color wheel offers not only full colors but also split colors and a rainbow effect.

Both moving heads feature precise 16 bit positioning, temperature controlled fan cooling and extensive control options via DMX, RDM, stand alone operation and master/slave mode. Robust carrying handles, omega brackets, rubber feet and professional SEETRONIC connectors underline their suitability for touring and rental applications. An integrated pressure compensation membrane provides additional protection for the electronics under changing weather conditions.

Technical specifications

Power supply:	100-240 V AC, 50/60 Hz
Power consumption:	310 W
IP classification:	IP65
Power connection:	IP T-Con input and output
LED type:	1 x 250 W COB (chip-on-board) cold white (CW)
Max. TILT movement:	240° exact positioning (16 bit resolution)
Max. PAN movement:	540° exact positioning (16 bit resolution)
	auto position correction (feedback)
Flash rate:	1 - 20 Hz
Equipment:	Focus motor-driven; prism 4-fold rotating; frost filter; color wheel;
	gobo wheel with static gobos; gobo wheel with rotating gobos;
	zoom motor driven
Gobos:	Gobo wheel with static gobos, 8 gobos and open
	Gobo wheel with rotating gobos, 8 gobos and open
	Outside diameter 15.7 mm
	Image diameter 10 mm
	Slot-in gobo system for easy gobo replacement
DMX channels:	18; 19; 23
DMX-connection:	3pin and 5pin XLR
	DMX; master/slave function; sound to light via microphone
Beam angle:	4° - 35°
Dimensions (WxDxH):	32.0 cm x 22.5 cm x 54.0 cm
Weight:	15.25 kg

EUROLITE LED SUPER PIX STROBE 864 PANEL

To the product

VERSATILE STROBE WITH MORE THAN 1,000 LEDS

This strobe fixture is equipped with an impressive 1,152 LEDs. Three double row strips of white LEDs run across the top, center and bottom, while 864 RGB LEDs are positioned in between.

The three LED strips can be controlled separately and enhanced with effects. The RGB LEDs are divided into eight segments. The result is a versatile strobe that not only produces powerful flashes but can also be used as a blinder, for atmospheric lighting and for animated effects – a true all rounder.

For control, six different DMX modes are available. The smallest mode requires only four DMX channels, while the largest mode offers 32 channels. In addition, numerous programs and settings can be conveniently adjusted via an IR remote control or directly on the integrated display.
The power connections are designed as P-Con input and output, while the DMX connections are provided in a three pin format.

VERSATILE AND WEATHERPROOF

The **LED IP TMH-W285** Hypno Moving Head Wash from EUROLITE demonstrates impressively how versatile, creative and at the same time robust modern lighting technology can be. With dynamic color effects and a weatherproof housing, this model is equally suited for stage productions, open-air events and permanent installations.

Powerful Wash Effect with RGBW Color Mixing

At the heart of the fixture are 19 RGBW LEDs that deliver intense colors and uniform illumination. The LEDs are divided into three segments that can be controlled individually, enabling vibrant color fades, rhythmic effects and structured wash looks. The system is complemented by a motorized zoom with a beam angle range from tight 2° beam effects up to wide 48° wash coverage. This allows the TMH-W285 to adapt flexibly to a wide variety of applications.

Hypno Ring for Additional Effects

A distinctive feature of this moving head is the integrated Hypno ring. Equipped with 72 RGB LEDs, it generates dynamic lighting effects. These effects are effective both during slow color transitions and rapid movements, making the TMH-W285 not only a functional wash light, but also a true visual highlight on stage.

EUROLITE LED IP TMH-W285 Hypno Moving Head Wash

To the product

- **Wash effect**
- **Hypno ring for additional effects**
- **Weatherproof construction**

Weatherproof Construction for Outdoor Applications

With its IP65 rating, the LED IP TMH-W285 Hypno Moving Head Wash is fully equipped for outdoor use. Rain, dust and changing weather conditions pose no challenge to its rugged housing. This makes the fixture ideal for open-air events, temporary installations and architectural lighting in outdoor environments. At the same time, it remains a reliable and powerful tool for indoor applications.

Technical specifications

Power supply:	100-240 V AC, 50/60 Hz
Power consumption:	195 W
IP classification:	IP65
Power connection:	T-Con input and output
LED-type:	19 x 15 W SMD 5050 4in1 QCL RGBW
	(homogenous color mix)
	72 x 0.12 W SMD 2528 3in1 TCL RGB (homogenous color mix)
Max. TILT movement:	260° exact positioning (16 bit resolution)
Max. PAN movement:	540° exact positioning (16 bit resolution)
	auto position correction (feedback)
Equipment:	Zoom motor driven
DMX channels:	18; 26
DMX connections:	3pin and 5pin XLR
Control:	DMX; master/slave function
Beam angle:	2° - 48°
Dimensions (WxDxH):	38.8 cm x 25.7 cm x 49.1 cm
Weight:	15.40 kg

MORE SHOW, MORE WOW

Say Hi to Your New Favorite Light

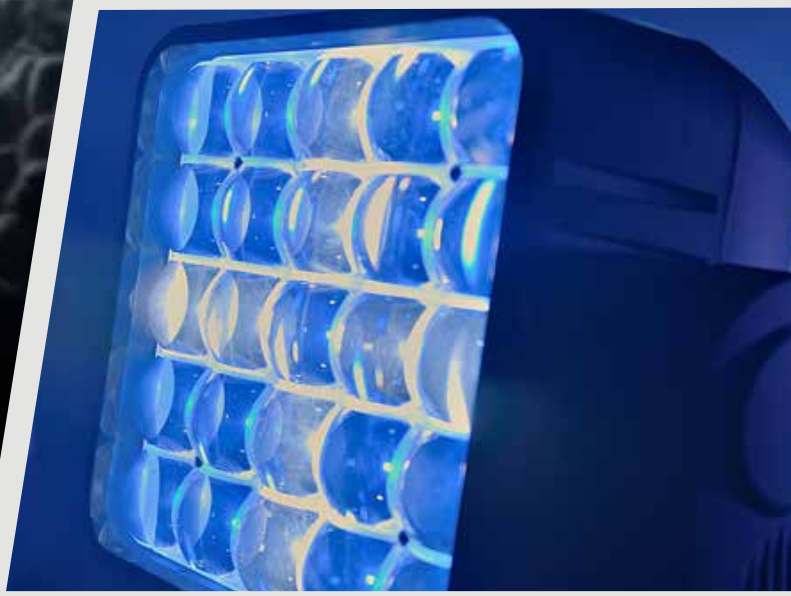
With the **LED TMH-W375**, EUROLITE expands its portfolio with a moving head that combines classic wash functions with creative matrix effects. At the core of the TMH-W375 is a matrix of 25 high-performance RGBW LEDs that can be controlled individually. This pixel structure enables far more than uniform color washes: in addition to dynamic patterns and chase effects, it can also display numbers, letters and graphic content. As a result, the moving head is suitable for atmospheric wash applications as well as effect-driven show elements with strong visual impact. The color mixing is even and consistent, delivering both vivid colors and clean white tones.

The fixture features a PAN range of 540° and a TILT range of 215°, each with 16-bit resolution.

A motorized zoom allows the beam angle to be adjusted from 2° to 42°. This covers a wide spectrum, from tight, almost beam-like accents to broad wash coverage. The TMH-W375 can therefore be flexibly adapted to different stage sizes and production requirements.

EUROLITE LED TMH-W375 Matrix Moving Head Wash Zoom

To the product



- **Brilliant colors**
- **Dynamic pixel effects**
- **Motorized zoom**

The feature set of the TMH-W375 makes it an attractive choice for clubs, touring productions, stage installations and event formats where lighting is intended not only to illuminate, but to actively shape the visual experience. The combination of wash light and matrix functionality allows a single fixture to deliver both base lighting and striking visual highlights.

Technical specifications

Power supply:	100-240 V AC, 50/60 Hz
Power consumption:	350 W
Power connection:	P-Con input and output
LED type:	25 x 15 W SMD 5060 4in1 QCL RGBW
	(homogenous color mix)
Max. TILT movement:	215° exact positioning (16 bit resolution)
Max. PAN movement:	540° exact positioning (16 bit resolution)
	auto position correction (feedback)
DMX channels:	11; 22; 109; 122
DMX connections	3pin XLR
Control:	DMX; QuickDMX via USB (optional);
	W-DMX by Wireless Solution via USB (optional);
	CRMX by LumenRadio via USB (optional)
Beam angle:	2° - 42°
Dimensions (WxDxH):	30.3 cm x 23.5 cm x 41.6 cm
Weight:	9.70 kg

FULL POWER IN EVERY MOMENT

The **EUROLITE LED TMH-H380** is a versatile moving wash light that combines beam, wash and flower effects in a single fixture. Designed for professional users, it brings together a powerful LED configuration with variable optics and comprehensive control options. This makes it equally suitable for permanent indoor installations as well as for mobile setups and live events.

Light Source and Effects

At the heart of the TMH-H380 are 19 high-performance 20 W RGBL LEDs in QCL configuration, delivering exceptionally clean color mixing. Each LED can be controlled individually. In addition to classic beam and wash applications, the specialized optics also create a dynamic flower effect, with rotating light patterns filling the space with movement.

A motorized zoom provides beam angles ranging from 1° to 35°. This allows for both tightly focused beams and wide-area washes. The rotating lens assembly further enhances the visual impact, adding vibrant motion to the overall lighting effect.

Control and Operation

Control is handled via DMX, with selectable modes of 18, 30, or 94 channels. In addition, the fixture offers stand-alone operation, sound-activated control via the integrated microphone and a master/slave function. For wireless DMX applications, the unit can also be integrated into QuickDMX, W-DMX, or CRMX systems using optional USB modules.

EUROLITE LED TMH-H380 Beam/Wash/Flower Effect

To the product

- **Lens rotation**
- **Pixel control**
- **Motorized zoom**

Conclusion: A Compact All-Round Performer

The TMH-H380 is designed for both mobile use and permanent installations. Two carrying handles, rubberized feet and an omega bracket for truss mounting make handling and setup straightforward. The temperature-controlled fan cooling in the head and base ensures stable operation, while the moving head delivers flicker-free light output. Power input and output connectors allow multiple units to be linked together.

The EUROLITE LED TMH-H380 presents itself as a compact, versatile effect moving light that combines beam, wash and flower effects in a single fixture, covering a wide range of applications.

Technical specifications

Power supply:	100-240 V AC, 50/60 Hz
Power consumption:	270 W
Power connection:	P-Con input and output
LED type:	19 x 20 W 4in1 QCL RGBL (homogeneous color mixing)
Max. tilt movement:	215° precise positioning (16-bit resolution)
Max. pan movement:	540° precise positioning (16-bit resolution)
	Auto position correction (feedback)
Flash rate:	1 - 18 Hz
Features:	Motorized zoom; lens rotation
DMX channels:	18; 30; 94
DMX connections:	3pin and 5pin XLR
Control:	DMX; QuickDMX via USB (optional);
	W-DMX by Wireless Solution via USB (optional);
	CRMX by LumenRadio via USB (optional); Master/slave function
Beam angle:	1° - 35°
Dimensions (WxDxH):	34.0 cm x 22.5 cm x 34.5 cm
Weight:	11.75 kg

SPARKASSEN-ARENA // JENA, GERMANY

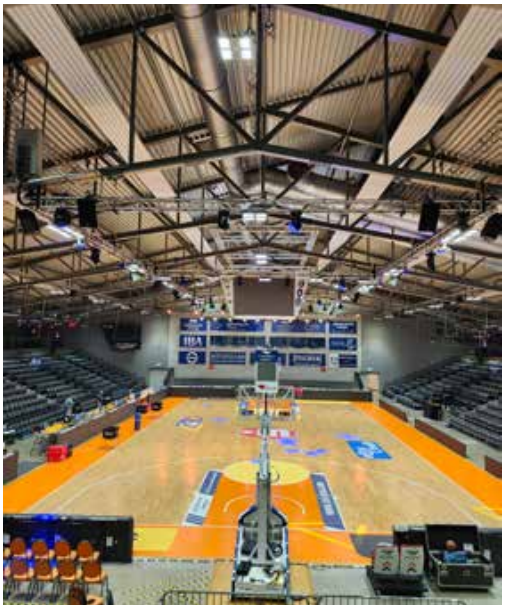
The Sparkassen-Arena Jena offers 2,300 square meters of space and a capacity for up to 3,000 guests. The multifunctional venue hosts concerts, sports events and corporate functions.

In 2025, the company CKV from Jena renewed the entire lighting and sound installation, taking the visitor experience to a new leveln – particularly for the games of the home team Science City Jena in Germany's top basketball league.

To the product

FUTURELIGHT EYE-1940 QCL Zoom LED Moving Head Wash

PRO Washlight with 19 Osram Ostar 40W RGBW LEDs, large zoom range and pixel control



To the product

EUROLITE LED TMH-S400 CMY Moving Head Beam/Spot/Wash

LED moving head hybrid with 400 W COB LED, color wheel, CMY color mixing, static and rotating gobo wheel, prisms, focus, zoom and frost

EUROLITE LED 7C-7 Silent Slim Spot

Silent 7in1 LED PAR spotlight in a space-saving design

To the product

Rain Does Not Stand a Chance!

Outdoor Pros – Unfazed by the Weather

The EUROLITE **LED IP T-PIX 18 QCL bar** is designed as a 106 centimeter long LED bar equipped with 18 powerful 8 W RGBW LEDs. Each individual LED can be controlled separately, allowing precise pixel effects and dynamic color gradients. The 18 degree beam angle enables both targeted façade or stage lighting as well as visible effect applications in the direct line of sight of the audience.

Thanks to RGBW color mixing, the fixture produces vivid colors as well as clean white tones. Twelve integrated show programs, a direct color selection for preset colors and operation via DMX, stand alone mode and master/slave function provide flexible application options. Passive convection cooling allows completely silent operation.

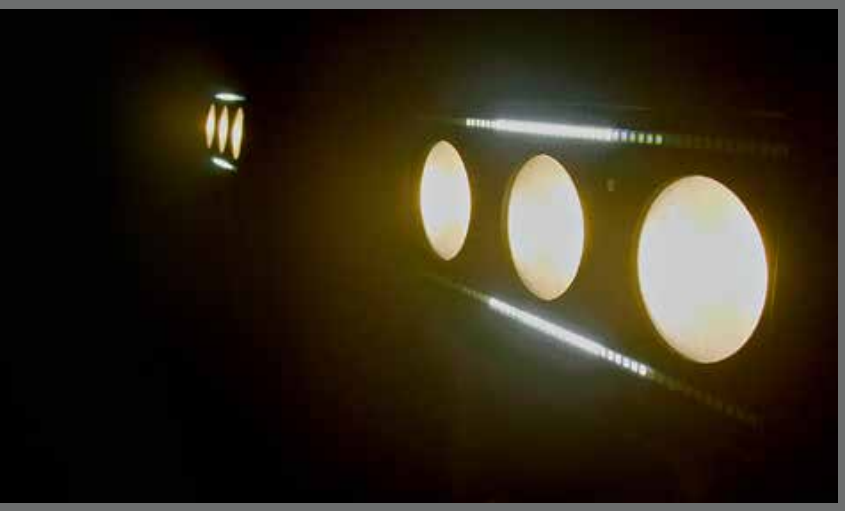
Mechanically, the T-PIX is highly versatile. In addition to a central mounting bracket, two side brackets are available to support different setup and mounting situations. On the power side, weatherproof T-Con connectors are used for input and output, while the DMX connection is provided via three pin IP XLR sockets. An integrated pressure compensation membrane provides additional protection for the electronics against environmental influences caused by changing weather conditions.

- Individually controllable LEDs
- Wash effect
- Strobe effect

EUROLITE LED IP T-PIX 18 QCL Leiste

Weatherproof (IP65) Bar with RGBW Color Mixing and Pixel Control, Including IR Remote Control

To the product



Look Into My Three Eyes, Kid: The EUROLITE **LED IP Triple Eye** is based on three powerful 100 W COB LEDs with RGB and warm white color mixing. Each of the three “eyes” can be controlled individually, enabling both intense blinder effects and colored wash applications. With a variable color temperature ranging from 1800 K to 8000 K, the light can be flexibly adjusted from very warm to cold white tones.

In addition, a total of 108 cold white LEDs frame the main optics above and below. These LEDs are individually controllable in 18 segments and create structured effect or strobe accents. This results in a multi dimensional lighting effect that is both functional and visually striking.

The Triple Eye is, of course, consistently designed for outdoor use. IP65 protection, weather resistant T-Con power connectors and three pin IP XLR sockets ensure reliable operation under demanding conditions.

- 18 individually controllable segments
- Blinder effect
- Wash effect
- Strobe effect

To the product

EUROLITE LED IP Triple Eye Hybrid

Weatherproof (IP65) Triple Blinder with RGB/WW Color Mixing and White Effect LEDs

Golden Hour at the Push of a Button

SUNSET IP

Recreating the dimmed, golden glow of a classic incandescent lamp with LED technology is considered one of the most demanding disciplines in modern lighting design. Especially in the lower dimming range, it quickly becomes clear whether the light appears authentic or artificial. With the Sunset series, EUROLITE introduces two outdoor blinders that convincingly simulate this behavior while deliberately remaining affordable.

Both models operate with sophisticated Dim-to-Warm technology. At lower brightness levels, the light takes on a reddish golden tone, similar to that of a dimmed incandescent lamp. As the intensity increases, the light gradually shifts to a classic warm white blinder look. In the process, not only the color temperature changes, but also the typical fade up and fade down behavior of a tungsten lamp is replicated. The result appears organic and familiar.

To the product

EUROLITE SUNSET IP EYE 1 Blinder dim2warm

Weatherproof (IP65) Blinder with 324 Watt LED and Excellent Tungsten Simulation

Straightforward Elegance: The EUROLITE **SUNSET IP BAR 12 Blinder dim2warm** is designed as a weatherproof IP65 bar with twelve individually controllable LED units. Each unit combines three 10 W warm white LEDs with additional red and amber LEDs, forming the basis for its particularly realistic Tungsten Simulation.
Since all twelve segments can be controlled individually, the fixture allows not only classic blinder effects but also dynamic chase effects. The wide beam angle creates the typical broad blinder look and remains convincing even when viewed from the side.
In addition to DMX, RDM, stand alone and master/slave operation, several show programs are available. Mounting brackets and omega brackets enable flexible installation, while SEETRONIC connectors and a pressure compensation membrane underline the fixture's suitability for outdoor use.

The Cyclops: With the **SUNSET IP EYE 1 Blinder dim2warm**, EUROLITE expands the series with a single eye high output variant. A 324 W COB LED delivers intense light output that holds up even on larger stages. The 73 degree beam angle supports the typical wide blinder effect. Here as well, Dim-to-Warm technology is used. At lower levels, the light begins with a deep red golden tone and gradually develops into warm white stage lighting as the intensity increases. In addition to the blinder effect, a strobe mode is also integrated. DMX, RDM, stand alone and master/slave operation allow flexible integration into existing setups.

To the product

EUROLITE SUNSET IP BAR 12 Blinder dim2warm
Weatherproof (IP65) Bar with Twelve 30 Watt LED Units and Excellent Tungsten Simulation

A True All Rounder

With the **Multiflood IP 24x40W RGBL Swing**, EUROLITE introduces a fixture that combines several lighting categories in a single system: Beam, wash, uplight and effect lighting merge seamlessly. This versatility is made possible by a powerful RGBL color mixing system, an electronically variable frost filter and a motorized tilt movement.

Inside the fixture, 24 powerful 40 W RGBL LEDs are at work. The combination of red, green, blue and lime enables both vivid colors and high quality white light with freely adjustable color temperature. Each LED can be controlled individually, allowing the creation of pixel and matrix effects. Together with internal macros, this results in dynamic beam and motion effects, which are particularly effective in haze.

Despite the name “Multiflood,” the fixture begins with a very narrow beam angle of 2 degrees, making it suitable first and foremost as a beam effect. The key difference lies in the electronic frost filter: It can not only be switched on or off, but also adjusted continuously. This allows the beam angle to be changed via DMX during the show, from a narrow beam to a wide flood effect. The transitions remain smooth and controlled, which makes the fixture especially versatile.

EUROLITE Multiflood IP 24x40W RGBL SWING FROST

Motorized Tilting Outdoor Fixture (IP65) with Continuously Variable Electronic Frost for Beam, Wash and Pixel Effects

- Continuously adjustable frost filter
- Beam, wash, uplight and effect light in one fixture
- Natural color rendering thanks to lime

SWING

The designation “Swing” refers to the integrated motorized tilt movement. With a working range of up to 210 degrees, light surfaces can be precisely aimed, dynamically moved or intentionally swung into the space or toward the audience. In combination with the variable beam characteristics and the RGBL color mixing, this creates a wide range of creative possibilities.

Despite its high output, the fixture is also suitable for noise sensitive environments. A Silent Mode reduces noise emissions to a level that allows use in theater, show or gala settings. At the same time, the unit is IP65 rated, making it suitable for outdoor use. The fixture can be used both on the floor and in flown installations and is supplied with omega brackets.

Conclusion: One Fixture for Almost Everything
The Multiflood IP 24x40W RGBL Swing offers a wide variety of applications. On stage, it can be used both as front light and as an effect or beam fixture in haze. At fashion shows, it can be placed directly along the catwalk to illuminate models and, moments later, swung outward as an effect light toward the room or audience. The fixture can also take on multiple roles in clubs, installations or theater environments.

To the product

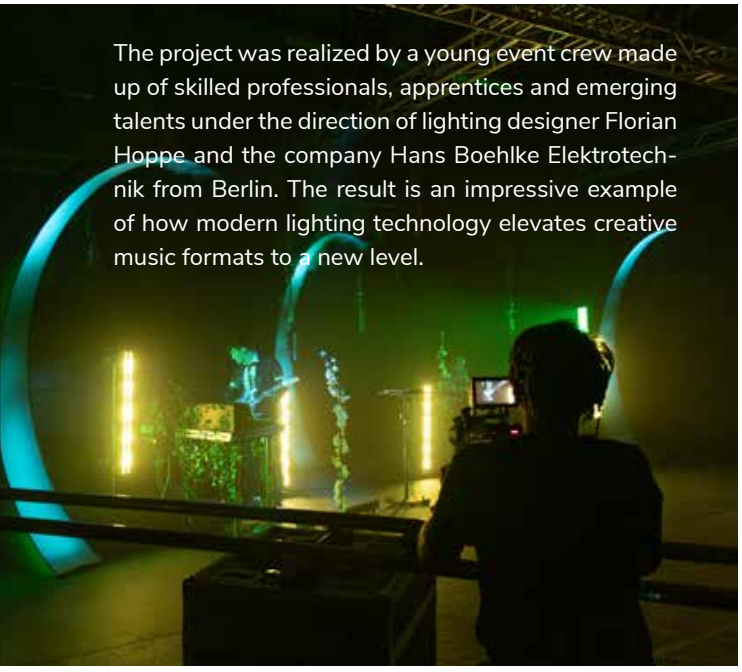
EUROLITE LED IP PIX Strobe RGB CW+WW MK2

Outdoor spotlight (IP65) for stroboscope, ambient and animation effects

DUST OF APOLLON // BERLIN, GERMANY

Performed live. Felt for real. Visually intensified:
For the Berlin-based newcomer “Dust of Apollon,” the entire debut album “chapters left unread” was staged as a full album playthrough at Lagerhalle Kuchem Konferenz Technik GmbH & Co. KG. Every song was performed live, without a safety net, but with maximum atmosphere.
EUROLITE LED IP PIX Strobes MK2 were used to shape the visual dramaturgy. They structured the performance with precise pulses of light, set emotional accents between intimacy and energy and underscored the character of each individual track.

Photos: Jan Paul Kowalczek



The project was realized by a young event crew made up of skilled professionals, apprentices and emerging talents under the direction of lighting designer Florian Hoppe and the company Hans Boehlke Elektrotechnik from Berlin. The result is an impressive example of how modern lighting technology elevates creative music formats to a new level.


To the product
IP 65
EUROLITE LED IP PAR 7x15W RGBL Spot
IP65 spotlight with RGBL LEDs, frost filters and IR remote control

LIME

THE NEW MIRACLE COLOR?

If there is one color that is truly trending in LED lighting right now, it's definitely lime. The term refers to a yellow-green hue reminiscent of the color of a lime. But what makes lime so special in lighting technology?

EUROLITE LED IP PAR 7X15W RGBL SPOT

OUTDOOR SPOT WITH RGBL COLOR MIXTURE

With the LED IP PAR 7x15W RGBL Spot, EUROLITE offers a weatherproof spotlight designed specifically for demanding outdoor applications. Thanks to its IP65 rating, the unit operates reliably even in heavy rain, making it suitable for open-air stages, architectural lighting and temporary or permanent outdoor installations. At its core are seven powerful 15 W LEDs with RGBL color mixing. The combination of red, green, blue and lime enables a very appealing color mixing as well as a convincing white rendering. The beam angle is 10 degrees. For greater flexibility, two frost filters are included in the package, which can be used to significantly widen the light beam and make it softer. This allows the spotlight to be used for both spot accents and more widespread lighting effects. Cooling is achieved entirely through passive convection. This makes the device suitable for noise-sensitive environments such as theaters, gala events or installations in close proximity to the audience. The design is complemented by features such as a pressure-equalizing membrane to protect the electronics and an integrated Kensington lock for theft protection.

LIME

THE NEW MIRACLE COLOR?

EUROLITE LED THA-120F and 230F Theater-Spot

Fresnel spotlight (stepped lens), 120 W or 230 W COB (chip-on-board) LED 4-in-1 QCL RGBL, extremely quiet, DMX

MONOCHROMATIC OR BROADBAND?

Unlike the classic LED primary colors – red, green and blue – lime is not monochromatic. Monochromatic means that a color covers only a very narrow range of the light spectrum. This is exactly how classic LEDs work: They produce light with a very limited spectral bandwidth. For example, if you mix monochromatic red and green light to create yellow, it appears yellow to the eye, but physically consists exclusively of red and green light components. Our eyes are fooled by this, but only to a certain extent.

WHY LIME WORKS DIFFERENTLY

Lime is not produced directly by the LED, but via a fluorescent material. The resulting light is broadband and contains very evenly distributed light components ranging from the red to the green spectral range. This broad spectral information is crucial for natural color rendering. These additional light components play a central role, particularly with white light, such as when illuminating human skin. If they are missing, skin quickly appears grayish or greenish and thus unnatural.

MAKING LIGHT QUALITY MEASURABLE

There are various methods for evaluating the quality of white light. The best known is the CRI, or Color Rendering Index. It can reach a maximum value of 100. For lighting intended for people, values of 80 or higher are considered the minimum standard, while professional applications generally require values above 90.

THANKS TO ITS BROAD SPECTRUM, LIME BRIDGES THE GAP BETWEEN RED AND GREEN, RESULTING IN SIGNIFICANTLY MORE NATURAL COLOR RENDERING, PARTICULARLY WITH WHITE LIGHT AND WHEN DISPLAYING SKIN TONES.

LIME COMPARED TO AMBER AND WHITE

Why are spotlights with lime LEDs now considered superior to models with white or amber LEDs? Amber, an orange hue, also lies between red and green, but covers this range with a significantly narrower spectrum. Amber is produced either directly as a monochromatic LED or via a fluorescent material. In both cases, the spectrum remains narrower than that of

EUROLITE LED THA-120F MK2 & THA-230F

NEW LED STEP LENSES IN THE EUROLITE THA SERIES

Two new LED stage spotlights have been added to the EUROLITE THA series. Both models feature a modern RGBL color mixing system based on the primary colors red, green, blue and lime. Lime is a broad-spectrum lemon yellow that bridges the optical gap between red and green. As a result, the fixtures produce not only vibrant colors but also excellent shades of yellow, orange and white. This makes them ideal for use with colored and white light.

Both spotlights are equipped with a quiet fan. If this is still perceived as disruptive, the so-called Quiet Mode can be activated, which guarantees near-total silence. In addition, both models offer camera-friendly pulse-width modulation, which is adjustable in twelve steps between 1,200 Hz and 25 KHz. The individual colors are dimmed using a high-resolution 16-bit process. The THA-120F MK2 is equipped with a 120 W LED and replaces the previous THA-120, whose RGBW color mixing is no longer up to date. This model features a manual zoom range of 3° to 48°. The THA-230, on the other hand, operates with a more powerful 230 W LED and fills a previous gap in the EUROLITE product line. Its zoom is motorized and can be adjusted between 3° and 56° via DMX signal or manually. Both spotlights feature high-quality, professionally crafted housings. Power is supplied via P-Con inputs and outputs, while the DMX connections are available in both three-pin and five-pin versions. Additionally, both models feature a wireless DMX USB port, enabling an upgrade for operation with Quick DMX or CRMX in a matter of seconds.

lime. This makes amber excellent for orange and yellow tones, but once again reveals limitations in the production of white light that are also perceptible to the human eye.

COLD WHITE, WARM WHITE AND THEIR PITFALLS

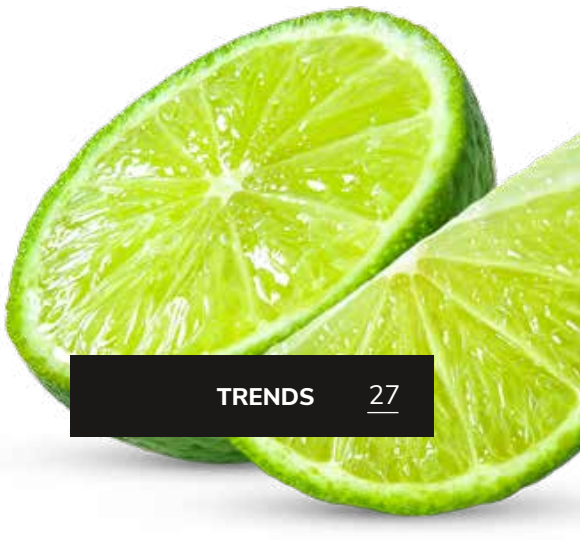
When generating white light, it is essential to distinguish between cold white and warm white light. Traditional RGBW LEDs combine red, green, blue and cold white. While this cold white light contains all color information, it does so in a very uneven distribution. The result often appears unnatural. This limitation specifically applies to the cold white component within RGBW systems. Pure cold white LEDs or systems with separate warm white and cold white LEDs can certainly achieve very high levels of quality.

RGB AND WARM WHITE AS ALTERNATIVES

The situation is somewhat different for spotlights with RGB and warm white. Many RGB/WW LEDs produce a very high-quality, natural light in warm white. However, the same applies here: Not all systems reach this level. There are models that offer both convincing white light and good colored light. Manufacturers often advertise these with high CRI values. A clear advantage is that only one channel is needed for high-quality white light, without complex color mixing. This is particularly appealing to less experienced lighting technicians. However, limitations become apparent with orange and yellow tones, which can be rendered much more convincingly with lime LEDs. Which solution is better ultimately depends on the specific application.

EUROLITE Multiflood IP 24x40W RGBL SWING FROST

Motorized tiltable outdoor spotlight (IP65) with stepless electronic frost for beam, wash and pixel effects



EUROLITE LED THEATRE COB 100 RGBAL AND LED THEATRE COB 200 RGBAL

EXPANSION OF THE EUROLITE THEATRE SERIES TO INCLUDE RGBAL MODELS

With the Theatre 100 and Theatre 200 series, EUROLITE offers two lines of spotlights that were originally developed for use in theatrical settings but are equally versatile for concerts, parties and other lighting applications. Both series cater to different needs, making them suitable for both budget-conscious users and professional productions with higher demands on performance and features. The Theatre 100 series is designed as a particularly economical solution for simple lighting tasks. The fixtures feature a plastic housing and operate with a fixed beam angle of 40 degrees. The barndoors are permanently mounted and allow for basic light shaping, which is sufficient for many applications. This makes the series particularly suitable for smaller stages, mobile setups or installations where ease of use is a priority.

The Theatre 200 series is positioned one level above. It features metal housings that are significantly more robust, underscoring the series' professional credentials. The light output is higher and the beam angle is significantly narrower at approximately 15 degrees, allowing for more precise illumination. For greater flexibility, magnetically attachable frost filters can be used to widen the light cone. Barndoors are available as an option for this series and can be added as needed. Common to both series is the high quality of the white light. Even in the previous versions, the focus was on excellent warm white rendering. In addition to pure warm white versions, there were models with adjustable color temperature ranging from warm white to cold white with good color rendering, as well as colored versions featuring red, green and blue in combination with a convincing warm white.

With the new RGBAL variants, both series significantly expand their color spectrum. In addition to red, green and blue, amber and lime are now being used. Although this eliminates the need for a dedicated warm white channel, the combination of amber and lime still allows for the creation of very high-quality white light as well as nuanced color tones. This color mixing offers a high degree of creative freedom for both scenic lighting in theaters and for colored accents at concerts and events. The Theatre 200 series was already known in earlier versions for its very quiet operation. With the Theatre 100 series, this was previously true primarily for the warm white models, while the other variants operated somewhat more audibly.

With the new RGBAL versions, this aspect has been consistently refined. Both series now operate so quietly that they can be used without issue even in noise-sensitive environments.

EUROLITE LED Theatre COB 100 and 200 RGBAL
LED theatre spots with 5in1 PCL RGBAL 100 or 200 W COB (chip-on-board) LED

WHY LIME IS OFTEN ADDED TODAY

In some systems, lime is additionally combined with amber or cyan. Amber specifically extends the lime spectrum in the narrow-band range and optimizes the reproduction of orange and yellow tones. Cyan forms the spectral counterpart to lime in the range between blue and green. Cyan is also generated by a fluorescent substance and fills this gap with broadband light. This allows for further refinement of color rendering. However, since the human eye is less sensitive in the range between blue and green, cyan plays a lesser role than lime in the transition between green and red.

CONCLUSION

A WIDER RANGE, A MORE NATURAL LOOK

Lime is not a passing fad, but a logical solution to a physical problem inherent in traditional LED color mixing. Thanks to its broad-band spectrum, lime bridges the gap between red and green, resulting in significantly more natural color rendering – especially with white light and when illuminating skin tones. Whether lime is the best choice depends less on measured values than on the intended application. Those with the highest demands for color rendering and natural lighting effects will clearly benefit from lime-based systems. In other applications, RGBW or RGB/WW solutions may still be appropriate, especially when ease of use or clear color accents are the primary focus.

EUROLITE LED Silent Par 12x10W RGBL

Fanless spot with RGBL color mixing and standing bracket

LIME

THE NEW MIRACLE COLOR?

EUROLITE LED SILENT PAR 12X10W RGBL

SILENT AND RELIABLE

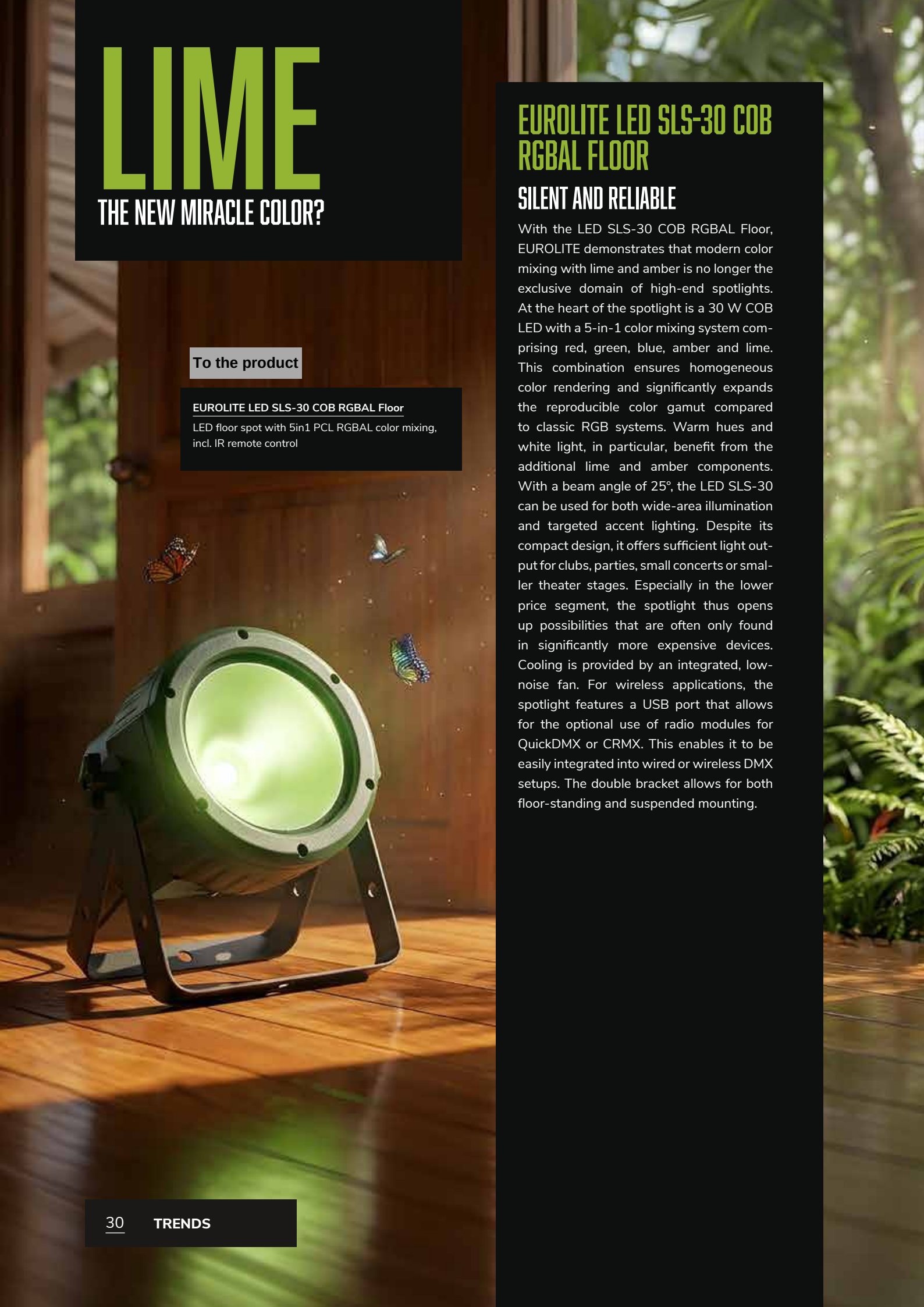
At the heart of the spotlight are twelve powerful 10 W RGBL LEDs. In addition to red, green and blue, lime is also used here. This combination significantly expands the possibilities for reproducing white, yellow and skin tones. A key feature of the LED Silent Par is its completely fanless design, which allows the spotlight to operate absolutely silently. This makes it particularly suitable for noise-sensitive environments such as theaters, galas, exhibitions or corporate events.

THOUGHTFUL DESIGN FOR FLEXIBLE APPLICATIONS

The elegant yet functional housing is designed for versatile applications. The mounting bracket not only allows for suspended operation but also serves as a stable stand for floor use. With a beam angle of 15 degrees, the spotlight can be used both as a precise spot and as an uplight, covering a wide range of applications. The Silent Par also demonstrates flexibility when it comes to control: A USB port allows for optional retrofitting with wireless modules for QuickDMX or CRMX. This enables the spotlight to be integrated quickly and easily into wireless DMX setups. Power is supplied via P-Con input and output; three-pin XLR connectors are available for the DMX signal.

LIME

THE NEW MIRACLE COLOR?



To the product

EUROLITE LED SLS-30 COB RGBAL Floor

LED floor spot with 5in1 PCL RGBAL color mixing, incl. IR remote control

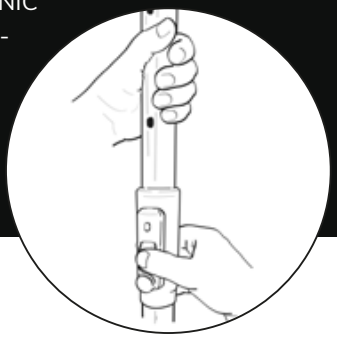
EUROLITE LED SLS-30 COB RGBAL FLOOR

SILENT AND RELIABLE

With the LED SLS-30 COB RGBAL Floor, EUROLITE demonstrates that modern color mixing with lime and amber is no longer the exclusive domain of high-end spotlights. At the heart of the spotlight is a 30 W COB LED with a 5-in-1 color mixing system comprising red, green, blue, amber and lime. This combination ensures homogeneous color rendering and significantly expands the reproducible color gamut compared to classic RGB systems. Warm hues and white light, in particular, benefit from the additional lime and amber components. With a beam angle of 25°, the LED SLS-30 can be used for both wide-area illumination and targeted accent lighting. Despite its compact design, it offers sufficient light output for clubs, parties, small concerts or smaller theater stages. Especially in the lower price segment, the spotlight thus opens up possibilities that are often only found in significantly more expensive devices. Cooling is provided by an integrated, low-noise fan. For wireless applications, the spotlight features a USB port that allows for the optional use of radio modules for QuickDMX or CRMX. This enables it to be easily integrated into wired or wireless DMX setups. The double bracket allows for both floor-standing and suspended mounting.

NEW STANDS WITH AIR SUSPENSION
FOR LIGHT & SOUND

These new tripods from EUROLITE and OMNITRONIC offer convenient features that make your work easier: air suspension for smooth, slow lowering of the load and an automatic pin lock for secure fastening.



To the product

Light stand including crossbar for four spotlights, maximum load 30 kg, height 140–250 cm

EUROLITE LCK-1 STAND WITH CROSSBAR

With the LCK-1, EUROLITE offers a compact lighting stand for smaller lighting setups in mobile applications. The manual extension stand is equipped with a crossbar that can hold multiple spotlights simultaneously. This makes the stand particularly suitable for compact setups at smaller events or in party rooms. Height adjustment is achieved via a manual extension mechanism. The maximum lifting height is 110 cm (from 140 cm to 250 cm height). Thanks to its ease of use and sturdy construction, the EUROLITE LCK-1 is a practical solution for smaller lighting installations where multiple spotlights need to be mounted compactly on a single stand.

Pull-out stand/ box stand with automatic pin lock, 106–200 cm

To the product

OMNITRONIC LCK-2 SPEAKER STAND

The OMNITRONIC LCK-2 is a classic speaker stand designed for mobile sound reinforcement applications. The stand was developed for use with speakers in the mobile DJ and solo entertainer sectors and provides a stable base for compact sound reinforcement solutions. The 35-millimeter tube diameter corresponds to the common standard for speaker stands. This allows a wide variety of speakers to be mounted directly on the stand. With its sturdy construction and practical features, the OMNITRONIC LCK-2 is particularly suitable for mobile DJs, solo entertainers, and small sound reinforcement solutions.

To the product

Distance tube with automatic lock pin, 109-200 cm

incl. bag

OMNITRONIC BPS-4LCK DISTANCE TUBE

In addition to the stands, OMNITRONIC also offers a height-adjustable distance tube with air suspension and an automatic pin lock for mounting a speaker with a standard flange (Ø35 mm) on a subwoofer or in combination with a base plate featuring an M20 internal thread. The lifting height is 91 cm (from 109 cm to 200 cm).

To the product

EUROLITE LED EVO-120 QCL Multi-Effect Projector

Innovative projection effect with magnetically interchangeable effect wheels

MUCH MORE THAN A PROJECTOR

With the EUROLITE LED EVO-120, EUROLITE expands its portfolio with a compact multi-effect projector that combines several lighting effects in a single fixture. The unit is aimed at users who want to create varied lighting looks without extensive programming, while accommodating both mobile applications and permanent installations.

COMBINED EFFECTS FOR VERSATILE PROJECTIONS

The EVO-120 combines gobo, animation and texture effects in a single fixture. The scope of delivery includes two textured glass wheels, one animation wheel and one gobo wheel, two of which can be freely combined inside the projector. Depending on the selected combination, different effects can be created, such as water reflections or crystal-like patterns.

The gobo projection can be used either as a clear projection or enhanced with additional moving effects. These different effect types can also be combined with one another, creating layered projections that range from sharply defined structures to soft, flowing movements. This results in dynamic light surfaces that can structure a space or set targeted visual accents.

The colored light from the RGBW LED can be further broken up through different combinations of texture and animation wheels, producing additional psychedelic color effects.

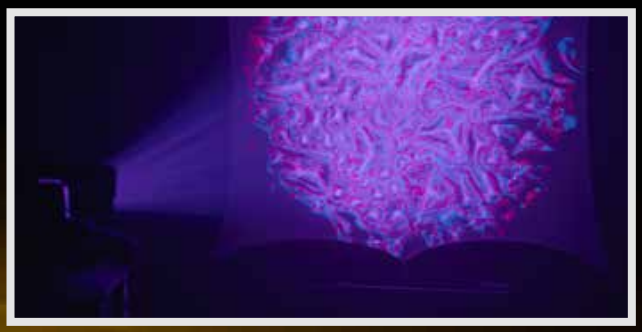
MOVEMENT, DYNAMICS AND CREATIVE DEPTH

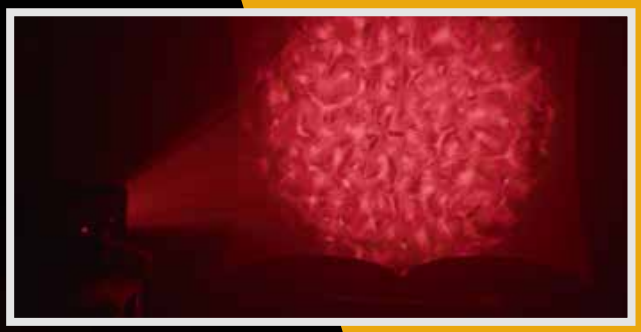
Thanks to the internal movement of its effect components, the projections change continuously, creating dynamic lighting visuals. In addition to classic applications in the event and party sector, this also makes the EVO-120 suitable for scenic tasks, such as designing stage backdrops. Moving textures, subtle animations or structured surfaces can be used deliberately to enhance stage designs and deepen the atmosphere – without distracting from the main action on stage.

STAND-ALONE OPERATION AND DMX INTEGRATION

Several automatic programs allow the fixture to operate without external control and provide ready-to-use effect sequences. For more complex setups, the EUROLITE LED EVO-120 can be integrated into existing lighting systems via DMX and precisely incorporated into show designs.

Operation is handled through a clear and intuitive menu directly on the fixture, making it easy to adjust settings quickly during operation.





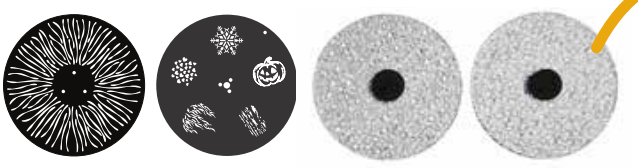
COMPACT DESIGN FOR FLEXIBLE APPLICATIONS

Thanks to its compact design and minimal space requirements, the EVO-120 is suitable for mobile DJs, smaller stages, bars and clubs, as well as for temporary or permanent installations. It offers a practical solution wherever versatile lighting effects are needed without requiring extensive technical setups.

CONCLUSION

The EUROLITE LED EVO-120 stands out as a versatile multi-effect projector that covers a wide range of applications thanks to its combination of gobo, animation and texture effects. In addition to classic event use, it also opens up creative possibilities in scenic environments and is well suited wherever dynamic yet flexible lighting visuals are required.

WITH MAGNETICALLY INTERCHANGEABLE EFFECT WHEELS



SMALL EFFECT BIG IMPACT

REPORT BY ANDREAS ZÖLLNER ON THE USE OF THE EUROLITE EVO-120

Andreas Zöllner

Can the EUROLITE EVO-120 also meet the demands of professional stages? At the “Best of Musical” concert in Giengen, Germany, it had the chance to prove exactly that. On stage were top musical performers such as Ethan Freeman, Ann Sophie, Anja Wendzel, Lucy Scherer and Stefan Tolnai, performing songs from a variety of musicals. The stage backdrop was designed to visually transport the audience into the world of each respective musical.

To achieve this, the 10-meter-wide and 4-meter-high back wall featured six FUTURELIGHT DMH-380 and four FUTURELIGHT EYE-1940 fixtures. The two truss towers on the right and left at the front edge of the stage not only carried the front lighting but also four EUROLITE EVO-120 units in total.

Originally, the EVO-120 fixtures were only intended to be used as crystal effects for three songs. Equipped with textured glass and an animation wheel, they created a beautiful crystalline structure across the entire stage area. However,

To the product

FUTURELIGHT EYE-1940 QCL Zoom LED Moving Head Wash

PRO wash light with 19 Osram Ostar 40 W RGBW LEDs, wide zoom range and pixel control

To the product

FUTURELIGHT DMH-380 Hybrid CMY Moving Head Spot/Beam

PRO spot/beam/wash moving head with 380 W COB LED, wide zoom range, frost filter, CMY color mixing and animation wheel

the production team quickly realized that these small effects had far greater potential. As a result, the EVO-120 ended up being used in almost every scene.

Their brightness, color capabilities and both static and moving projections provided a perfect visual foundation for the individual songs. These were then complemented by the DMH-380 fixtures with their gobos, used as projecting side lights. In terms of brightness, it was almost surprising how well the compact effects held their own. The EVO-120 were even able to fully take over the EYE-1940's original task of creating wide color washes, freeing the EYE-1940 to deliver additional effects such as side lighting, backlighting or illuminating the ceiling.

Because the EVO-120 produced virtually no noise in Silent Mode, even very quiet passages posed no problem.

The audience was not only captivated by the performances on stage but also fascinated by the lighting. Each time the lighting mood changed, an audible murmur of excitement could be heard throughout the audience. The city of Giengen, as the event organizer, was equally impressed, emphasizing that they had never seen anything like it before. The local press commented on the lighting designs – strongly shaped by the EVO-120 – with the following words: "Special lighting moods created almost impressionistic backdrops."

To the product

EUROLITE LED EVO-120 QCL Multi-Effect Projector

Innovative projection effect with magnetically interchangeable effect wheels

To the product

EUROLITE LED TCL-450 Color Changer COB

LED Color Changer with 90 W COB LED, Gobo Wheel and Color Wheel

SPECIALIST FOR MIRROR BALLS

What is the ideal way to illuminate a mirror ball? The key is a narrow, clearly defined beam of light with a sharp edge that creates maximum contrast with the surroundings. Only then can the mirror ball reflect as many sharply defined spots and beams of light into the room as possible. Classic LED color mixing systems are not suitable for this purpose, as their colors are generated by multiple light sources positioned next to each other. On the mirror ball, these colors separate again, resulting in uneven and inconsistent color effects.

EUROLITE addresses this issue with the LED TCL-450. The concept follows the idea of a moving head or scanner – without movement. A powerful white LED generates the light, while the desired color is produced using a color wheel. This keeps the beam homogeneous and clean, even after reflection.

The LED TCL-450 operates with a bright 90 W COB LED in cold white and features a beam angle of eleven degrees. For even more precise applications, so-called reduction gobos can be used to further narrow the beam angle.

For color design, a color wheel with eleven dichroic colors is available. The colors are clearly separated and ensure rich, clean color points on the mirror ball. Split colors can also be selected.

THE AIR SERIES IS GROWING: LASER DERBY WITH AIR CONTROL

EUROLITE LED Laser Derby MK3 AIR

DMX lighting effect with RG laser (2M), rotating LED derby, twinkle effect, AIR wireless unit (2.4 GHz) and wireless remote control

EUROLITE LED Laser Derby MK3 AIR

When the LED Laser Derby by EUROLITE was first introduced in 2018, it caused quite a bit of astonishment. From an extremely compact housing, it produced a level of light output that few would have expected from such a small fixture. This strength has also been retained in the third generation. The LED Laser Derby MK3 AIR continues to send surprisingly bright, moving beams of light in red, green, blue and white through the room and complements them with an integrated RG laser. This projects a large number of red and green laser beams, significantly expanding the visual effect. The laser operates in Class 2M, meaning that no laser safety certification or special safety precautions are required.

One of the most important updates in the MK3 version concerns the additional LEDs. While earlier models were equipped with bright white strobe LEDs, the new version now uses RGB LEDs. These allow colored sequences, smooth transitions and atmospheric accents.

The addition “AIR” in the name indicates that the derby belongs to EUROLITE’s AIR series. Fixtures in this series can be easily controlled via a wireless remote control, which can also be used to establish master/slave connections wirelessly. Since this is a true radio based remote control rather than an infrared system, the range is significantly greater and there is no need to aim the remote directly at the fixture.

IDEAL FOR SMALL STAGES AND MOBILE SETUPS.

DIRECT CONTROL FOR SMALL SETUPS

Not every lighting application requires a complex lighting console with extensive programming. For many small setups, direct and intuitive control via faders is the more practical solution. The FD-36+1 by EUROLITE is designed as a compact desktop panel and allows control of up to 36 DMX channels. The user interface is intentionally kept clear and straightforward: Twelve faders are available and can be used across three channel groups. An additional master fader controls the overall intensity and enables quick adjustments during live operation.

The dimmer panel is designed for straightforward operation. It is particularly suitable for applications that require static lighting looks or simple brightness fades. Typical areas of use include small stages, bars, clubs, school events or mobile DJ setups. DMX output is provided via a 3-pin XLR connector. Two power supply options are available: The unit can be operated either via USB-C or alternatively with a 9-volt battery. This flexibility simplifies temporary installations and mobile applications.

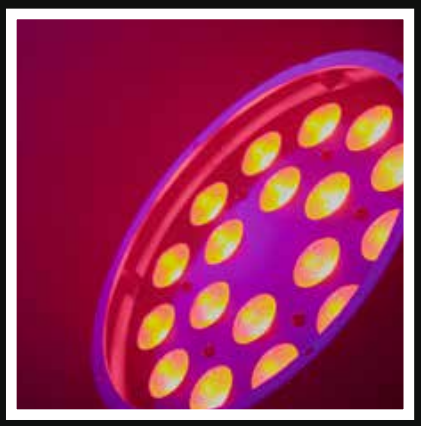
To the product

EUROLITE FD-36+1 DMX Dimmer Panel

Simple DMX Controller for 36 Channels with Master Fader

COMPACT ZOOM WASH WITH HIGH LIGHT OUTPUT

- Motorized zoom from 12° to 72°
- Ultra-compact design
- Exceptionally low noise operation



To the product

EUROLITE LED Z-PAR 18x8W QCL Zoom

Bright LED spotlight with motorized zoom and RGBW color mixing

With the **LED Z-PAR 18x8W QCL Zoom**, EUROLITE expands its portfolio with a particularly powerful zoom fixture in a compact form factor. The Z-PAR is equipped with 18 high-performance 8 W LEDs based on RGBW technology. Its homogeneous color mixing enables both rich, saturated colors and clean white tones. Despite its compact dimensions, the fixture delivers impressive light output and positions itself as the most powerful “entry-level” zoom fixture currently available in the EUROLITE lineup.

The motorized zoom range from 12° to 72° ensures a high degree of flexibility. Even with this wide zoom range, the housing remains extremely compact: With a depth of less than 16 centimeters and a weight of approximately 3.6 kilograms, the fixture is easy to transport. A double bracket allows for floor-standing operation, for example as an uplight, while also providing flexible mounting options for truss or stand installation.

Special attention has been paid to low-noise operation. Temperature-controlled fan cooling supports reliable performance even during extended use. Control options include stand-alone mode, sound activation via an integrated microphone, master/slave operation or DMX control. Integrated show programs and direct color selection for preset colors enable quick and easy setup. For power connectivity, P-Con input and output connectors are available. Considering this overall package, there is really only one surprise: the attractive price.

APPLAUSE FOR THE

Würzburg, Germany is once again shining on the national cultural stage: With the club “Kurt & Komisch,” one of Germany’s most prestigious cultural awards is heading to the cathedral city. The recognition in the category **“Best Live Music Programs”** is not only a prestigious pat on the back, but also a major boost for the local scene, accompanied by 40,000 euros in prize money.

The **APPLAUS Award** (Award for Programming of Independent Venues) is far more than a simple popularity prize. It recognizes the curatorial work of the previous year and applies rigorously defined criteria in doing so:

- **Artistic Quality: A program beyond the mainstream.**
- **Diversity and Gender: A balanced lineup and gender equity.**
- **Fairness: Appropriate working conditions and fees for the artists.**
- **Sustainability: A well-conceived overall concept.**

The award is the logical result of consistently ambitious work carried out in partnership with the artists. At a time when many clubs are struggling with rising costs, the 40,000 euros in prize money send an important signal in support of preserving venue diversity. Würzburg offers compelling proof that quality and fair conditions ultimately pay off.

To the product

EUROLITE LED IP Mega PIX Strobe 714 SWING

Outdoor spotlight (IP65) with tilt motor for strobe, blinder and matrix effects

WACHAU CHURCH RUINS // MARKKLEEBERG, GERMANY

The Wachau Church Ruins in Markkleeberg near Leipzig became a vibrant backdrop in September 2025 for the concert by “Regio Brass & Madrigio,” marking the festive finale of the Cultural Summer. The atmospheric lighting of the ruins was designed and implemented by TSP Veranstaltungstechnik under the direction of Volker Götz. Among the fixtures used were EUROLITE LED IP Mega PIX Strobe 714 SWING units as well as EUROLITE AKKU Multiflood IP 8x10W RGBW Wash CRMX fixtures for the colored base lighting.

Fotos: Volker Götz

GIRLHOOD PARTY

WHEN CLUB HITS, EMOTIONS AND SAFESPACE COME TOGETHER

“Girlhood” Parties for Respectful Celebration

DJ Blossom Good from Mannheim has been hosting her own party series called “Girlhood” since May 2025.

The event took place in various clubs across the country and quickly became an insider tip, not only among women. Guests can expect a cross-genre mix of high-energy urban club hits combined with emotional ballads that reach deep into the soul. “Girlhood” is open to everyone who treats others with respect, with a focus on women. The event series website states clearly: “At Girlhood, we do not tolerate any bullshit.” Pushy behavior, harassment, racist, transphobic, homophobic or misogynistic comments result in immediate removal from the event without a refund of the admission fee.

In this interview with DJ and organizer Blossom Good, learn more about the concept behind “crying, screaming, dancing.”

For those who may not know you yet: Could you briefly introduce yourself to our readers?
I am Blossom Good, a full-time DJ and event organizer. Every weekend, I am on the road creating great experiences for people through music.

When and how did you come up with the idea to launch the "Girlhood" party series?
I started working on the concept at the end of 2024 because I was increasingly frustrated that club performances no longer felt good for either side. At many of my gigs, the audience was not really interested in my sound and I equally did not enjoy playing the same worn-out 2000s pop tracks just because they were the only songs everyone in the crowd could agree on. I knew that I either had to find a new way to shape club nights so they would be fun for me again as a DJ or I would have to change career paths.

What does your party stand for, and how does it differ from other events?
For big beats and big emotions. For trust and friendship. For being seen and feeling understood. For moments that happen on the dance floor and are carried home with you – memories you look back on with joy long afterward. And by the way, for all genders, not just girls. The most distinctive difference is probably that we do not use ballads as the final "closing songs," but instead place them intentionally at specific moments during the night so that the entire room sings along at the top of their lungs. The rest of the music selection is also a key factor in what makes the event unique. We play many tracks by female artists, without becoming stereotypical or limiting ourselves to specific genres. The sound remains urban and thoughtfully curated, performed exclusively by female DJs.

What criteria do you use when selecting locations and DJs for "Girlhood"?
A layout that allows me to see all the guests and create the same sense of closeness for everyone. A certain aesthetic in the venue itself and in its external communication. A (major) city location with good public transportation access. And above all – and this is much more important – venues that demonstrate responsibility and a clear stance. That means they also book high-quality, diverse lineups outside of Girlhood and we are not arriving just to fill a gap that will remain afterward. As a rule, I send out more rejections to clubs than I accept booking requests for the party series.

What would you like to achieve with "Girlhood" in the future?
At Girlhood, there is a lot of singing along throughout the entire night. It would be even more special if we did not limit that to the DJ sets, but at some point also would have artists perform their songs live on stage.

Is there anything you would like to share with our readers before we wrap up – something that matters to you?
Nothing is more outdated than flyers and DJ lineups featuring five guys in caps. It is time to start booking more diversely.

Blossom Good, thank you very much for your time and for the insightful interview.

LASER SHOWS INSTEAD OF FIREWORKS

WHY LIGHT IS THE FUTURE OF SPECTACULAR PRODUCTIONS

Fireworks have been among the most impressive forms of staged spectacles for centuries. Whether at city festivals, major sporting events or New Year's celebrations, exploding colors in the sky symbolize highlights, new beginnings and a sense of community. At the same time, however, criticism of this tradition continues to grow. Environmental impact, safety risks, rising costs and increased social awareness are prompting event organizers, municipalities and companies to look for alternatives. One solution is increasingly moving into focus: the laser show.

Laser shows are no longer just a technical niche product. They have evolved into an independent production medium that combines emotion, precision and sustainability – while opening up entirely new creative possibilities.

Emissions and Environmental Impact:
A Fundamental Difference

Perhaps the most significant advantage of laser shows lies in their environmental footprint. Traditional fireworks release fine particulate matter, carbon dioxide, heavy metals and chemical residues with every ignition. In densely populated areas in particular, this can lead to measurable impacts on air quality. In addition, fireworks generate substantial noise emissions that affect not only people but also animals. Pets, wildlife and livestock often react with panic to explosions, which can result in stress, injuries or long-term behavioral changes.

Laser shows operate on an entirely different principle. They create visual effects exclusively through concentrated light. There is no combustion smoke, no debris and noise levels are minimal. The electrical energy required is relatively low compared to the overall visual impact and, depending on the event, could even be sourced entirely from renewable energy. This makes laser shows especially suitable for environmentally conscious events, for city centers with strict regulations or for locations where fireworks are no longer approved for ecological or safety reasons.

Costs and Economic Efficiency:
Investment Rather Than Consumption

At first glance, laser shows often appear more expensive than traditional fireworks. High-performance laser systems, control computers, safety concepts and qualified technical personnel are essential. However, this comparison falls short. Pyrotechnics are purely consumable products: Each effect is ignited once and then permanently used up. The costs recur with every event.

Laser systems, by contrast, are long-term capital investments. They can be deployed for many years, maintained and technologically upgraded. A show concept developed once can be adapted, reprogrammed and reused for different occasions. For regularly recurring events, tours or municipal event series, this creates a clear economic advantage for technical service providers.

In addition, many secondary costs associated with fireworks are often underestimated large-scale safety perimeters, fire protection measures, debris cleanup, disposal and extensive permitting procedures. Laser shows are more predictable, more flexible and can often be adapted at short notice to changing conditions.

Immersion and Creative Design: From Spectacle to Storytelling

While fireworks primarily captivate through their sheer force and unpredictability, laser shows stand out for their precision and creative flexibility. Light beams can be directed and modulated with exact accuracy and synchronized with other media. Music, spoken word, architecture and movement can merge into a cohesive production.

This ability to create immersion – to draw the audience into the experience – is one of the greatest strengths of modern laser shows. Buildings can become projection surfaces, spaces can be visually reshaped and three-dimensional effects create the impression of tangible structures within the air. Unlike traditional fireworks, which mainly unfold high above the audience, laser shows deliberately bring the production closer to the spectators.

For brands, cultural institutions and cities in particular, this offers tremendous advantages. Content can be communicated in a narrative way: Stories, values, and identities. A laser show can build dramatic tension around an anniversary, emotionally amplify a corporate message or visually interpret historical events. The result is not only impressive, but also memorable in a lasting way.

Safety and Permitting: Control Instead of Risk

Fireworks are always associated with a certain level of risk. Flying sparks, misfires or uncontrolled fires can never be completely ruled out. As a result, legal regulations are strict and in many regions permits are being issued with increasing restrictions.

Laser shows are also subject to clearly defined safety standards, particularly with regard to eye safety and air traffic regulations. The key difference, however, lies in controllability. Modern laser systems feature redundant safety mechanisms, emergency shut-off systems and precisely defined projection zones. This makes it possible to technically safeguard risks and assess them transparently. For event organizers, this means greater planning reliability and fewer unpredictable variables.

Combination: New Approaches Instead of Either-Or

Despite all their advantages, using laser shows does not necessarily mean a complete departure from fireworks. In many cases, the greatest added value comes from intelligent combinations. Lasers can provide the dramatic framework, build themes and establish visual motifs, while selectively deployed pyrotechnic effects amplify specific highlights.

In addition, laser shows can be seamlessly combined with other technologies: Drone shows, projections, water effects or interactive elements open up entirely new forms of production. The result is hybrid shows that are emotional and spectacular, yet significantly more resource-efficient than traditional fireworks displays.

Conclusion: A Shift in Perspective with a Future

Laser shows are more than a replacement for fireworks – they represent a fundamental shift in how we stage major moments. They combine technological precision with emotional depth, reduce emissions, enhance safety and offer long-term economic advantages.

At a time when sustainability, responsibility and creative differentiation are becoming increasingly important, laser shows provide compelling answers to the demands of modern events. They demonstrate that spectacular experiences do not have to come at the expense of the environment and society – on the contrary, they have the potential to set entirely new standards.

12 POINTS GO TO...

A LOOK AT 70 YEARS OF EUROVISION SONG CONTEST

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Glittering outfits, spectacular stage shows, more flags than at a soccer World Cup and a phrase that has made history: “Twelve points, douze points, go to ...”

Anyone who still does not know what this is about must have either lived in a cave for the past 70 years or consistently refused to watch public broadcasting. Everyone else has long since figured it out: We are talking about the Grand Prix Eurovision de la Chanson – or, as the song contest has officially been called since 2001, the Eurovision Song Contest. This year, the annual event celebrates its 70th anniversary. To mark the occasion, we take a look back at its eventful history – full of glamour, disco, big emotions and technical records.

THE INVENTION OF THE EUROVISION SONG CONTEST

The first edition of the European singing competition took place in Lugano, Switzerland, in 1956. The European Broadcasting Union (EBU), an association of public and private broadcasters in Europe founded in 1950, organized the first gala on May 24, 1956, under the title Gran Premio Eurovisione Della Canzone Europea. The aim was to promote understanding between nations after World War II through music.

Artists from Belgium, West Germany, France, Italy, Luxembourg, the Netherlands and Switzerland took part, performing their songs accompanied live by an orchestra. At the time, the competition was broadcast with considerable technical effort to the participating countries and also to Denmark, Austria and the United Kingdom. A jury consisting of two jurors from each participating country voted on site to determine the winner of the competition and awarded the first "Grand Prix" to Swiss singer Lys Assia for her song "Refrain."

In line with the technical possibilities of the 1950s, the early editions of the competition did not yet feature spectacular stage designs or elaborate shows – quite the opposite. The focus was clearly on the musical performance itself. Points were awarded for composition and interpretation. However, it cannot be denied that appearance already played a role: Neat dresses, evening attire for everyone involved and impeccable hairstyles – together with floral decorations on stage – conveyed the gala atmosphere of the event to viewers watching on their television sets.

Following the success of the premiere, the Grand Prix Eurovision de la Chanson became a firmly established fixture in the calendars of European broadcasters. From then on, the competition was held once a year, usually in the spring, with more and more countries joining over time. Gradually, the event evolved from a modest black-and-white broadcast into a spectacular show.

THE 1950S

In the early years of the Grand Prix, stage design was limited to floral decorations and canvas backdrops that were changed to match the country currently performing. Lighting and stage technology consisted mainly of the lamps required for television broadcasting, which were used to illuminate the scene.

Inger Jacobsen 1962 at the Eurovision Song Contest in Luxemburg

THE 1960S

Just a few years after the introduction of the European singing competition, the broadcast began to develop into a true television show. Audiences had gradually become accustomed to the medium, technology continued to improve and productions were able to introduce more movement. Early projection effects – still static – were used as elements of stage design. However, the focus remained clearly on singing and artistic performance. In 1968, color television was introduced, paving the way for more unusual and colorful performances. Fashionable costumes with bright miniskirts and fringed dresses – very much in keeping with the spirit of the time – drew the audience's attention for the first time more strongly to the visual aspects of the show. Stage design was expanded with futuristic-looking metal structures, fabrics and images, but lighting design was still primarily limited to illuminating the stage for the broadcast. All performers appeared in the same setting; the stage design itself did not change.

THE 1970S

The 1970s brought movement to the stage. Thanks to ongoing advances in television, lighting and stage technology, more elaborate set designs could be created and illuminated with moving lighting effects. Glittering costumes – such as those worn by ABBA – and glossy hairstyles added to the growing glamour factor. Even more dynamism came from entire stage elements that could move. In 1978, for example, the live orchestra was

positioned on a lotus-like rotating stage. The use of hand-held microphones – still wired but no longer mounted on stands – also gave performers greater freedom of movement. However, stage changes between individual acts were not yet part of the production.

Sverre Kjelsberg and Mattis Hætta for Norway, 1980
© https://foto.digitalarkivet.no/fotoweb/archives/5001-Historiske-foto/Indekserte%20bilder/11096945055.jpg.info

THE 1980S

Glitter, glamour and big emotions: The 1980s brought elaborate and large-scale stage designs to the Grand Prix, often featuring multiple performance levels. A now indispensable element of every Eurovision Song Contest also emerged during this decade: Quick changes – lightning-fast costume changes on stage – became an established stylistic device of the show. Stage sets grew to unprecedented dimensions. In 1986, host country Norway designed the stage as an icy landscape with towering "crystals." Wireless technology made it possible for performers to move freely across the stage with their microphones. Lighting design also evolved significantly, with different colors as well as light and shadow effects used creatively to adapt the stage atmosphere to the various acts.

THE 1990S

It is almost impossible to summarize the development of the ESC during this decade in just one paragraph. In the 1990s, lighting and stage technology truly began to accelerate. At the beginning of the decade, static lighting combined with color, projection and beam effects still played the main role in adapting the stage design for different artists. By 1999, however, the stage set consisted of a complex arrangement of spots, beams, 3D elements and light bars. Depending on the performer, these elements were not only illuminated in different colors but also arranged in different configurations, allowing the atmosphere to change in line with the character of each song. The highlight of the 1999 stage was an oversized installation of light bars in the background resembling a giant clock, with elements moving concentrically like the hands of a clock. From a musical perspective, 1999 also marked a turning point. Starting with that year's ESC, the live orchestra was no longer part of the show; instrumental music has been played as a backing track ever since.

Carola Häggkvist, representing Sweden in Athens, 2006
© https://commons.wikimedia.org/wiki/User:Per_Ingar_Nilsen

THE 2000S

Now things become truly spectacular. The new millennium brings LED walls and LED floors to the stages of the Eurovision Song Contest – now also officially referred to by that name in Germany. For the first time, video content is integrated in a way that creates the illusion of constantly changing stage environments for viewers watching at home on their TV screens. Lighting designers and production managers – led by Ola Melzig – experiment with glass floors with integrated lighting, moving stage elements and elaborate scenic structures while combining video content with projections. Under Melzig's leadership, the ESC develops into the largest and most elaborate live show in Europe, regularly setting new technical records. By the end of the decade, almost anything seems possible. Pyrotechnics are used on a large scale, and costumes take on extraordinary forms – artists appear on stage dressed as monsters (LORDI) or look as if they have just emerged from heaven or hell. At the 2009 ESC, one third of the world's total available LED screens were installed.

Inger KEiiNO for Norway at the Eurovision Song Contest 2019 in Tel Aviv
© https://www.eurovisionary.com/?attachment_id=166871

THE 2010S

Hundreds of beam moving heads, video walls covering more than 1,000 square meters and kinetic stage technology – the ESC shows of the 2010s can easily be summed up with one word: gigantism. Performances are no longer limited to traditional front stages. Live audiences sometimes experience the artists on bridges above the crowd or on stage islands in the center of the arena. LED floors and walls create a three-dimensional effect for both the audience in the venue and viewers watching at home. The production effort is equally impressive. In 2018, the setup took twenty days, while the entire dismantling process was completed in just 72 hours

THE 2020S

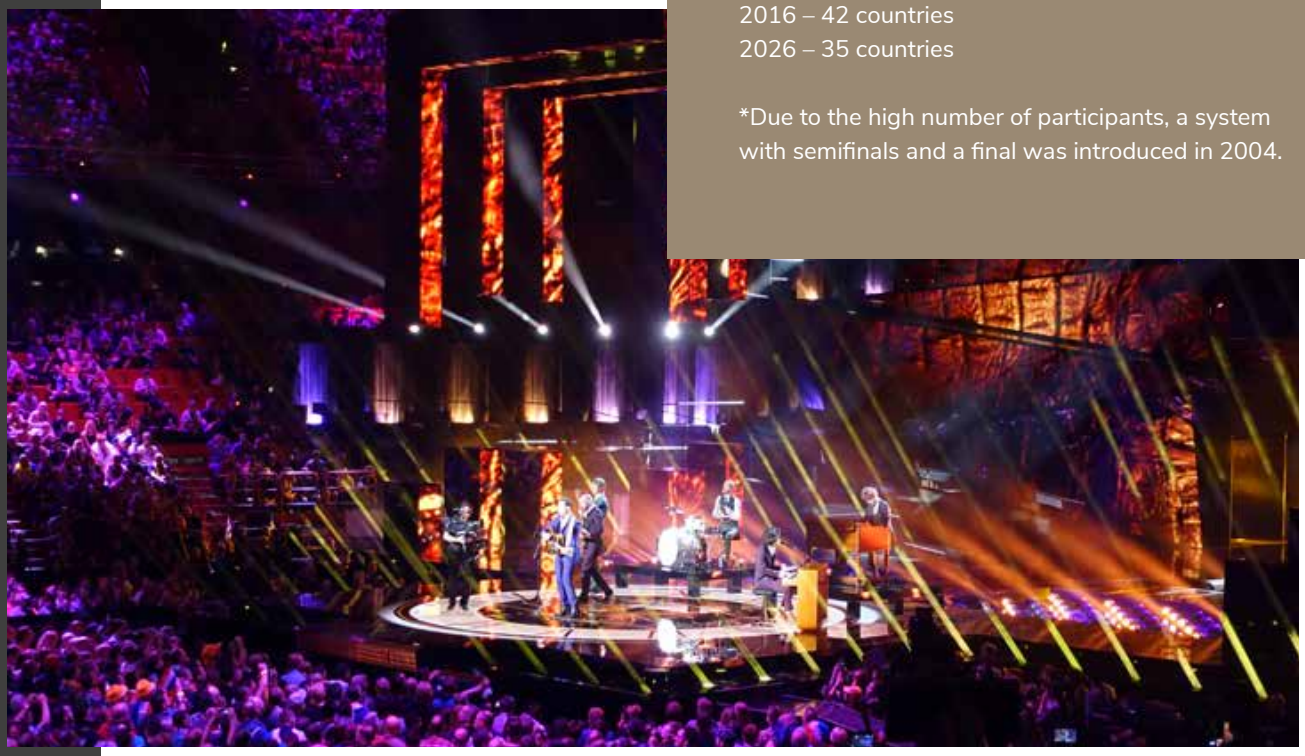
The year 2020 marks the only time in the history of the Eurovision Song Contest that the competition could not take place. Due to the COVID-19 pandemic, the event had to be canceled. Nevertheless, the following years have continued the trend of record-breaking productions. By now, the ESC has built such a large global fan base that the broadcast is watched not only in participating countries but far beyond them. In 2025, around 170 million viewers tuned in. Technical records also continue to be set. At the 2024 contest in Malmö, the largest lighting control system in the event's history was deployed, including 19 grandMA3 consoles, 21 processors and 96 nodes. Alongside massive video walls, kinetic elements, powerful beam fixtures, strobe effects and projections, so-called eye-candy elements now also contribute to the visual impact of the performances.

DEVELOPMENT

participating countries:

1956 – 7 countries
1966 – 18 countries
1976 – 18 countries
1986 – 20 countries
1996 – 23 countries
2006 – 37 countries*
2016 – 42 countries
2026 – 35 countries

*Due to the high number of participants, a system with semifinals and a final was introduced in 2004.



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Ola Melzig served as Production Manager responsible for the technical realization of the Eurovision Song Contest from 2000 to 2025. During this time, not only did technology seem to reinvent itself almost every year – Ola and his team also continuously pushed the ESC to evolve and raise the bar. We had the opportunity to ask Ola a few questions about his work.

INTERVIEW OLA MELZIG

Hello Ola, thank you very much for taking the time to answer our questions today. Could you briefly introduce yourself to our readers?

Thank you for having me! I am a production manager and technical director that had the enormous luck to get involved with my first Eurovision in 2000. That was the beginning of an adventure that has taken me around the world, producing all kinds of amazing shows besides the 19 Eurovision productions I've had that honor to be involved in.

Over the past 25 years, your work has helped shape the Eurovision Song Contest into the event we know today: A spectacular show for millions of viewers that continues to surprise and break records year after year. Let's go back to the beginning. How did you come to take over as Production Manager in 2000, and what was your initial idea or vision for the ESC?

I was the head of the production department at Spectra Event Technologies out of Sweden that got the contract for the lighting, video and rigging for Eurovision 2000. Since I was the one in the company that had the most solid experience of major live events, I took the lead of this project myself. Little did I know what I was walking into... [laughing]. The Eurovision was doing a transformation from being a studio production into an arena event this year, so it was the golden opportunity for everyone involved to think big and take it to the next level. We wanted to do something completely new and groundbreaking and with the wireless controlled risers with LED and an, for the time, absolutely massive rigg of moving lights, I think it is safe to say that we achieved our goals. This was also the inspiration moving forward. Push everything to the limits, break new grounds, introduce new technologies or use existing technologies in a brand new way.

An event of this scale requires a team made up of many different departments and disciplines. In recent years, how large was the team working behind the scenes, and which areas of expertise were typically involved?

Yes, it is ALL about the team! It does not matter how much cool gear you have. If you do not have a team that can handle it and cram out the outmost of that gear, it is all for nothing! The production team is usually around 700 people including all crew. It takes a whopping 230 people just to operate a Eurovision broadcast. So, it is a big machinery. Mind you, these numbers do NOT include the incredibly valued volunteers. That adds another 500-700 people to the mix. We could not do what we do without them.
The areas of expertise are too long to mention here. But let us highlight a couple of functions that are extremely important besides the obvious: The Executive Producers.
Show Producer, Contest Producer, Head of Production, Lighting Designer, Video Content Designer, Multi Camera Director, Head of Sound, Pyro Designer and Set Designer are all equally important for the success of the show. But there are many many many more.

Can you still keep track of how many (technical) records you have broken with the ESC over the years? Which edition of the Contest was the most challenging for you personally – and why?

Hahaha. No, not really actually. But I think it is around 20 world records or something like that. All the Eurovision productions I have done hold a special place in my heart for various reasons. There are so many amazing memories. But there are of course plenty of harsh ones as well. It is very hard and I think unfair to point out one production that was more challenging than the others, but I will take a swing at it and say Eurovision 2017 in Kyiv.
Mind you that the war with Russia had been going on for several years already with the occupation of Cremia in 2014. And even if the war at that time was far away from the streets of Kyiv, It was still an eerie feeling every time you thought about the fact that You were in a country that is in war with Russia! I mean, bloody hell!
Of course this affected the production in many ways, good and bad. But it was absolutely magical to see how tall and proud this country stood! And even though the political climate was rough at times, the warmth, the generosity, the creativity and excellence of the Ukrainians clearly compensated for that.

> "It does not matter how much great equipment you have. If you do not have a team that truly gets the maximum out of it, it is all in vain."

Twenty-five years is a long time. From your perspective, what remained constant throughout the ESC editions between 2000 and 2025, and what changed the most?

It has been a very long time! I think what remained constant during my 25 years was the curiosity and ambition to do something that had never been done before. That still drives me in all shows I do! I think what has changed the most is

how overpowering video has become. This is a technology that has developed hand in hand with Eurovision, and it has been an amazing journey to not only be a part of, but to actually lead.

Another thing that has changed is the ambition and professionalism from the artists and delegations. Their knowledge and understanding of this extremely complicated beast have increased a lot over the past 25 years and it has allowed the show to become even more spectacular and challenging because of it.

> "I am extremely proud of the large number of technologies that had their world premiere at the ESC and later became industry standards."

Over the course of a quarter century, you naturally develop many ideas and ambitions for what you want to achieve. Looking back, which idea turned out to be your best – and which one was the worst (and why)?

We had absolutely no idea what it would mean to our industry when we introduced media severs to the world on Eurovision 2002 in Tallinn. That stunt has affected absolutely everything in event technology. Everything!
The same thing when we decided to lay down a LED screen in a custom built steel construction, cover it with glass and call it a stage floor in 2003! Mind you, we actually did LED floor like this for 10 years before there was actually a commercial product developed and released!
The worst idea … There have been many ideas of using water over the years. Water is completely useless set element since its just experienced as a black shine surface unless you add bubbles, lights, fog or whatever to make it do something. There was also an idea about fountains and a waterfall one year. That was a big No, No, because of the noise they produce. I was able to cancel all bad ideas successfully already in pre-production, so there have never been any major issues under my watch on the shows that I have been involved in.
But I am extremely proud of the sheer amount of new technologies that had their world premiere on Eurovision and became production standards after their launch.

You must have listened to an enormous number of songs and watched countless performances. Setting aside the technical aspects for a moment and purely from a personal perspective: Which act from the past 25 years was your favorite Eurovision Song Contest entry?

Oh my gosh… the amount of songs that is in my head… [laughing].
I know it might not be politically correct in times like this. But the 3 minutes I am most proud of, of all the hours of Eurovision I have done, is the Russian entry from 2016. That is SO ahead of its time and just brilliant in its idea and execution. We always have the ambition to have our audience go: HOW THE HELL DID THEY DO THAT? That one hits all the right marks for sure.
Other favorites are Greece 2005, Ukraine 2007, Turkey 2010, Portugal 2017, Israel 2018 and of course Croatia 2024. I mean, how can you NOT love Baby Lasagna!
Funny enough, you actually learn to love all songs when working with shows like this. So to be clear, not only Eurovision! I do not-know what it is. Maybe it is your mind that acts that way to prevent you from killing yourself or something! …[laughing].

Ola, thank you so much for giving us these insights into your work! We wish you all the best for whatever crazy project comes up next for you.

The Stage Design of the Eurovision Song Contest 2017
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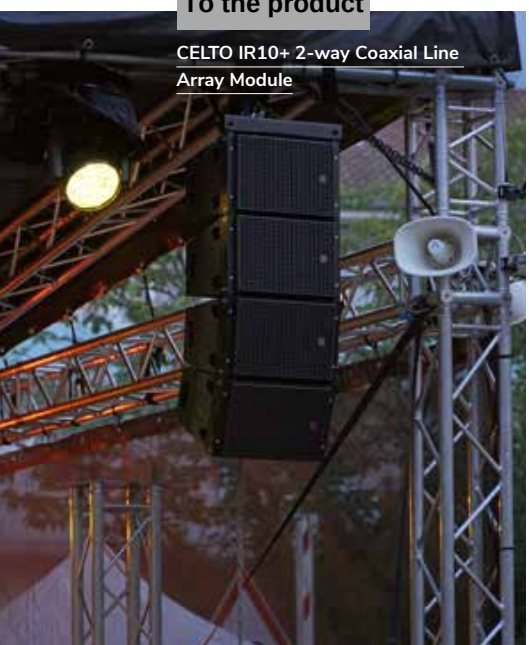
RAKOCZY FESTIVAL // BAD KISSINGEN, GERMANY

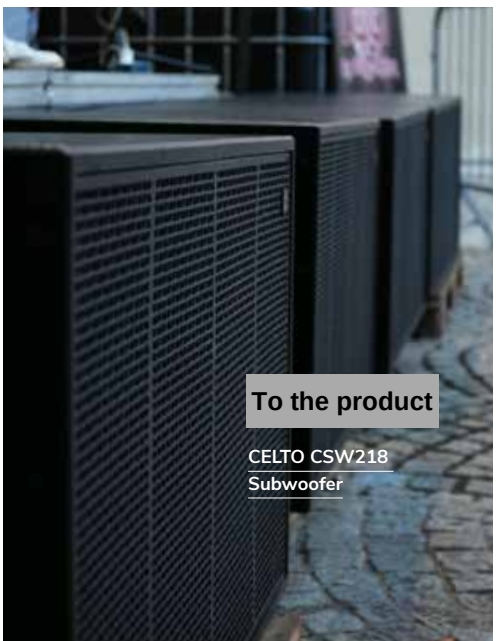
From July 25 to July 27, 2025, the annual “Rakoczy Festival” took place in Bad Kissingen, Bavaria. Approximately 72,000 visitors enjoyed a diverse musical program presented on multiple stages throughout the city. In the courtyard of City Hall, the bands Dance The Funky Chicken, KOJAK and FeieraBänd performed for their audience. The team from CSB-Media was responsible for the lighting and sound production and technical execution of the three-day event.

To ensure high-quality sound, the main PA system included eight IR10+ two-way coaxial line array modules and four CSW218 subwoofers from CELTO. Two CMP10 two-way coaxial loudspeakers were used as front fills, along with two CSW118 subwoofers and four CT12V two-way full-range loudspeakers for monitoring. A SQ12000 amplifier was deployed, complemented by two PSSO QCA-10000 MK2 four-channel amplifiers and one OMNITRONIC MTC-3204DSP four-channel amplifier.

To the product

CELTO IR10+ 2-way Coaxial Line Array Module



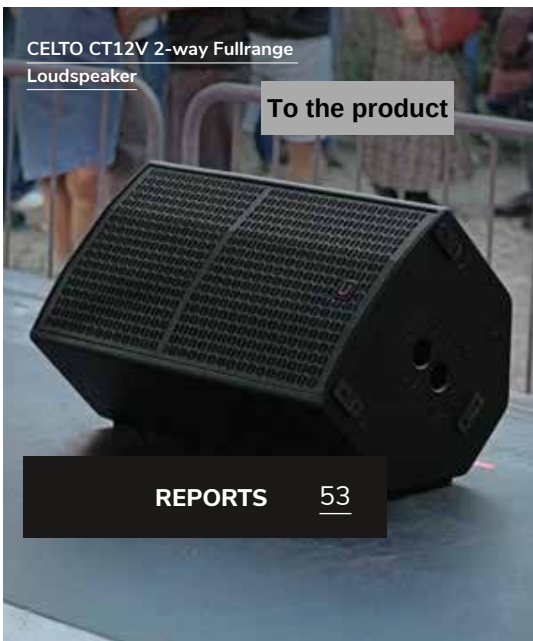


To the product

CELTO CSW218 Subwoofer

CELTO CT12V 2-way Fullrange Loudspeaker

To the product



Active Curvature System:

Compact Line Source Technology with Touring DNA

Line source systems traditionally stand for controlled dispersion, long throw and scalable concepts. With ACS, the Active Curvature System by CELTO, this principle is translated into a format that is significantly more compact than many classic solutions. The goal is to combine professional sound reinforcement technology with high mobility and flexible deployment.

At the center of the system is the ACS10, an ultra-compact line source module that delivers the performance of a classic 2×8-inch line source at roughly half the size and half the weight. The enclosure is approximately the size of an A3 sheet of paper, making it easy to transport while still designed for high output levels.

The ACS10 is offered as a pair consisting of one active and one passive version. The ACS10M serves as the active master unit with integrated Class-D amplification and DSP, while the ACS10P functions as a passive extension powered directly via the SpeakOn output of the master unit.

This concept reduces cabling requirements and enables compact array structures. Up to six modules per array are intended for flown operation or stacked configurations, with integrated rigging elements and a specified safety factor of ten supporting suspended installations.

From a design perspective, CELTO relies on a patented IsoTop™ coaxial waveguide that enables balanced horizontal and vertical coverage. The system uses neodymium drivers consisting of a 10-inch low-frequency driver and a coaxially arranged high-frequency system. Maximum sound pressure level is specified at 136 dB peak, with a frequency range from 95 hertz to 22 kilohertz. The integrated DSP structure handles tasks such as crossover management, equalization, phase alignment and protection functions.

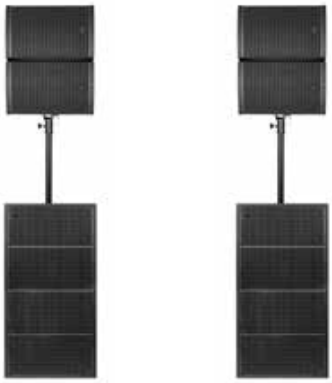
For low-frequency extension, the ACS218 is available. This active subwoofer operates with two 18-inch drivers and an integrated Class-D amplifier delivering 6000 watts peak output. The frequency range extends from 30 hertz to 95 hertz, with a maximum sound pressure level of 139 dB peak. The low-frequency drivers feature 4-inch voice coils and are housed in a heavily braced CNC birch plywood enclosure finished with a touring-grade polyurea coating. Combined with the ACS10, the result is a system designed for consistent, controlled bass reproduction and high durability.

The ACS system follows a modular design and supports different setup configurations. It can be pole-mounted on subwoofers, configured as a ground stack or installed as a flown array. Corresponding adapters and connection elements, such as the 35-millimeter mounting adapter or the crossbar, are part of the overall system concept. This allows the system to be configured for both portable sound reinforcement scenarios and permanent installations.

Overall, the ACS positions itself as a compact, active line source system with integrated signal processing and a scalable architecture. The system's advantage lies in its particularly favorable ratio of enclosure size to achievable sound pressure level. For users seeking touring technology in a transport-friendly format, the Active Curvature System offers an approach that brings classic line array principles into a significantly more compact form factor.

Approximate Dimensions of the ACS10

SYSTEM 1

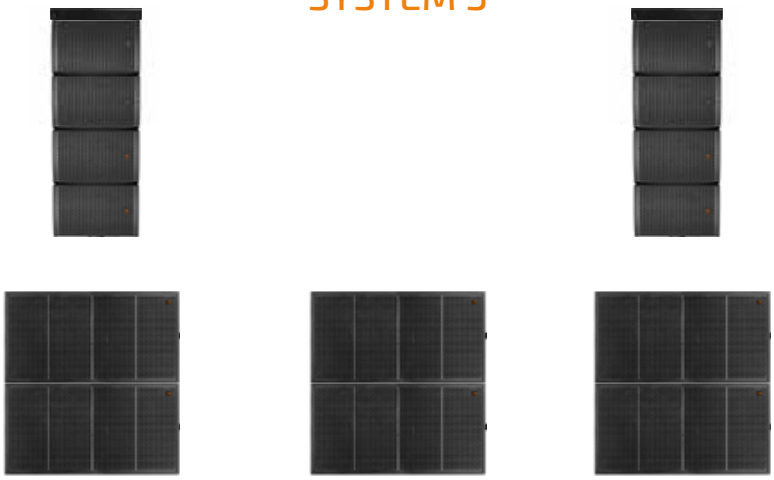


Pole-mounted
4 ACS10 + 2 ACS218 + 2 ACS-MA + 2 CB700

SYSTEM 2

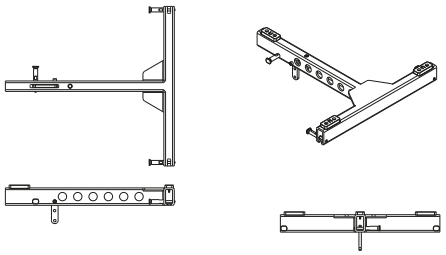
Ground-stacked
8 ACS10 + 6 ACS218 + 2 ACS10-CB

SYSTEM 3



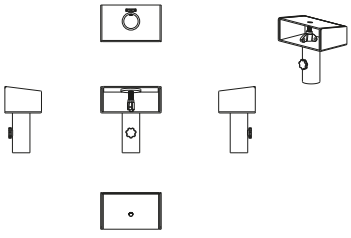
Flown
8 ACS10 on the air + 6 ACS218 + 2 ACS10-CB

CROSSBOW



ACS10-CB:
can be used on top of ACS10 (flown)
or below ACS10 (stacked on sub with safety screw)

MOUNTING ADAPTER



ACS10-MA:
35mm mounting adapter, support up to 4 ACS10

To the product

ACS10

Specifications

Frequency range:	95 – 22000 Hz
Max. SPL:	136 dB peak
Dispersion angle:	100° x (array dependent)
Flying points:	With integrate rigging system
Speaker:	Woofer 10“ with neodymium magnet
	Voice coil woofer in/out wound 3“
	Basket material: aluminum
	Conematerial: cardboard/paper
	Annular compression driver 1“ with neodymium magnet
	Voice coil compression tweeter highs 1.7“
	With phase plug
Type of speaker:	Coaxial speaker
Type of construction:	Vented
Material:	Birch multiplex
Color:	Black, rubberized Polyurea coating, painted
Integrated amplifier module	
Power supply:	100 – 240 V AC, 50/60 Hz
Power consumption:	Max. 1500 W
Output power:	Max. 3000 W LF, Max. 1600 W HF
	1500 W RMS LF, 800 W RMS HF
Power connection:	Mains input via P-Con (blue), mounting version
Power output:	PowerCON (gray), mounting version
DSP:	Digital signal processor
DSP presets:	MUSIC; FLAT; NEAR FIELD; MID FIELD; FAR FIELD
Cooling:	1 x low-noise cooling fan
Circuitry:	Class D
Control elements:	Power switch, DSP preset switch
Controls:	Overheat; short-circuit; DC voltage; limiter
Status LED:	Power, signal, limit, protect
Weight:	Set 29KG (ACS10M 16 kg / ACS10P 13 kg)
Dimensions:	Width: 45 cm, Depth: 42 cm, Height: 28 cm

To the product

ACS218

Specifications

Power:	Rated: 3000W
Frequency range:	30 – 95 Hz
Max. SPL:	139 dB
Dispersion angle:	Omnidirectional
Impedance:	4 ohms speaker
Attachment system:	2x M20 thread
Speaker:	2 x woofer 18“ with ferrit magnet
Type of speaker:	Subwoofer
Type of construction:	Vented
Transport aid:	Wheels optional
Material:	Birch multiplex
Color:	Black, rubberized Polyurea coating, painted
Integrated amplifier module	
Power supply:	100 – 240 V AC, 50/60 Hz
Power consumption:	1500 W
Output power:	Max. 6000 W, 3000 W RMS
Power connection:	Mains input via PowerCON (blue),
	power supply cord with safety plug included
Power output:	PowerCON (gray), mounting version
DSP:	Digital signal processor
DSP presets:	FLAT; KICK; DEEP
Cooling:	2 x temperature-controlled fan
Circuitry:	Class D
Control elements:	Power switch, DSP preset switch
Controls:	Overheat; short-circuit; DC voltage; limiter
Status LED:	Power, signal, limit, protect
Connections:	Input: mono via 3-pin XLR (F) mounting version
	USB A (F) mounting version
	Link: mono via 3-pin XLR (M) mounting version
Weight:	83.00 kg
Dimensions:	Width: 110 cm, Depth: 74 cm, Height: 58 cm

To the product

OMNITRONIC DRS-95 INTERNET RADIO WITH DAB+ AND BLUETOOTH

With the DRS-95, OMNITRONIC offers a versatile internet radio that is particularly suitable for permanent installations in commercial environments. Whether in a café, restaurant, fitness studio or reception area, the unit combines internet radio, DAB+, FM and Bluetooth in a compact format and can be flexibly integrated into existing audio systems.

dab+ REMOTE CONTROL BT LAN

Worldwide radio access via network

The device connects to the network via Wi-Fi or a LAN port. Stations can be conveniently searched by genre, name or location. In addition to DAB+, an FM tuner is also available. This allows the device to cover both traditional radio programs and digital international content. For operators of hospitality or fitness businesses, this means maximum program variety.

Everyday streaming via Bluetooth

The device also features Bluetooth with a range of up to 20 meters. Guests or staff can easily play their own content, for example from a smartphone.

The DRS-95 is operated via a central jog dial as well as the included IR remote control. A multicolor TFT display provides a clear overview of station information and menu navigation.

Designed for permanent installations

The robust steel chassis with an aluminum front panel underlines the device's professional character. In addition to use as a desktop unit, 19 inch rack mounting is also possible. With a height of one rack unit, the internet radio can easily be integrated into existing technical racks.

Digital and analog outputs allow connection to external amplifiers or powered speakers. This makes the DRS-95 suitable both for small sound systems and as a central source within larger installations.

WHAT IS BETTER SUITED

FOR SPRING THAN YELLOW?

As the days grow longer again and the sun finally gains strength, one color appears everywhere: yellow. It symbolizes light, energy and good cheer. Exactly what we need after winter. No wonder yellow plays such a big role not only in nature but also in our daily lives.

FROM FLOWERS TO THE STAGE: YELLOW ACCENTS CREATE A CHEERFUL ATMOSPHERE, ENSURE VISIBILITY, AND DELIVER THAT WOW FACTOR.

To the product

EUROPALMS Daffodil, artificial plant, 23 cm

Flowers

Yellow flowers are among the first signs of spring. They bring color to gardens, balconies and living rooms, instantly creating a springtime atmosphere wherever they appear.

To the product

EUROPALMS Crystal tulip, yellow, artificial flower, 61cm 12x

EUROPALMS Wisteria, artificial plant, yellow

Adhesive & Marking Tape

Gaffa Tape Pro 50mm x 50m yellow

Simple adhesive tape for event technology and other applications

To the product

Not only beautiful, but also practical: Yellow marking tape catches the eye immediately and is the perfect tool when you need to mark something clearly and quickly. Yellow tape also helps keep things organized in dark backstage areas.

To the product

Marking Tape PVC yellow/black

Ideal for marking separate zones

To the product

EUROLITE KB-3 Cablebrigde 3 Channels 900x500x70mm

Rugged cable crossover with antislip yellow cover, maximum load 9000 kg

Cable bridge

Yellow not only sets the mood but also ensures visibility. Cable trays protect cables and mark pathways, ensuring that equipment is safely installed and shows run smoothly.

EUROLITE DRO-2A Cable Channel

Rugged, yellow cable channel (2 x 3 cm), hard plastic

To the product

To the product

EUROLITE LED SLS-30 COB RGBAL Floor

Light

Bright yellow evokes the warmth of sun-light. When used effectively, it creates a warm, energetic atmosphere.

To the product

EUROLITE Neon Stick T5 20W 105 cm yellow

EUROLITE RUBBERLIGHT RL1-230V yellow

Flexible tube for decorative lighting

To the product

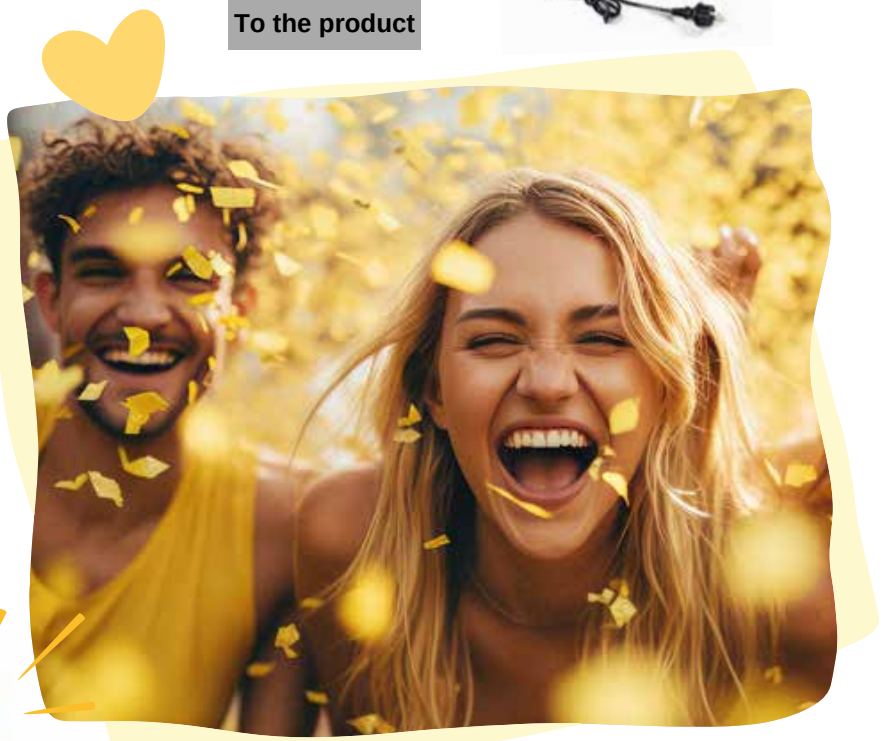
Party accessoires

Whether it is a May Day celebration or a summer wedding: A confetti shooter filled with yellow confetti turns every celebratory moment into a little burst of sunshine. Or how about a themed color party?

To the product

TCM FX Handheld Confetti Cannon 28cm, gold

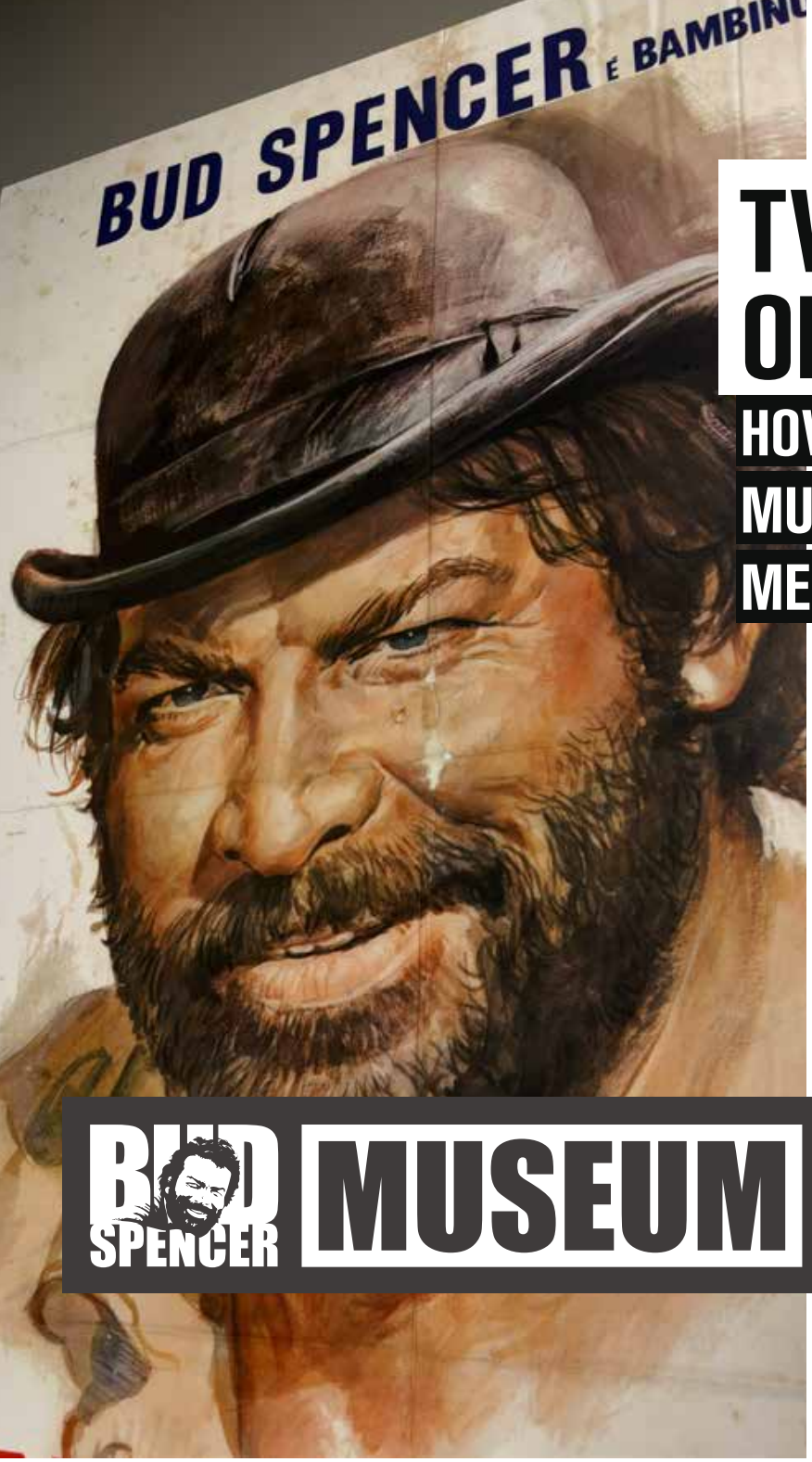
Hand-operated confetti cannon



EUROLITE LED Police Light DE-1 yellow

Classic decorative effect with LED lighting

To the product



TWO ICONS, ONE FEELING

HOW THE "BUD SPENCER MUSEUM" KEEPS MEMORIES ALIVE

Bud Spencer and Terence Hill are among the most successful screen duos in European film history. Their movies combine humor, action, and a clear sense of justice. To this day, they continue to captivate audiences across generations. Since June 27, 2021, a special exhibition in Berlin has been dedicated to the work of the Italian actor Carlo Pedersoli, better known as Bud Spencer. The exhibition was created in close cooperation with the Pedersoli family. It is based on a private family collection that was first presented in Naples in 2019. Even there, the exhibition quickly became a major attraction within just a few days.

In Berlin, it evolved into a museum that tells less of a traditional chronological story and instead focuses on conveying a particular feeling. Visitors are meant to experience the blend of humor, nostalgia and lightness that characterized the films of Bud Spencer and Terence Hill.

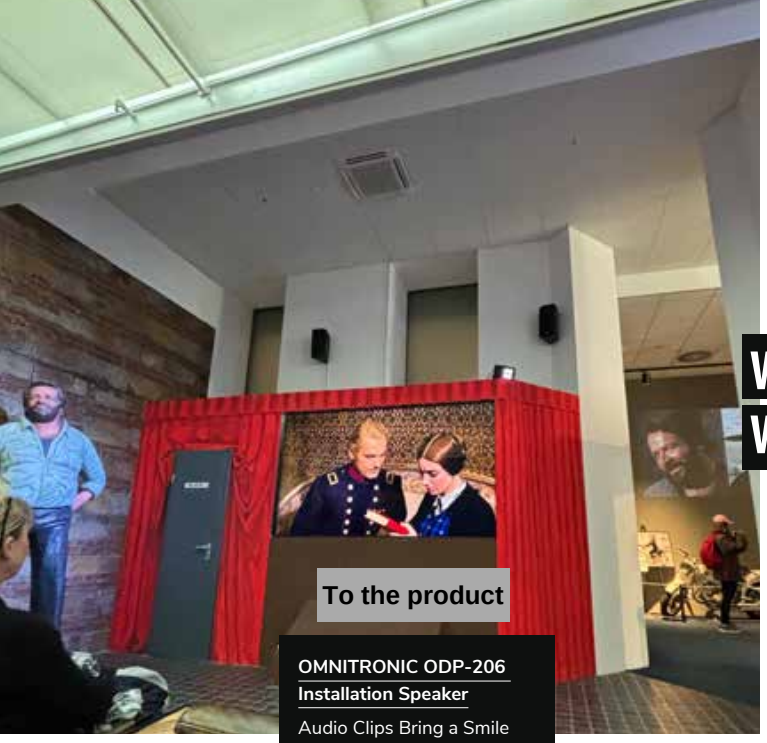
Managing director Michael Maaß explains in an interview how a spontaneous idea developed into a place where memories remain alive.

"THE MOMENT WHEN WE KNEW: WE WANT THIS TOO"

Mr. Maaß, what was the original idea behind the museum? What feeling did you want visitors to experience?

The idea actually came about during a visit to Italy. At the time, the Pedersoli family invited us to Naples, where a Bud Spencer museum had opened for three months. It impressed us greatly. In that moment, we knew we wanted to create something like this ourselves.

But the films themselves were not the only inspiration. What left a particularly strong impression was the fan community surrounding Bud Spencer and Terence Hill. This community is one of the friendliest I have ever encountered. You can see that at our festivals as well. In more than 25 years, there has not been a single fight. People come together simply to celebrate. The team wanted to make that same sense of community tangible in the museum.



To the product

OMNITRONIC ODP-206
Installation Speaker
Audio Clips Bring a Smile to Visitors' Faces.

Original Screenplays

If you take a moment there and observe the visitors, you quickly understand what we mean. Just sit down for an hour and watch people. Many walk past, look inside and begin to smile. Culture that brings a smile to people's faces has become rare today.

WHY THE DUO STILL WORKS TODAY

Bud Spencer and Terence Hill remain firmly anchored in collective memory. Why does this duo still have such a strong impact decades later?
Every era has phenomena like this. Think of Laurel and Hardy or Louis de Funès. With Bud Spencer and Terence Hill, many elements came together: The right moment, the right people and a type of humor that almost works like a comic strip. Slapstick, fast pacing and humor in which no one is seriously harmed. That combination struck exactly the right chord at the time. The contrast between the two characters also plays a central role.

OPPOSITES THAT FIT TOGETHER PERFECTLY

Bud Spencer and Terence Hill are rarely perceived separately. In your view, what makes their dynamic timeless?
Together they were simply unbeatable. One good natured and powerful, the other clever and slender. This interplay still works today. You can find the same principle again and again in modern action comedies. On top of that, there is a large and very loyal fan base that keeps the cult surrounding the duo alive.

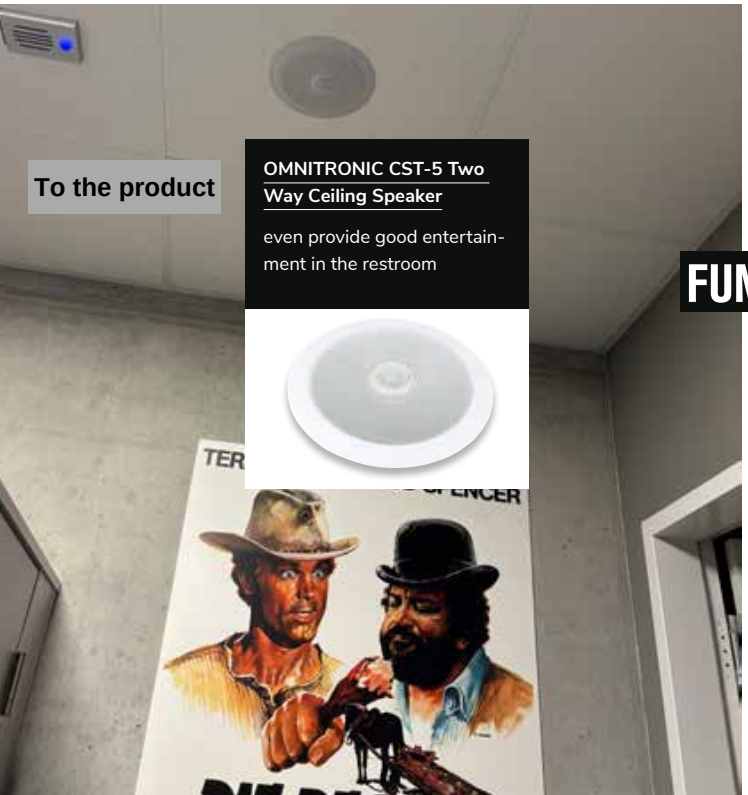
VALUES THAT GO BEYOND THE FILM

Which values or attitudes of the two actors play a special role in the concept of the museum?
That sense of justice and fairness that appears in many of their films. Also the idea that the weak should be helped. This attitude is reflected in the museum's everyday operations as well. Partners and offerings are chosen very consciously. At the same time, family friendliness plays an important role. The more children a family has, the less expensive the visit becomes. We know ourselves how costly outings with children can be.

A MUSEUM DESIGNED TO SURPRISE

The Famous Red Dune Buggy with the Yellow Hood from “Watch Out, We’re Mad!”

The Remote Control from “The Sheriff and the Satellite Kid”



The museum deliberately focuses on staging rather than a traditional chronological narrative. Why was this approach the right choice for you?
In our media gallery, there is certainly also a chronological side of his life. Overall, however, it is simply more enjoyable when visitors are surprised by individual areas. Instead of a linear storyline, thematic rooms, film sets and interactive elements alternate throughout the exhibition.

Is there a particular area that, for you personally, captures the interplay of humor, emotion and memory especially well?
I may be a little biased here. But for me, it is the set from the film “I’m for the Hippopotamus”. I associate many childhood memories with that movie. One glance is enough and the scenes and quotes immediately start playing in my mind.

Voices, music and film sounds are a central part of the exhibition. What role does sound play in the emotional experience?
I have been making music myself for more than 30 years, so I have quite high expectations when it comes to sound. It is less about spectacular effects and more about subtle impact. Good sound often works in the background. Visitors may not even consciously realize why they feel more comfortable, but sound plays a major role in that.

Do you notice certain reactions from visitors when they hear familiar dialogue or sound effects?
Yes, the memories appear immediately. And most of the time people start laughing. It is always wonderful to watch. A museum that operates continuously places special demands on technology. How important is it that the technology works reliably without becoming the center of attention itself?

That is absolutely crucial. As a wise man once said: If you buy cheap, you buy twice. Quality not only ensures smooth operation. It also helps visitors feel comfortable and allows them to focus entirely on the experience.

When visitors leave the museum, what feeling should they take with them?
With a smile. That is our goal, both in the museum and at our events. Sometimes a short moment is enough to set everyday life aside for a while. There is hardly anything more important than being able to focus completely on something beautiful.

FUN FACT: A SPECIAL EXHIBIT

A personal favorite piece of Michael Maaß hangs in the media gallery: Two promissory notes signed by Bud Spencer. The fact that such documents still exist today is remarkable. At the same time, they tell a special story. These promissory notes were one of the reasons why Bud Spencer accepted a film role at the time – the beginning of a career that would later achieve cult status.

CLEAR SOUND BEGINS WITH THE RIGHT ACOUSTICS.

To the product

OMNITRONIC MIB-01
Microphone Isolation Box

Dimensions
(W × D × H):
33 × 33 × 43 cm

MIB-01

Not every room offers ideal acoustic conditions. Reflections, reverberation or ambient noise can quickly compromise the quality of speech and vocal recordings. With the MIB-01, OMNITRONIC provides a compact solution that makes recording conditions significantly more controllable in no time. The lightweight aluminum housing of the isolation box is lined with highly effective acoustic foam, ensuring maximum sound absorption with a minimal weight of 3 kilograms.

A dual-layer pop filter is integrated into the removable front door. It reliably reduces sibilance and supports clear speech intelligibility. A movable, height-adjustable microphone arm with a 5/8-inch adapter allows precise positioning of a wide range of microphone clips or shock mounts. The thoughtfully designed cable routing through the base of the housing ensures neat and protected wiring. Weighing just 3 kilograms and featuring a lightweight aluminum construction, the MIB-01 is designed for mobile use. It can be mounted on stands with a 5/8-inch or 3/8-inch thread. Alternatively, the box can be placed directly on a tabletop. Vibration-absorbing floor protectors help ensure interference-free recordings.

The generous interior space also allows microphones, cables, and accessories to be transported inside the box when needed.

KIDS TO THE DECKS!

Playing for thousands of dancing fans, hosting their own radio show and being part of a network of like-minded people that spans the globe – what sounds like the everyday life of a world-famous DJ is actually the concept behind an initiative supporting underage aspiring DJs called KIDS RAVE.

Children and teenagers from around the world are given the opportunity to gain their first experiences on stages and in DJ booths in a protected environment. Co-initiator Emma Fletcher spoke with us in an interview about the project.

Hi Emma! Thank you for giving us an insight into the KIDS RAVE project today. Could you briefly introduce yourselves and your project to our readers? Who are you, and what do you do at KIDS RAVE?

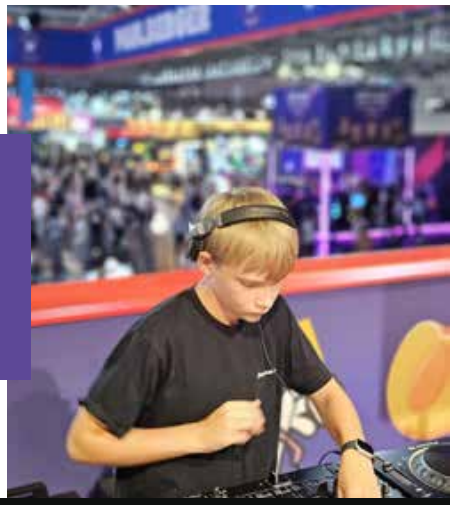
We are the initiators of KIDS RAVE, a global community and platform for young DJs and artists. KIDS RAVE was founded to provide children and teenagers with a safe, professional and respectful environment in which they can develop and showcase their passion for electronic music.

We organize events, operate our own global radio platform called KIDS RAVE Radio, and support young talents throughout their long-term development – always with a strong focus on safety, responsibility and community. Our goal is to give young people real experiences without exposing them to the risks that are normally associated with the club and festival scene.

What was the specific moment when you decided: This movement needs to exist?

The moment came during the planning of a free open-air festival we were organizing. There was still one stage available and musically every genre we had hoped for was already represented. Since it was a daytime event, the idea emerged to give that stage to young artists and offer them a real opportunity.

When we started looking and speaking with the first parents, we experienced something that has become rare in today's music industry: Genuine gratitude, emotion and



DJ VDM Gamescom Köln 2025 ©Artim Media

LEWIS ADE Club Panama ©Artim Media

Jay aka. DJ Pulsar Duisburg Love Parade Memorial©Artim Media

Pulsar, EIJI, Julia and Lynn at Radio Sunshine Live(1) ©Artim Media

Rave The Planet 2025 Myles Lewis Jay Perry Ethan Dirk ©Artim Media

pure joy about receiving a booking request. It was not about fees or conditions, but about the opportunity to perform at all. At the same time, however, we realized how vulnerable these young artists are. Their enthusiasm and gratitude make them especially in need of protection – because without clear structures, there is a risk that they could be taken advantage of or end up in situations they are not yet able to fully assess themselves.
At that moment, the decision was made to build KIDS RAVE – not only as a platform for performances, but as a structure that protects and supports young artists while providing them with a safe and respectful environment.

How do you manage to balance professional club and festival structures with the protection of minors?
Through clear and non-negotiable guidelines. The protection of the children always comes first.
We strictly monitor performance times and set lengths. Late-night appearances are generally excluded. When young artists perform at festivals or in clubs, this takes place exclusively during daytime or early evening hours and always within the legally permitted framework. Especially at traditional 18+ events, close and clearly defined coordination with the organizer is essential.
The immediate environment around the DJ booth is also clearly regulated: During performances there is no alcohol, no smoking and no vaping in the immediate vicinity. The focus is solely on the music and on maintaining a professional and safe environment.
Another central part of our concept is continuous parental supervision. Each child is accompanied at all times by at least one parent – not by external supervisors. This presence provides the children with security and stability.
Equally important is the mindset of the children themselves: They do not come to a festival or a club to party. They arrive with a clear goal – they want to inspire people with their music. They arrive, go straight to the stage, play their set and then leave the event area afterward. The real moment of joy often comes later, outside the festival grounds, when the tension fades and they realize what they have just experienced.

What criteria do you use to select young DJs for the community? Is it more about talent, attitude, personality or commitment?
Talent is important, but it is not the most important factor. For us, personality, passion and attitude are at the center. We are not looking for the “best” DJs, but for young people who truly burn for music and want to be part of a community. Respect, motivation and support from the family play a central role.
We also work with parents whose children face personal challenges – including autistic children, young people with health limitations or children who have experienced bullying. Music can have an enormous empowering effect in these situations.

Charly Lownoise B2B Pulsar - ADE 2025 Club Panama (1) ©Artim Media

LEE I AM B2B Paul Keen - ADE 2025 Club Panama ©Artim Media

We have experienced many moments in which parents were moved to tears of joy when they saw their child develop self-confidence through music and grow beyond their own limits.
Follower numbers do not matter to us. Reach alone says nothing about a person. What truly matters is character and a sense of community. KIDS RAVE is not a competition, but a community.

What distinguishes KIDS RAVE from traditional youth or talent development programs?
The biggest difference is that KIDS RAVE is not a short-term talent program, but a long-term community. We do not work with pressure or competition, but with trust and development. The young artists are not just participants; they are part of a global network where they can support each other and grow together.
Another important difference is that decisions are not made from a distance. We listen to the children themselves. They are our most important advisors and show us what they need and how they want to develop. KIDS RAVE is not a casting format. It is a sustainable ecosystem.

With more than 90 DJs from all continents, how do you organize international collaboration on this scale?
The foundation for this is close and trusting communication with the parents. Every family is an active part of the community. Digital platforms, regular radio shows and international events connect the artists worldwide. At the same time, we make sure the structure remains personal and manageable. As the community continues to grow, we are developing regional units supported by experienced members. These units ensure direct contact and personal support within the community. Such units are currently being established in Italy, Dubai, Mexico, Colombia, the United States, the United Kingdom and Spain. KIDS RAVE grows organically, built on trust and genuine relationships.

What role does the radio format "KIDS RAVE Radio" play for the community – more of a stage, a networking platform a playground, or an educational tool?
First and foremost, KIDS RAVE Radio is a networking platform. It connects young artists around the world and gives them a shared voice. At the same time, it also serves as a stage and an important part of their development: The children get to know one another and discover new countries, languages and cultures. However, we do not see ourselves as a school. Education remains the responsibility of parents and schools. Our role is to accompany the young artists and provide guidance. We encourage them to take their education seriously and to build a broad foundation for their future.

What does it mean for the young artists to perform at events such as the Amsterdam Dance Event or Rave the Planet?
It means the world to them. These events are true milestones – performances that even many adult artists have not experienced yet. For the young artists, these moments are emotionally overwhelming. Many of them have cried tears of joy together with their parents.
Rave the Planet in particular carries special significance because it represents the values and the history of electronic music culture. The children realize that they are part of this culture and that they can carry it into the next generation. These experiences give them pride, confidence and a strong sense of belonging.

Where do you see KIDS RAVE in five years – more in the event sector, in education or as a global network?
In five years, we hope that KIDS RAVE will be represented with its own stages at established festivals and will be able to organize even more of its own events. One of our key goals is to enable young artists from countries outside Europe to participate, even if they would not otherwise be able to afford it financially. This would help turn the vision of a truly global network into reality.
Our focus is not on rapid growth, but on sustainable development. The community remains at the center. In the end, that is exactly the foundation of KIDS RAVE: solidarity. Only together can something be created that will last over the long term.

For more information go to:

http://www.kidsrave.co.uk

https://www.kidsraveradio.co.uk/

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Tipps, Trends, News und Videos

Network Technology in Event Production: An Overview

In modern event production, network technology plays a crucial role. In the past, many devices were connected individually, for example via analog cables or fixed point-to-point connections. Today, however, more and more signals are transmitted over digital networks. Almost all areas – such as lighting control, audio transmission, video technology, system control and monitoring – rely on IP-based networks. These modern networks provide greater flexibility, faster setup and centralized control. The following article offers a clear overview of the fundamentals of network technology in event production and highlights the most important protocols, including Art-Net, Dante and sACN.

1. Fundamentals of Network Technology

A network is a group of devices that communicate with each other. In event production, these are typically IP networks, meaning that each device is assigned its own address (IP address) and exchanges data using standardized procedures. These networks are almost always based on Ethernet technology – the same technology used in office buildings and home networks.

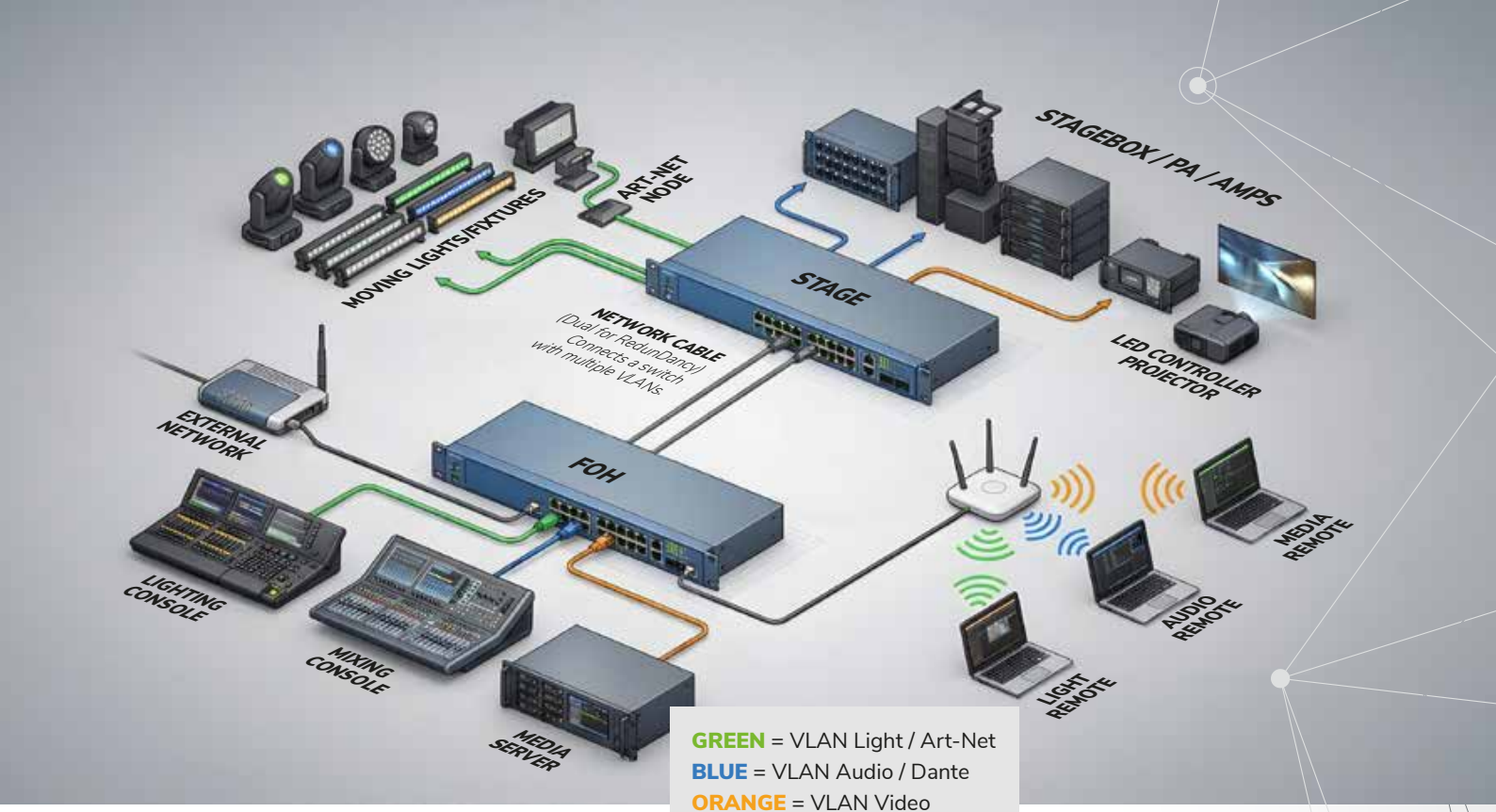
To enable communication, various components are used. Switches, for example, act as distribution units that forward data packets to the correct devices. Routers connect different networks to each other, such as when an internet connection or a link to another area of the venue is required. Wireless connections are provided by so-called access points (wireless LAN access points) and media converters transform electrical signals into optical signals, for example when working with fiber optic cables. Using VLANs (virtual local area networks), a physical network can be logically divided into different segments, such as lighting, audio and video.

Basic knowledge of IP addresses, subnet masks, DHCP, and MAC addresses is essential for setting up and operating networks in event production effectively. An IP address functions like a street number within the network. It ensures that data reaches the correct device. The subnet mask helps the network determine which devices can communicate directly with each other. DHCP is a method that automatically assigns IP addresses to devices, which is practical for temporary setups. However, for permanently installed or sensitive devices, it is often better to assign static IP addresses – fixed addresses that do not change. The MAC address, finally, is a unique hardware-based identifier that each device comes with. It is often used for identification or for fixed IP assignments.

A fundamental understanding of these terms not only simplifies planning but is especially helpful when troubleshooting, allowing problems to be identified and resolved more quickly.

2. Requirements in Event Production

Networks used in events must meet specific requirements. Real-time capability is particularly important – that is, the ability to transmit data so quickly that no noticeable delay occurs. This is especially critical for audio and lighting signals. During an event, a lighting fixture must not respond with delay, and audio must not arrive at the loudspeaker out of sync.



Another key factor is reliability. Network failures must not occur during an event, as they could, in the worst case, bring the entire production to a halt. Flexibility is also essential. The network should be easy to expand if new requirements arise at short notice, for example through additional cameras, loudspeakers or control devices.

Another important aspect is “Quality of Service,” or QoS. This function allows particularly important data – such as audio streams – to be prioritized so that they can be transmitted without disruption even during heavy network traffic. Finally, security also plays a role. To prevent unauthorized access to systems or accidental misconfiguration, protective measures such as access controls or separated network segments are necessary.

3. Protocols in Event Production

Within networks, various protocols – sets of rules governing data transmission – are used. In event production, several specialized protocols are in operation, each tailored to the requirements of audio, lighting or video.

Art-Net is one of the best-known protocols in the field of lighting control. It was developed to transport the traditional DMX control signal – previously transmitted via XLR cables – over networks. Art-Net operates on the UDP protocol, which enables particularly fast data transmission without acknowledgment. It can transmit several thousand channels simultaneously and is compatible with many lighting consoles, LED controllers and control devices.

sACN, short for “Streaming ACN,” is a modern, open standard for transmitting DMX data over IP networks. Compared to Art-Net, sACN is more efficient in its use of bandwidth because it specifically uses multicast, meaning it sends data simultaneously to multiple receivers in a targeted manner. Priority management is also handled more effectively in sACN, making it particularly suitable for larger setups with many lighting fixtures.

Art-Net

Art-Net transmits DMX data for lighting control over IP networks. It is very fast, widely used and compatible with many lighting systems.

sACN (Streaming ACN)

sACN is an efficient, open standard for DMX over IP. Through the use of multicast and priority handling, it is particularly well suited for large-scale lighting systems.

Dante

Dante enables the transmission of multiple digital audio signals with extremely low latency over networks. Control and routing are managed centrally via Dante Controller.

AVB / Milan

AVB guarantees time-accurate transmission of audio and video over networks. Milan expands AVB with cross-manufacturer, open standards.

NDI

NDI transmits compressed video signals with high quality and low latency over IP networks. It is widely used in live streaming and video production.

Dante is a protocol for transmitting digital audio signals over networks. Developed by Audinate, Dante is integrated into many mixing consoles, audio interfaces and loudspeaker systems. It allows the transmission of up to 512 audio inputs and outputs per device and operates with extremely low latency, often below one millisecond. Management is handled through dedicated software known as Dante Controller, which simplifies routing and monitoring.

AVB, short for "Audio Video Bridging," is a protocol standard also developed for transmitting audio and video signals. It is based on IEEE standards and guarantees consistent, time-accurate transmission, even when many signals are being transmitted simultaneously. An advanced implementation of this is "Milan", which was jointly defined by multiple manufacturers. "Milan" relies on open standards and is used by manufacturers such as Meyer Sound and L-Acoustics.

In video production, NDI is increasingly used. Developed by NewTek, this protocol transmits compressed video signals with high quality and low latency over the network. It is particularly popular in the world of live streaming and video control rooms because it is flexible to deploy and often does not require additional hardware.

Other noteworthy protocols include RAVENNA and AES67, which are also used for Audio over IP and are partially compatible with Dante. In lighting technology, manufacturer-specific protocols such as MA-Net, ETCNet or Hog-Net are also found. For general control data, OSC (Open Sound Control) is frequently used, a versatile protocol often employed in conjunction with software or multimedia installations. MIDI over IP is also gaining importance, especially for controlling music and media systems.

4. Network Design and Management

A well-designed network is the foundation for reliable and trouble-free operation in event production. Unlike static information technology infrastructures, event networks are usually temporary and must be ready for operation within a short time. Nevertheless, they must meet the same professional standards as permanently installed systems. The key lies in a clear structure, meaningful segmentation and robust management.

A central element in network design is the segmentation of the network into logical or physical units. In practice, this means that different departments – such as lighting, audio, video, control and media servers – either operate on separate network infrastructures or are isolated from one another using VLANs (virtual local area networks). VLANs make it possible to operate separate virtual networks within a single physical network. This reduces the risk of packet collisions, simplifies troubleshooting and increases security. For example, one VLAN could be reserved exclusively for Audio over IP, another for lighting control and a third for control data such as OSC or remote desktop connections.

Another cornerstone is selecting the right network components. While simple unmanaged switches may be sufficient in small setups, managed switches are virtually mandatory in professional productions. They allow VLAN configuration, traffic prioritization (QoS), implementation of redundant paths and active monitoring of network status. Using protocols such as RSTP (Rapid Spanning Tree Protocol), alternative paths can be automatically activated if a connection fails – an essential function in critical show environments.

Redundancy concepts are often not just an option but a requirement. Many modern devices offer dual network interface cards (two network ports), which can be used either as failover or in parallel operation for redundancy. Setting up multiple switches with redundant cabling also significantly increases system reliability. In Dante systems, for example, the secondary port can provide a complete mirror of the primary signal on a separate network – ensuring that the audio stream remains intact even in the event of hardware or connection failure.

In addition to the physical architecture, address assignment is also a decisive factor. There are essentially two approaches: Automatic assignment via DHCP (Dynamic Host Configuration Protocol) or manual assignment of static IP addresses. In complex productions, a hybrid approach is often used. Critical devices such as stage boxes, lighting consoles, or media servers are assigned fixed IP addresses, while mobile control devices or guest access may be integrated via DHCP. In any case, clean and up-to-date documentation of IP addresses, subnet masks, gateway addresses and host names is essential. Without it, rapid troubleshooting is often impossible.

An aspect that is often underestimated in practice is network monitoring and diagnostics. Tools such as Wireshark enable in-depth analysis of data traffic at the packet level, which is particularly useful in cases of disruption caused by broadcast or multicast storms. Specialized software such as Dante Controller provides detailed information about audio connections, clock synchronization and packet loss. In AVB networks, time-based control mechanisms such as gPTP (Generalized Precision Time Protocol) play a central role in synchronizing audio and video signals precisely.

Troubleshooting in such environments requires appropriate technical expertise – and often a certain level of experience with the specific characteristics of different manufacturers.

However, even a well-designed network is only as good as its daily operation. Therefore, network management is becoming increasingly important. This includes regular status checks, creating backups (for example of switch configurations or Dante routing), maintaining documentation and training the technicians involved. Especially in more complex productions with multiple departments or a high degree of automation, at least one person in the team should be responsible for network design and management – comparable to a system administrator in traditional information technology environments.

In the future, the integration of centralized monitoring and management platforms will play a greater role. Initial approaches such as SNMP-based monitoring, cloud-based network management or cross-platform protocol overviews (for example using AV over IP dashboards) simplify control of growing network infrastructures. The integration of security features such as access control lists (ACLs), port authentication (802.1X) or firewalls is also increasingly coming into focus, particularly in networks with external connections or remote access.

5. Challenges and Trends

As connectivity increases, so do the challenges. Systems are becoming more complex, and knowledge of network technology is increasingly essential. Different protocols and devices from various manufacturers often make planning and operation demanding. Network errors can be difficult to identify and, in the worst case, have a direct impact on the live show.

At the same time, clear trends are emerging. More and more systems are being consolidated: audio, lighting and video frequently run over a shared network. Open standards such as sACN or AES67 facilitate collaboration between different manufacturers. Remote control of systems – via tablet or over the internet – is also becoming increasingly important. As a result, the demand for information technology expertise in event production continues to grow. Anyone planning or executing events today must be increasingly familiar with network technology.

6. Conclusion

Network technology has become indispensable in modern event production. It enables flexible, powerful and future-ready solutions for controlling and transmitting audio, lighting, video and more. At the same time, it requires a fundamental understanding of the technologies, protocols and systems involved. Anyone who invests time in network technology is investing in the quality, safety and professionalism of their productions – today and in the future.

RAVENNA / AES67

RAVENNA and AES67 are professional Audio over IP protocols. AES67 enables interoperability between different audio systems.

Manufacturer-Specific Lighting Protocols

MA-Net, ETCNet and HogNet are proprietary protocols for lighting control systems. They offer high performance within a single manufacturer's ecosystem..

OSC (Open Sound Control)

OSC is a flexible protocol for control data in multimedia and software environments. It is particularly well suited for complex and interactive applications.

MIDI over IP

MIDI over IP transmits MIDI data over networks instead of traditional cables. This allows music and media systems to be networked flexibly.

VLAN

VLANs (virtual local area networks) allow a physical network to be logically divided into separate segments.

DHCP (Dynamic Host Configuration Protocol)

A method that automatically assigns IP addresses to devices within a network.

QoS

Quality of Service (QoS) is a network technology that prioritizes data traffic to ensure the performance of time-critical applications (such as Voice over IP, video conferencing and streaming) when bandwidth is limited.

RSTP (Rapid Spanning Tree Protocol)

Rapid Spanning Tree Protocol (RSTP) is a network protocol that disables redundant paths in local area networks and reactivates them automatically if a connection fails.

Dual-NICs

Devices with two network ports that can be used either as a fallback (failover) or in parallel operation for redundancy.

WHEN MUSIC ENTERS THE ROOM

FROM EARLY SURROUND CONCEPTS TO DOLBY ATMOS IN THE HOME THEATER AND THE QUESTION OF HOW WE MIGHT LISTEN TO MUSIC TOMORROW

A Dolby Atmos setup with front, center and surround speakers, complemented by ceiling speakers for the height channels. Subwoofers handle the low frequencies, while an AV receiver drives and processes each channel individually. This allows sounds to be positioned precisely within the room, including above the listening position, creating a truly immersive three-dimensional audio experience.

Spatial audio feels modern today, almost futuristic. Yet the idea is anything but new. As early as the 1960s, audio engineers and musicians were exploring how music could be experienced not only from the front, but from multiple directions. Experiments with quadraphonic sound, meaning four-channel audio, were intended to make music feel more tangible and alive.

However, the major breakthrough with a broad audience never materialized. The technology was complex, expensive, and hardly practical for everyday use. Different standards, complicated playback systems and a lack of compatibility meant that surround sound repeatedly appeared as a concept in music production, but never became firmly established. Stereo remained the lowest common denominator.

From Cinema to Home Theater to Pure Music Listening

While surround sound remained a niche topic in music for decades, it continued to evolve steadily in the film industry. Here, multichannel audio was not seen as a gimmick, but as a tool to support storytelling and atmosphere. With the introduction of Dolby Atmos in 2012, this development reached a new level: Atmos fundamentally changed the way we think about sound. Instead of assigning signals to fixed channels, sounds are positioned as individual objects within a three-dimensional space. Height becomes a true dimension rather than a simulation. For film, this concept proved ideal and was adopted relatively quickly, first in cinemas and later in home theater environments.

The fact that Dolby Atmos is now playing an increasingly important role in music is therefore less a disruption and more a logical continuation of this evolution.

Modern Technology and the Mass Market

The key difference compared to earlier surround experiments lies less in the idea itself than in its practical feasibility. Modern audio technology is powerful, compact, and far more accessible than it was a few decades ago. Processing power, software and playback systems now allow a level of precision that simply was not achievable in the past.

At the same time, the market has changed. Music is no longer consumed exclusively through physical media, but through streaming services that can make new formats available with relative ease. In parallel, the range of compatible hardware continues to grow, from AV receivers and soundbars to specialized speakers and headphones.

All of this creates the conditions for spatial music to be explored seriously, without being hindered by technical barriers.

Dolby Atmos Music as a New Listening Experience

In music, Dolby Atmos is often understood not as a replacement for stereo, but as an additional perspective. Instruments and vocals can be positioned more freely within the space, without masking one another. Well-mixed productions therefore sound less spectacular in terms of effects and instead more open, transparent and spatially defined.

Producers such as Steven Wilson are deeply engaged with these possibilities and view immersive sound primarily as a creative tool. This perspective is also reflected in the market: Dolby Atmos Music is increasingly attracting interest from audiophile listeners and high-end audio enthusiasts who approached the topic with skepticism for a long time.

Not every production automatically benefits from added spatiality. However, when it is used intentionally and musically, the listening experience changes in a noticeable way.

Has It Already Become Established?

The clear answer is no. Stereo remains the dominant music format and will continue to do so for the foreseeable future. Dolby Atmos Music is not yet a standard, but rather an additional offering. It requires compatible technology and specially created mixes. Both are available, but neither is yet a given.

At the same time, it is evident that more and more new productions are at least being conceived with immersive formats in mind. In 2025, more than 90 percent of the tracks that reached the Billboard Top 100 charts were also produced in Dolby Atmos. This does not mean that Atmos mixes are intended to replace stereo, but rather that they can exist alongside it, similar to how high-resolution audio formats have done in the past.

A Look Ahead

How music listening will develop in the long term cannot be predicted with certainty. However, it is conceivable that spatial audio will become more natural in private environments, not necessarily through complex speaker installations, but through intelligent systems that virtually reproduce space and position. For music lovers, this could mean listening more consciously. Not louder, but with greater nuance. Music would then be experienced as a space rather than merely a surface. The listener would, in a sense, be right in the middle of it all, as if at a concert where the audience is not positioned only in front of the band, but where the musicians move around them.

Whether Dolby Atmos will assume a lasting leading role or remain an important step in the evolution of audio is still an open question. What is certain, however, is that the concept of spatial music has better conditions today than ever before.

Conclusion

Surround sound in music is not a new idea. What is new are the technical and cultural conditions under which it is being discussed today. Whether this will lead to a lasting transformation or remain an intriguing alternative for curious listeners remains to be seen. For now, however, a new way of experiencing music is emerging.

ODD MEASURES

WHEN MUSIC BRIEFLY STUMBLES

The 4/4 time signature is the reliable workhorse of pop and rock music. Four beats, clearly structured, steady as a well-lit stage floor. The downbeat is firmly in place, the snare on beats two and four provides the famous backbeat and everything feels familiar and secure. It is no surprise that this meter has dominated for centuries.

Odd time signatures begin precisely at this point. They do not change the tempo, but the internal logic of time. The floor is still there, but it suddenly feels slightly tilted.

WHAT ACTUALLY MAKES A MEASURE "ODD"?

An odd time signature emerges when beats are grouped in unfamiliar ways. Instead of four evenly spaced quarter notes, five, seven or nine counts come into play. What matters is less the number itself and more the way it is organized.

A 5/4 measure rarely feels like five equal beats. It is usually divided into 3 + 2 or 2 + 3. A 7/8 measure works in a similar way and is often conceived as 2 + 2 + 3. These subtle internal shifts cause the musical accent to land where the ear does not expect it.

The result is not chaos, but a controlled imbalance.

LISTEN CLOSELY

The human ear loves patterns. The 4/4 time signature delivers them reliably. Odd time signatures play with that expectation. The next accent arrives too early, too late or simply somewhere else. For a brief moment, there is a sense of irritation, almost like a musical stumble.

It is precisely this moment that keeps listeners alert. The music feels more alive, sometimes more restless, sometimes more open. The groove remains, but it no longer runs on autopilot.

HERE IS A SELECTION OF SONGS FEATURING SKILLFULLY CRAFTED ODD TIME SIGNATURES, PERFECT FOR LISTENING AND COUNTING ALONG:

MUSE – ANIMALS
TAYLOR SWIFT – TOLERATE IT
THE DAVE BRUBECK QUARTET – TAKE FIVE
GENESIS – TURN IT ON AGAIN
TOOL – SCHISM
STING – SEVEN DAYS
PINK FLOYD – MONEY
PETER GABRIEL – SOLSBURY HILL
YES – CHANGES
RADIOHEAD – EVERYTHING IN ITS RIGHT PLACE
FRANK ZAPPA – KEEP IT GREASEY
KARNIVOOL – GOLIATH

DO YOU RECOGNIZE ALL THE TIME SIGNATURES?

5/4: muse - animals, taylor swift - tolerate it, dave brubeck quartet, take five, 6/4 - 7/4: genesis - turn it on again, 5/8 - 7/8: tool - schism, 5/8: sting - seven days, 7/4: the beatles - all you need is love, peter gabriel - solsbury hill, pink floyd - money, porcupine tree - the sound of muzak, 7/8: yes - the fish, u.k. - in the dead of night, alice in chains - them bones, rush - tom sawyer, yes - changes, 10/4: radiohead - everything in its right place, 9/4: stone temple pilots - pretty penny (chorus), 9/8: dave brubeck quartet - blue rondo a la turk, 19/16: frank zappa - keep it greasey, 27/4: karnivool - goliath

DESIGN RATHER THAN CALCULATION
WELL-CRAFTED ODD TIME SIGNATURES RARELY FEEL COMPLICATED.

The key lies in clear accent placement. Even eighth notes or sixteenth notes hold the pulse together, while the odd meter does its work in the background.

A classic example is Take Five by The Dave Brubeck Quartet. The 5/4 time signature feels almost natural here. The piece floats elegantly without ever becoming awkward.

Money by Pink Floyd uses the same principle. The 7/4 time signature is structured so clearly by its distinctive bass line that the shift feels intriguing rather than confusing. Only later does the song allow itself a traditional 4/4 passage, which makes it feel almost like a moment of release.

STUMBLING ON PURPOSE

In progressive rock and metal, things can intentionally feel a little less comfortable. Schism by Tool shifts between different odd meters and deliberately places accents where they create tension. The groove pulls, but it pulls at an angle. The result is a constant sense of internal motion.

Solsbury Hill by Peter Gabriel works very differently. Here, the 7/4 time signature does not feel angular, but open and narrative. The music seems to be taking one more step forward again and again, without ever fully arriving. An effect that perfectly matches the mood of the song.

MORE FEELING THAN CALCULATION

Odd time signatures are often considered overly cerebral. In reality, however, they operate primarily on an emotional level. They can create restlessness, intensify forward momentum or give songs a sense of floating openness.

Instead of blunt predictability, movement emerges. Music breathes differently, responds differently and lingers longer in the memory. In a world full of perfectly aligned 4/4 grooves, it is precisely these subtle rhythmic imbalances that capture attention.

BREAKING THE RULES AS A STYLISTIC DEVICE

Odd time signatures are not, after all, a break from pop music, but an expansion of its vocabulary. They shift the focus away from sheer reliability toward tension, movement and character. Where 4/4 provides a sense of security, odd meters open up space for surprise and expression. Their particular appeal lies in the balance between control and irritation. When thoughtfully crafted, odd time signatures do not feel awkward or overly cerebral, but organic and natural. They allow music to breathe, give it edges and ensure that it stands apart from the familiar without losing its groove.

In a musical landscape that often strives for maximum accessibility, odd time signatures serve as a quiet yet effective counterpoint. They are a reminder that tension does not arise from volume or tempo, but from the deliberate play with expectation. Sometimes a single additional beat is enough to turn routine into attitude and a song into a distinctive statement.

HAPPY BIRTHDAY: 30 YEARS OF THE WHITE LED

The LED has completely transformed the world of show technology. However, after its invention in 1962, it spent decades confined to a niche role as a simple indicator light. The problem was that LEDs could produce red, green or orange light, but developers struggled for years to create a blue LED. Everyone understood that a blue LED would unlock entirely new possibilities and represent a billion-dollar opportunity, yet despite attempts by numerous major corporations, success remained elusive.

It was not until 1993 that Shuji Nakamura, an engineer at the small Japanese company Nichia, succeeded in developing a blue LED that could be mass-produced and delivered sufficient brightness for the standards of the time. He achieved this with a budget of just three million dollars. For his breakthrough, he initially received a bonus of only 140 US dollars. His employer, however, became a global market leader as a result of his invention.

With red, green and blue LED light now available, it became possible to mix additional colors – and even white light. However, the white light created through color mixing was of poor quality. Physically, it is not possible to generate true white light directly with a single LED. In 1996, Shuji Nakamura and Nichia achieved another breakthrough by using phosphor materials similar to those found in fluorescent lamps. A blue LED was designed whose light excited a phosphor coating, which then emitted white light. Once again, however, Nichia proved less than generous toward Shuji Nakamura, ultimately leading to a legal dispute and his departure from the company.

THE HISTORY OF THE LED

1907

The English researcher Henry Joseph Round discovered that certain inorganic materials could be stimulated to emit light by applying an electrical voltage. He described this phenomenon and named it after himself: the “Round effect.” However, the discovery was largely forgotten.

1921

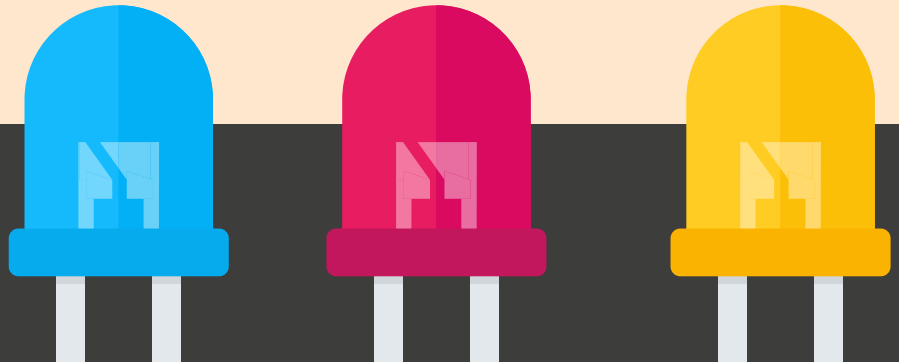
The Russian physicist Oleg Vladimirovich Losev independently rediscovered this behavior and investigated it in greater detail. He published several scientific papers on the subject and developed technology related to what we now recognize as modern LEDs. Aside from the inventor himself, however, no one saw practical value in the weak green light.

1935

The Paris-based engineer Georges Destriau was familiar with Losev’s publications and continued research in this field. He succeeded in producing brighter light and was the first to use the term electroluminescence. He referred to the light itself as “Losev light,” in honor of his Russian predecessor. Nevertheless, his work also failed to gain recognition and the technology once again faded into obscurity.

1962

Physicist Nick Holonyak made history by developing the first red LED suitable for mass production.



Professor Shuji Nakamura

Source: https://www.flickr.com/photos/n28307/15485959887

How a White LED Works

A blue LED excites a phosphor material, causing it to emit yellow light. By mixing the blue light from the LED with the yellow light from the phosphor, white light is produced.

1993

Although LEDs already existed in red, green, orange and yellow, the blue LED was not invented until 1993 by the Japanese engineer Shuji Nakamura. This breakthrough paved the way for the enormous success of LEDs in lighting technology as well as in numerous other technical applications.

1995

Once again, Shuji Nakamura achieved a milestone by useing phosphor materials to enable blue LEDs to produce white light.

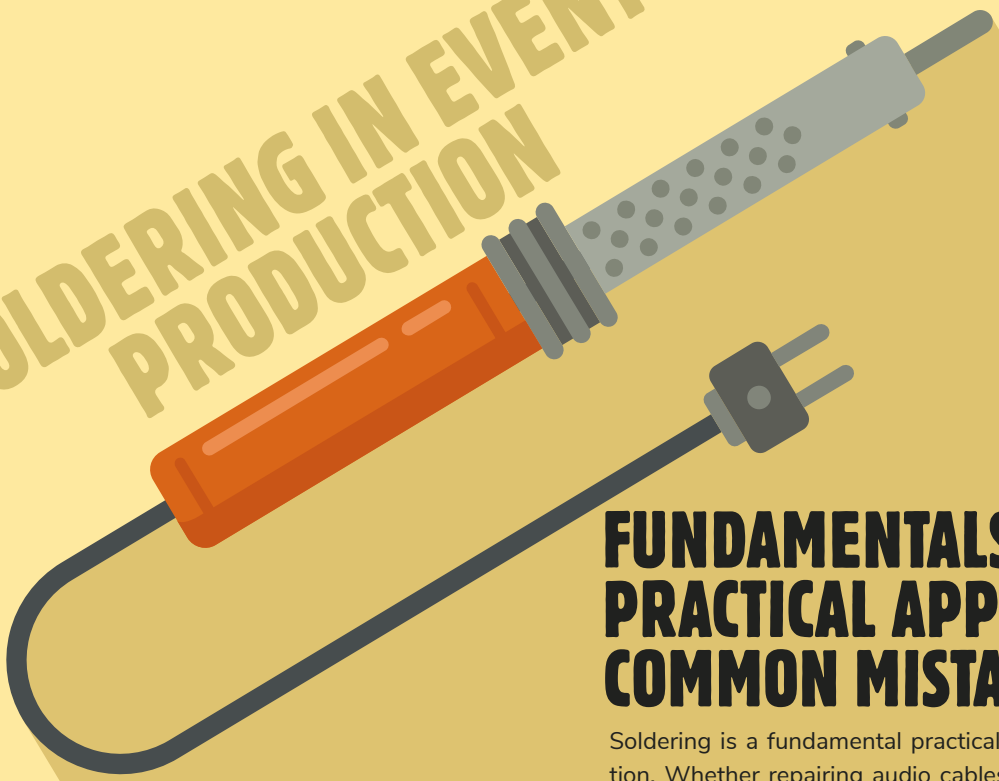
2006

In this year, the first LED surpassed the milestone of 100 lumens per watt. In practical applications, however, performance levels remained significantly lower.

2026

The first LEDs reach an efficiency of 50 percent, corresponding to 175 lumens per watt. Most LEDs, however, operate at approximately 80 to 140 lumens per watt. How close we will ultimately come to 100 percent efficiency – equivalent to 350 lumens per watt – remains to be seen.

SOLDERING IN EVENT PRODUCTION



FUNDAMENTALS, PRACTICAL APPLICATION AND COMMON MISTAKES

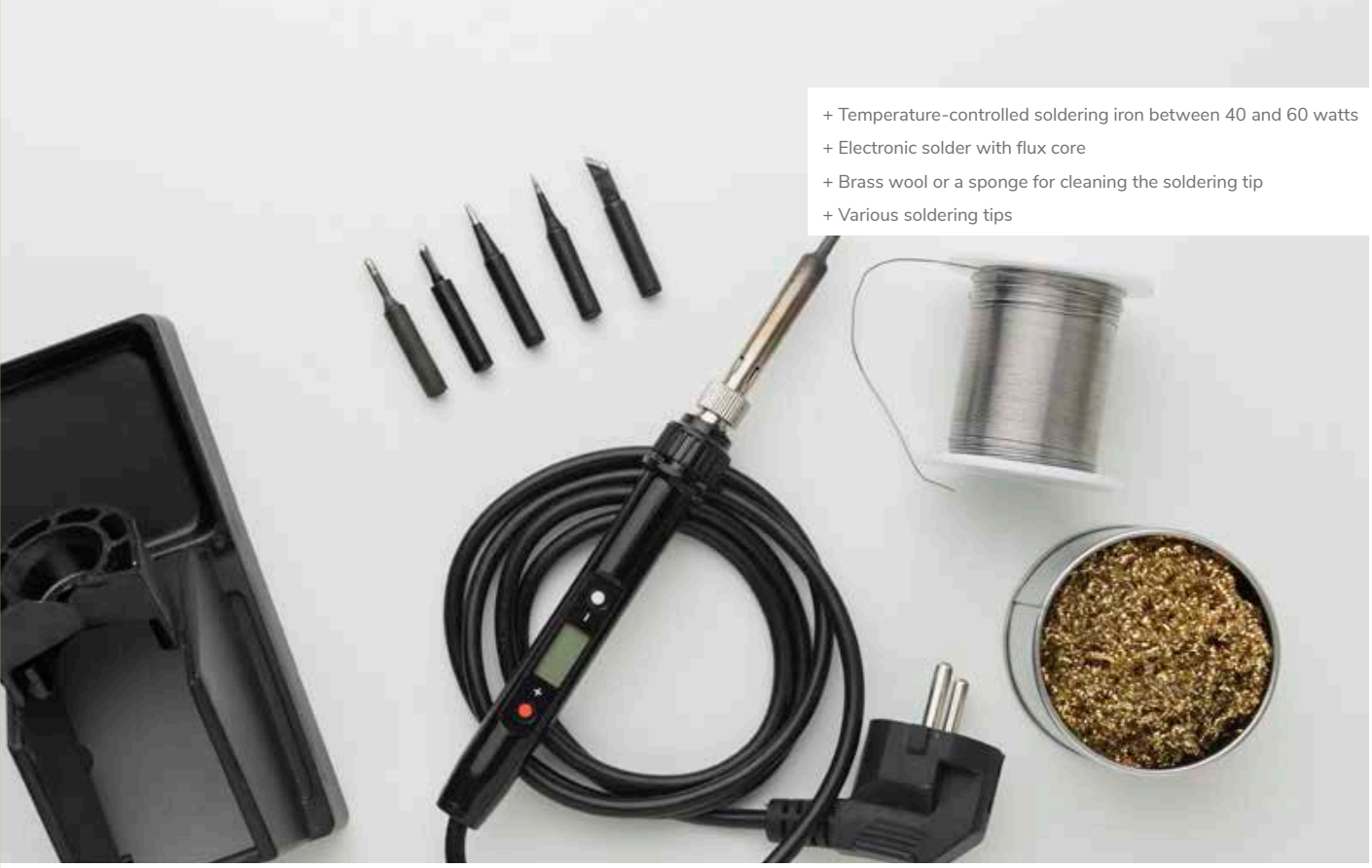
Soldering is a fundamental practical skill in event production. Whether repairing audio cables, assembling connectors or performing minor work on electronic components, properly executed solder joints are essential for reliable operation. Especially in live environments, connections must be mechanically stable, electrically dependable and durable over time.

Fundamentals of Soldering

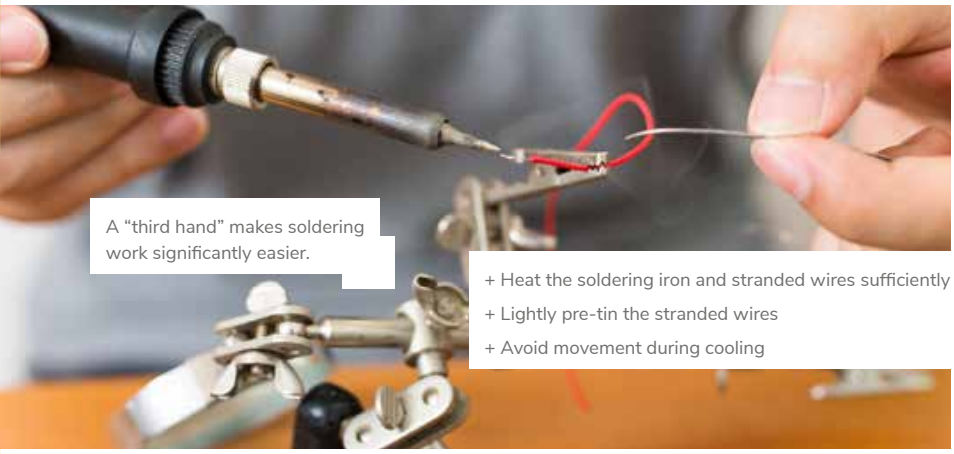
In soldering, metal parts are joined together using molten solder, which itself consists of an alloy made from different metals. A key requirement for a solid connection is that the components being joined are heated sufficiently, not just the solder. Only then can the solder flow properly and bond with the surfaces. Cleanliness plays a crucial role: Oxidized contacts, contaminated stranded wires or old solder residues often result in poor connections. A flux supports the soldering process by removing oxide layers and improving surface wetting. In practice, electronic solder with an integrated flux core is most commonly used. Even heat distribution and a steady hand are more important for a good result than excessively high temperatures or large amounts of solder.

Typical Applications in Event Production

In addition to classic electronic work, solder joints on connectors are particularly important in event production. XLR, phone, Speakon and DMX connectors are especially common. In these cases, it is not only electrical conductivity that matters, but also mechanical durability, since cables are frequently moved, coiled, plugged in and unplugged. When soldering cables to connectors, it is important to ensure that the stranded wires are cleanly stripped and lightly pre-tinned. The solder should fully penetrate the strands without leaving individual wires exposed. It is equally important that the solder joint itself is not subjected to mechanical stress – the strain relief of the connector is responsible for that, not the solder.



+ Temperature-controlled soldering iron between 40 and 60 watts
+ Electronic solder with flux core
+ Brass wool or a sponge for cleaning the soldering tip
+ Various soldering tips



A “third hand” makes soldering work significantly easier.

+ Heat the soldering iron and stranded wires sufficiently
+ Lightly pre-tin the stranded wires
+ Avoid movement during cooling

A well-executed solder joint is smooth, slightly shiny, and evenly formed.

Required Equipment

For beginners, a temperature-controlled soldering station in the 40 to 60 watt range is sufficient. It allows for clean work on both printed circuit boards and more robust connector contacts. In addition, electronic solder, a sponge or brass wool for tip cleaning, side cutters, wire strippers and a “third hand,” meaning a holding fixture, are recommended. For cable work, heat-resistant connectors and heat-shrink tubing are also advisable.

Characteristics of Good Solder Joints

A well-executed solder joint is smooth, slightly shiny and evenly shaped. The solder fully connects the contact and conductor without forming lumps or sharp points. In connectors, the solder joint sits firmly in place and shows no movement when the cable is lightly stressed – provided the strain relief has been installed correctly.

Cold Solder Joints and Common Mistakes

Cold solder joints are often caused by insufficient heating or movement during the cooling phase. They appear dull, grainy, or uneven and are a common source of intermittent connections – an especially critical issue in live environments. Overheated joints, melted insulation or cable ends stiffened by excess solder can also lead to long-term failures.

Conclusion

Properly executed solder joints are a key factor in operational safety and reliability in event production. By following basic soldering principles and paying particular attention to mechanical strain relief and clean workmanship when working with connectors, many common mistakes can be avoided and the service life of cables and components can be significantly extended.

CRISIS-PROOF

DANCE WHEN THE WORLD IS SHAKING!

WHETHER DURING WARS, GLOBAL ECONOMIC CRISES OR TIMES OF UNCERTAINTY, PEOPLE STILL GO TO THE THEATER, THROW PARTIES OR VISIT CLUBS AND NIGHTCLUBS. ONE MIGHT THINK THAT IN EXTREME SITUATIONS, SAFETY AND RETREAT WOULD BE MORE IMPORTANT THAN PARTYING AND SOCIALIZING. YET OFTEN, THE EXACT OPPOSITE IS TRUE. THIS ARTICLE EXPLORES WHY THAT IS THE CASE.

Crises transform markets, shift boundaries and shake our certainties. Yet one deeply human behavior remains surprisingly constant: We celebrate. Even when war rages, economic uncertainty prevails or social upheaval shapes daily life, people seek community. They go to the theater, organize parties or gather in small groups to celebrate a birthday, for example. At first glance, this seems contradictory. Should not caution be the priority in times of danger? Why do people invest energy, time and resources in rituals and shared experiences precisely then? A look at history shows that this behavior is not a modern phenomenon. Since ancient times, festivals have served far more than just the purpose of entertainment. They stabilize communities, structure time and create order. At the same time, they provide individuals with a sense of grounding. Anyone who wants to understand why people celebrate even in uncertain times must therefore look back – to the cult festivals of antiquity, the rituals of the Middle Ages, the courtly productions of the early modern period and the private celebrations of the modern era. Celebrating is more than just pleasure. It is a cultural mechanism and a human response to crises.

WHEN FESTIVALS SECURED THE WORLD ORDER

IN ROME, PEOPLE BELIEVED THAT BY HOLDING CHARIOT RACES, GLADIATORIAL CONTESTS OR THEATRICAL PERFORMANCES, THEY COULD HONOR THE GODS AND THUS WARD OFF DISEASE, WAR OR NATURAL DISASTERS

Even the ancient Romans and Greeks knew how to celebrate. However, these celebrations were not about private occasions like birthdays. The focus was on the community and its well-being. Many festivals in ancient Europe had religious origins. They were intended to appease the gods of a city or an empire. In Rome, people believed that by holding chariot races, gladiatorial combats or theatrical performances, they could honor the gods and thus ward off disease, war or natural disasters. Festivals were therefore not merely a pastime, but part of maintaining the divine order. Just how seriously this aspect was taken is illustrated by an episode from the year 211 B.C. During the Apollinarian Games, an alarm was sounded that Hannibal was at the gates of Rome. The theater emptied. It later turned out to be a false alarm. People now feared that the interruption might anger Apollo. To formally continue the ritual, a mime continued to dance, without an audience, just for the god. Thus, the games were considered uninterrupted.

THE DIVINE ORDER WAS PRESERVED.

At the same time, such events served as a political tool. Politicians like Caesar or Nero organized lavish games to secure the favor of the people. Generous funding was an investment in power and career advancement. Caesar incurred heavy debt, gained popularity and thereby strengthened his political position. Festivals were also economically significant. Large-scale events attracted visitors, promoted trade and required infrastructure such as arenas or supply networks. Festivals were both a social highlight and an economic factor.

In ancient Greece, too, the origins of festivals lay in the worship of the gods. The Olympic Games were established in honor of Zeus, and theater emerged from the festivals dedicated to Dionysus. In 534 B.C., a single actor faced the chorus for the first time in Athens. This moment is considered pivotal for the development of tragedy. Masks, props and early stage effects were employed. Celebrations continued even in times of war or plague. During the plague in Athens in the 5th century BC, processions and sacrifices were dedicated to Apollo, the god of healing. The festival signaled a capacity for action in uncertain times.

WHAT THESE CULTURES HAD IN COMMON WAS THAT FESTIVALS STRUCTURED THE YEAR, PROVIDED A SENSE OF DIRECTION AND BROUGHT THE COMMUNITY TOGETHER.

BETWEEN LENT AND CARNIVAL

In the Middle Ages, the context of celebrations shifted, but not their purpose. The church year structured daily life. Christmas, Easter, Pentecost and numerous saints' days shaped the rhythm of the year. In an era marked by uncertainty, disease and war, these rituals provided a sense of stability. Markets also played an important role. Many were linked to church holidays. When believers gathered for church consecration festivals or patron saint's days, economic and social gathering places emerged. Merchants offered goods, artisans displayed their wares and jugglers and musicians provided entertainment. Religious ritual, commerce and socializing merged into one another. These festivals were of great significance to the people. They interrupted the often harsh daily routine and allowed for collective joy. The regular recurrence of the same festivals created a sense of reliability. At the same time, festivals offered space for limited transgressions. This was particularly evident during Carnival before the 40-day Lenten season. Before Ash Wednesday, people celebrated exuberantly. They ate, drank and danced. Masking and the playful questioning of authority were part of it. For a short time, different rules applied. Paradoxically, these exceptions strengthened the order. Those who could relieve tensions did not permanently challenge the system.

FROM COURT CEREMONY TO LIVING ROOM PARTY

In modern times, the purpose of celebration changed once again. Religious festivals remained important, but secular and private occasions came more to the fore. At the court of Louis XIV, the "Sun King," celebration was deliberately used to consolidate power. Elaborately staged balls and spectacles served the purposes of prestige and political control. Visibility at court meant influence. At the same time, however, a trend toward individualization began. With the Enlightenment and the rise of the bourgeoisie, the individual took center stage. Birthdays gained importance, weddings became more personal and Christmas increasingly evolved into a family celebration. With industrialization, a clearer separation emerged between work and leisure. Celebrations became a conscious counterpoint to the world of work.

This makes it all the more remarkable that even in extreme situations like World War I, the need for celebration and ritual does not disappear. The Christmas celebrations at the front in 1914 – some of which even led to spontaneous ceasefires between enemy soldiers – vividly demonstrate the psychological power of private rituals. With candles, songs and small gifts, a sense of normalcy was restored for a brief moment. The celebration created moments of humanity in a state of emergency. After the war, a different need emerged: the "Roaring Twenties" represented a new form of celebration. Dance halls, jazz clubs, wild nights – celebration became an expression of a zest for life following the traumatic experiences of war. At the same time, individualization continued to intensify. Fashion, music, nightlife and private parties became means of personal identity formation. People no longer celebrated solely for God, king or state, but celebrated themselves, their survival, and their freedom. Even during World War II, celebration remained a part of life – despite destruction and threats. Birthdays, weddings and Christmas were celebrated in small circles. It was precisely in private life that celebration gained significance. Where public order collapsed, the home became an emotional refuge.

WHY WE PARTY IN TIMES OF CRISIS

Even today, it is clear that celebration does not disappear even in times of crisis – but rather gains in significance. Since the start of the war in Ukraine, the population has been braving destruction and existential threats. At the same time, people are holding weddings in subway stations, celebrating birthdays in bomb shelters or organizing concerts and cultural events as a sign of identity and resistance. Here, celebration becomes a conscious affirmation of life – a signal: We are still here.

Even during the COVID-19 pandemic, it became clear just how important celebration is to human well-being. Social distancing measures and lockdowns abruptly disrupted familiar rituals. Weddings were postponed, birthdays were celebrated digitally and Christmas was observed in the smallest of circles. For many people, this period was the first time they truly realized how much celebrations serve as emotional anchors in life. The longing for shared presence, for hugs, for shared moments made it clear that celebrating is far more than just a date on the calendar. It is a basic social need. For in an individualistic society, private celebrations hold special significance. They mark life transitions, strengthen bonds and give structure to one's own life. Those who celebrate consciously set aside a moment to go against the flow of everyday life. In times of crisis and war, this moment becomes even more significant: It creates normality in a state of emergency, closeness despite distance and meaning in uncertain times. Celebrating fosters community, structures time and strengthens the individual. It is not a luxury, but a deeply human need – especially when the world is thrown off balance.

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CONCERT TICKETS AS A LUXURY GOOD?

HOW CONCERT PRICES HAVE CHANGED AND WHY THERE IS NO SINGLE "TICKET EURO"

Looking at old concert tickets today almost feels surreal. Prices that were still considered high in 2014 or 2015 appear surprisingly moderate from today's perspective. At the same time, hardly any cultural market has developed as dynamically as the live sector. Anyone who wants to understand why concert tickets cost what they do today has to take a closer look. The best place to start is where reliable numbers are available.

Three artists are particularly well suited for this: Taylor Swift, U2 and Ed Sheeran. Not because they are typical, but because their tours are well documented and illustrate three very different paths through the live market. In this article, we take a closer look at ticket pricing for these selected artists and compare today's prices with those from ten years ago.

THEN AND NOW: WHAT TICKETS ACTUALLY COST

Let us start with the raw numbers. For the years 2014 and 2015, average ticket prices can be determined from Pollstar box office data. Ten years later, reliable figures are once again available for the same artists. Here are the numbers.

TICKET PRICES

Artist	2014/2015	Current
Taylor Swift	approx. 110 USD	approx. 254 USD
Ed Sheeran	approx. 50–65 USD	approx. 104 USD
U2	approx. 118 USD	approx. 369 USD

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TAYLOR SWIFT

In 2015, the average ticket price for her tours at the time was about 110 US dollars. For the Eras Tour 2023 to 2024, Pollstar reports an average price of 253.56 US dollars. The ticket price has therefore more than doubled.

ED SHEERAN

In 2014 and 2015, his average ticket prices ranged between 50 and 65 US dollars. For the current Mathematics Tour, the average price is 104.20 US dollars. This also represents a clear increase, but at a significantly lower absolute level than in the case of Swift.

U2

In 2015, the band's average ticket price was around 118 US dollars. The residency at Sphere in Las Vegas goes far beyond that range. Based on total revenue and ticket numbers, the average price comes to around 369 US dollars per ticket. This is a special case that was deliberately designed this way and results from the venue's extraordinary production and operating concept.

Overall, the trend is clearly upward. However, there is no single fixed factor behind this increase. All prices have risen, but not to the same extent and not for the same reasons.

TICKETING FEES: HIGHER IN EUROS, LOWER IN PERCENTAGE

One point that often sparks discussion is the so called ticketing fees. Here, the data is surprisingly clear.

In 2014 and 2015, the average ticketing fees in the United States were about 6.25 US dollars per ticket. Today, they average around 9 US dollars.

This represents an increase, but not an explosive one. It also has an interesting side effect: The higher the ticket price, the smaller the percentage share represented by the ticketing fee. This is because many ticketing fees are charged as a fixed amount per ticket and do not rise proportionally with the ticket price.

WHO BENEFITS FROM IT?

This is where things become more complex. Unlike ticket prices or ticketing fees, artists' revenues do not follow a fixed pattern.
For Taylor Swift, business publications such as Forbes and Bloomberg consistently report that she generated a personal profit of around 500 to 600 million US dollars from the Eras Tour. That is exceptional and the result of enormous market power. It becomes clear that Swift is not only negotiating fees, but entire structures.

Ed Sheeran operates in a different league. His tours are technically comparatively lean and production costs are relatively low. Forbes estimates his annual income during the Mathematics Tour at 70 to 100 million US dollars per year. Less spectacular, but extremely efficient.

U2, finally, represent a special case. For the Sphere shows in Las Vegas, the band received a pre-negotiated guaranteed fee which, according to industry reports, was in the range of 60 to 70 million US dollars for the entire run. In this case, the financial risk was largely carried by the venue itself, MSG Sphere. U2 earned well, but in a predictable way and without the risk associated with ticket prices.

WHY IT IS STILL IMPOSSIBLE TO PUT A PERCENTAGE ON IT

As tempting as it may be to present a simple breakdown of the "ticket euro," such a formula does not exist. Each of these acts negotiates new contracts for every tour. Promoters, venues, ticketing providers and artists agree on individual models.

Sometimes there are fixed venue rental fees, sometimes revenue sharing agreements. In some cases the artist carries the financial risk, in others the venue does. Ticketing companies usually act as intermediaries and pass on parts of the fees. As a result, conditions can vary from city to city even within the same tour.

WHERE PERCEPTION AND REALITY ALIGN

One thing is clear: Ticket prices have risen significantly over the past ten years, even when general inflation is taken into account. Ticketing fees, on the other hand, have increased only moderately and, in relative terms, have often even decreased. Artist earnings depend less on the ticket price itself than on negotiating power, production costs, and the structure of the contract. It is also highly individual how much of the ticket price ultimately reaches service providers such as technical suppliers, lighting and audio technicians, and road crew members.

THE "TICKET EURO" TODAY

Perhaps the most important finding is this: The „ticket euro" is more transparent today than it used to be, but not simpler. Prices are rising because demand, production effort and audience expectations are increasing. At the same time, there is growing scrutiny over who actually benefits from it.

Taylor Swift, Ed Sheeran and U2 illustrate three very different answers to the same question: How much is a live experience worth – and who ultimately profits from it?

MORE TOUR REVENUE = MORE PROFIT FOR EVERYONE?

Unfortunately, rising ticket prices do not automatically mean that the technicians, stagehands and road crew involved in a tour benefit more in the end. The main issue is that technical service providers and similar contractors are not directly involved in the tour's revenue. Instead, their fees are usually negotiated well in advance.

In addition, they often have limited leverage in negotiations, as they frequently operate under strong competitive pressure and contracts are often awarded primarily on the basis of price. The average margin in this sector is below 10 percent in the United States and even below 8 percent in Europe*.

*Source: EVVC Key Figures for the Event Industry, PLASA, IATSE

WHAT DOES "TICKETING" ACTUALLY MEAN?

When concert prices are discussed, the term ticketing almost always comes up. However, it refers not only to the sale of a ticket, but to an entire chain of services surrounding admission to an event.

What Ticketing Includes
Ticketing companies typically handle:

- the online sale of tickets
- the technical platform (shop systems, virtual queues, server capacity)
- payment processing, including credit cards and fee management
- digital tickets, QR codes and entry systems
- customer service for inquiries, changes or problems
- data management for promoters and venues

Well known providers include Ticketmaster, AXS and Eventim, although the core functions are broadly comparable across all of them. It is also important to note that the ticket price itself is not set by the ticketing company, but by artists, management and promoters as part of the tour planning process.

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On a personal note
On October 1, 2025, our long-standing and valued colleague Christian Hold passed away very suddenly. He left a huge void in our editorial team, both on a personal and professional level. We dedicate this issue to him in grateful memory.

QUIZ TIME

There are words that carry more than one meaning. This is also true for the event industry. The words are frequently used but can also have entirely different meanings. In these cases, context is king. Which terms can you identify?

1. I exist as a computer accessory and as a stage lighting fixture.
2. I am a fruit and a color.
3. I am a unit of temperature, but also a description of color.
4. I work for the criminal investigation department, but I also light up a stage.
5. Two teams face each other in me, but I also produce beams of light.
6. You often find me in the fall and in nightclubs.
7. I create wind, and I am also a trailer.
8. You get drinks at me, and lighting fixtures hang from me.
9. You can use me to make smoothies or music.
10. I go down the ice rink, and I provide sound for small parties.
11. I sit on the desk, and I am at the feet of the musicians.
12. I am very cold, but I also make the light softer.
13. I provide you with internet access, but I am also the brightest part of a beam of light.
14. I sit on a horse, and I also issue technical specifications.
15. I am a floor covering, but I am also a sound carrier.
16. Coffee runs through me, but I also color light.

1. Scanner, 2. Orange, 3. Kelvin, 4. Profiler, 5. Derby, 6. Fog, 7. Fan, 8. Bar, 9. Mixer, 10. BOB, 11. Monitor, 12. Frost, 13. Hotspot, 14. Rider, 15. Vinyl, 16. Filter

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LIME

THE NEW MIRACLE COLOR?

If there's one color that's truly trending in LED lighting right now, it's definitely lime. The term refers to a yellow-green hue reminiscent of the color of a lime. But what makes lime so special in lighting technology?

Read more in the magazine

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