

LIGHT & SOUND INTERNATIONAL • OCTOBER 2020
ENTERTAINMENT • PRESENTATION • INSTALLATION

IN THIS ISSUE:

Theatre: Sleepless - A Musical Romance
UK theatre put to the test

Venue: Cornwall's Minack Theatre
Survival on the rocks

Tech Focus: Claypaky's Xtylos
The laser-based luminaire reviewed



DIGITAL
EDITION

Hanging in the balance

**The industry's fight for
survival continues**



OUTDOOR THEATRE: JESUS CHRIST SUPERSTAR • OPERA: VERONA ARENA FESTIVAL, ITALY
EVENTS: A TALE OF TWO DRIVE-INS • LIVESTREAM: WAREHOUSE MANIFESTO • FUTURE TECH
INDUSTRY: COVID-19 RESPONSE UPDATE • PROFILE: BRYAN HARTLEY - AND MUCH MORE....

plasamedia



SUPPORTING THE INDUSTRY
FROM 1987

SUPPORTING THE INDUSTRY
THROUGH 2020

SUPPORTING THE INDUSTRY
IN 2021 AND BEYOND



#MartinEMEA

www.martin.com

MORE READY
THAN EVER



K3 Full-Range. Compact. No Compromises.

Introducing K3: a versatile loudspeaker satisfying all your requirements for mid-size events and venues without any compromises. Completing the K series line, K3 boasts an optimal mechanical design for reduced weight, Panflex™ variable directivity, laminar vents for a powerful, linear low-frequency response down to 42Hz, and class-leading SPL. Optimized for audiences of 1,000 to 10,000, K3 reduces the need for amplification and dedicated subwoofer, making it faster, more straightforward, sustainable, and economical to deploy. It's ready for your next event. l-acoustics.com



contents

FEATURES IN THIS ISSUE

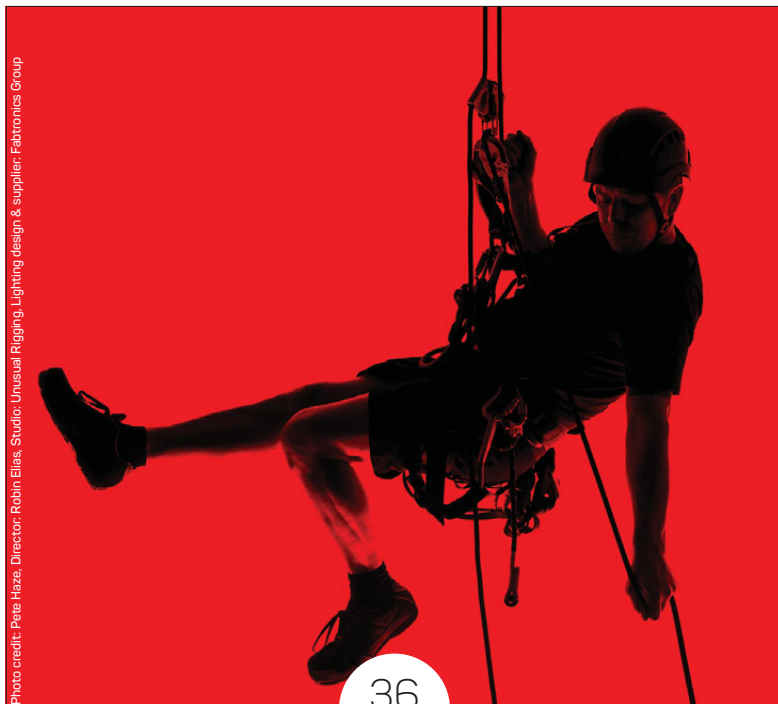


Photo credit: Pete Haze. Director: Robin Elias. Studio: Unusual Rigging. Lighting design & supplier: Fabtronics Group

36

COVER STORY

Global Outcry

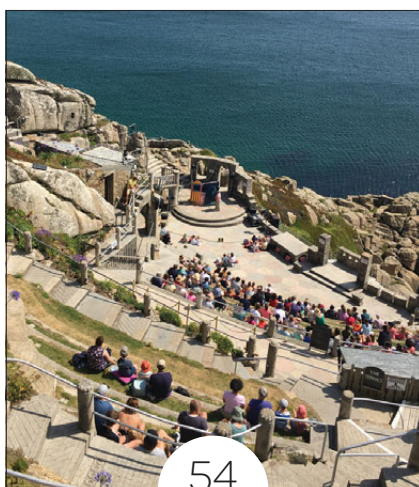
The industry's fight for survival continues, culminating in a worldwide #WeMakeEvents day of action...



46

Theatre : Sleepless

Rob Halliday checks in with the crew behind the musical adaptation, which marked the return of indoor theatre shows in the UK...



54

Theatre on the rocks

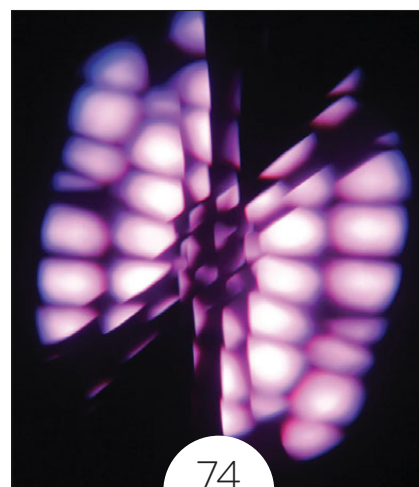
Julie Harper finds out how Cornwall's iconic cliffside Minack Theatre has resumed its activities post-lockdown...



64

A tale of two drive-ins

Kate Lyon reports on a series of UK drive-in events that marked the tentative comeback of live entertainment...



74

TF : Claypaky Xtylos

Mike Wood reviews Claypaky's laser-based beam moving head luminaire...



READ LSi ONLINE FOR FREE. DOWNLOAD THE NEW 'LSi-VIEW' APP - AVAILABLE FOR BOTH APPLE AND ANDROID DEVICES

NEWS

08 In the News

Latest business news & developments, association news, events, training & education, standards & safety

18 Glimmers of light?

Rob Halliday checks in with just a few of the lighting professionals affected by the on-going COVID-19 pandemic . . .



22 Superstar returns

Rob Halliday reports from Regent's Park Open Air Theatre as *Jesus Christ Superstar* signals a cautious return for UK outdoor theatre . . .



26 Warehouse Manifesto

LSi reports on an industry initiative that saw an inspired crew create an events series in aid of Music Support . . .



28 Opera finds its voice

Mike Clark reports on how this year's Verona Arena Festival adapted to proceed with its programme of operatic delights despite current restrictions . . .

30 Group dynamics

LSi talks to France's Novelty Group, an emerging force on the production rental scene . . .

REGULARS

32 Early Stagers

Ryan Perry

34 Future Tech

Deepfakes

42 Audio File

Always the bridesmaid

44 Book Review

Concert Design: The Road, the Craft, the Industry

52 Crew Cuts

Barry McClelland

53 Tools From Beyond

A t-shirt, a book and a picture

60 Second Fix

Now everything can be IP

62 The Conductor

RCD woes

63 Classic Gear

Strand Electric Patt 123

70 Help Desk

Digital light tracks

72 Technology Focus

Restarting the Industry, pt. 2

82 In Profile

Bryan Hartley

NEXT ISSUE

Coming up in the November issue*:

- Event: The Proms
- Festival: Tomorrowland
- Installation: Milan City Studios
- Live Music: Socially-distanced gigs
- Tech: Allen & Heath's Avantis console
- Plus all of your regular favourites . . .

*Subject to change

For advertising enquiries:

advertise@lsonline.com

Copy deadline:

Monday 21 September 2020

Light&Sound International Online - published 11 times a year by PLASA Media Ltd.
© Copyright PLASA Media Ltd.
ISSN 1759-6343

CHAINMASTER
THE WORLD OF MOTORS

D8plus **Ultra**
250 - 2 000kg



Ultrasafe



Ultralight



Ultraprotected



Ultracompact

Safety factor 8/ (static) | Direct or low voltage control | optional with protection class IP 66 | Original EU DAT matt black-grey chain according to DIN EN818-7 | FlipBag works in climbing and standard position

ChainMaster Bühnentechnik GmbH

✉ info@chainmaster.de
🌐 www.chainmaster.de
📱 @chainmastergermany

IDEAS COME TO LIGHT.



Max. 20h



App



Wireless DMX



IP65



100% WIRELESS

WWW.ASTERA-LED.COM

Editor

Claire Beeson
claire.beeson@plasa.org

Assistant Editor

Teodora Lyubomirova
teodora@plasa.org

Technical Editor

Richard Cadena
richard.cadena@plasa.org

Sales Executive

Greg Morley
greg.morley@plasa.org

Sales Executive

Kelly Williams
kelly.williams@plasa.org

Production Manager

Sonja Walker
sonja.walker@plasa.org

Subscriptions

subs@lsionline.com

PLASA MD

Peter Heath
peter.heath@plasa.org

PLASA FD

Shane McGreevy
accounts@plasa.org

Regular Contributors:

Simon Allen, Mike Clark, James Eade, Jim Evans,
Rob Halliday, Roland Hemming, Julie Harper,
Chris Henry, Mark Johnson, Mel Lambert,
Kate Lyon, Steve Moles, Sarah Rushton-Read,
The Shend, James Simpson, Louise Stickland,
Phil Ward, Mike Wood.

Annual Subscription: UK: £38.00 - Europe
(Airmail): £60.00 (€77 - US\$96) - RoW Airmail:
£70.00 (€90 - US\$111) - RoW standard: £50.00
(€64 - US\$80) Single copy price: £3.50 (€5 - US\$6)

Every effort has been made to ensure that the information carried in LSi is accurate, but the Publisher cannot accept responsibility for its contents or any consequential loss or damage arising as a result of the use of material printed. The views expressed in LSi are not necessarily those of the Editor or PLASA Media.

The editor's consent must be obtained before any part of this magazine may be reproduced in any form whatsoever. LSi reserves the right to edit news and features as required.

LSi is published by PLASA Media Ltd, a commercial arm of PLASA. While LSi works to promote the interests of PLASA's Members, and the activities and initiatives of the Association itself, it is not positioned as a service to PLASA members. Our aim is to continually improve and refine LSi to ensure that it continues to offer industry-leading coverage.

PLASA Media aims to produce LSi with an approximate 60/40 split between editorial content and advertising respectively.



LSeye

Claire Beeson editor
claire.beeson@plasa.org

"Our thanks go to Unusual Rigging for this month's striking cover image, part of a campaign shot in support of #WeMakeEvents..."



Firstly, our thanks go to Unusual Rigging for this month's striking cover image - part of a campaign shot by the company in support of the recent #WeMakeEvents Global Day of Action. Our coverage of activities that took place around the world on 30 September - and indeed, in the days and weeks leading up to it - can be found on pages 36-41 inside.

As with the UK's Red Alert movement that took place in August (see *LSi September*), the Global Day of Action was incredibly moving to witness, particularly as it came in the wake of comments from the UK's chancellor of the exchequer that insinuated our industry's jobs might no longer be considered 'viable' enough for financial support from the government.

Across Europe, other governments have been more supportive, with the German federal government committing €80million to organisers of concerts and festivals as part of its €1billion *Restart Culture* programme. Meanwhile, the French government has pledged €5billion to the culture sector - almost three times that pledged by the UK government - plus emergency income support measures that are set to remain in place until August 2021.

For most, of course, the fight continues. As this issue of LSi went to press, PLASA MD Peter Heath was contributing to an Economic Affairs discussion at the House of Lords, alongside UK Theatre's Julian Bird, Horace Trubridge of Musicians' Union and

Abigail Pogson, MD of Sage Gateshead. We can but hope the ongoing effort stirs some much-needed support sooner rather than later!

Indoor theatre made a tentative return in London recently, with *Sleepless: A Musical Romance* the first to lift the safety curtain. For his report on pages 46-51, Rob Halliday passed a COVID test to join the crew and creatives on-site at Troubadour Wembley Park Theatre. Here he discovered the stringent safety measures in place - and whether or not audiences approved...

Also inside, we check in with a number of al fresco activities, including a revival of Andrew Lloyd Webber's *Jesus Christ Superstar* at London's Regent's Park Open Air Theatre (pages 22-24), an opera festival at Italy's Verona Arena (pages 28-29), and a number of successful drive-in events (pages 64-68). Meanwhile, Julie Harper takes a trip to Cornwall's iconic Minack Theatre to see how the open air venue resumed its activities post-lockdown (pages 54-58). Mike Wood takes a closer look at Claypaky's Xtylos laser-based beam moving head for this month's *Technical Focus* review (pages 74-81), whilst Richard Cadena continues his account of living in a bubble to light the NBA's return in the US (pages 72-73). Meanwhile, our back-page *In Profile* interview focuses on the career of rock and roll lighting designer Bryan Hartley (page 82). Plus, as ever, all your regular favourites and more in what is - remarkably - the 400th edition of the magazine! Enjoy...



*35 years and 400 issues
by your side as the
industry's favourite
magazine...*

*You make events
We share the stories*

www.lsionline.com

TRAINING/EDUCATION

Full steam ahead for NRC

[UK] PLASA's National Rigging Certificate (NRC) assessments have resumed following a postponement caused by the COVID-19 pandemic. Assessments have already been delivered successfully earlier this month at Unusual Rigging's COVID-secure HQ in Bugbrooke, Northamptonshire.

Robin Elias, NRC centre manager at Unusual Rigging, comments: "We are pleased to be able to resume our NRC assessments once again and to report back that those which have run to date have been extremely successful with feedback from

candidates extremely positive. Our main priority right now is to reschedule dates for all those who had their assessments postponed due to the pandemic and to ensure they get the opportunity to complete their assessments. However, we know that the NRC certification is extremely popular and as such we will be looking to add more level two and level three dates to the calendar to meet demand."

Potential candidates should register their interest via the web address below.

➔ www.plasa.org/nrc-registration



Robin Elias, NRC centre manager at Unusual Rigging

TRAINING/EDUCATION

GSA course to include ABTT accreditation



Photo: GSA

[UK] The Guildford School of Acting (GSA) has integrated the ABTT Bronze Award into the programme of its BA Theatre Production degree course, enabling students to achieve the accredited ABTT Bronze Award (SCQF Level 7) in addition to their degree.

Mig Burgess, ABTT trustee, lighting teacher and newly-appointed Theatre Production programme leader, comments: "I am so proud and excited to formally announce the integration of the ABTT Bronze Award into the core teaching of our production course here at GSA. As a teacher who still very much works as a lighting professional, keeping current industry links and practice at the heart of the curriculum is something that I will forever advocate. I am so excited for the students who will not only study the five core modules of the Bronze Award alongside their degree, but will also be more closely-linked with the ABTT and the vastly experienced pool of professional members it has."

➔ gsauk.org
➔ www.abtt.org.uk

*All the latest business,
people & project
news available daily at :
www.lsonline.com*

BUSINESS

Studio Connections for Point Source Audio

[Australia] Point Source Audio has appointed Studio Connections to distribute its range of microphones and headsets in Australia. The move is a result of Point Source Audio looking to build on its already strong reputation in the country with the appointment of a new partner dedicated to the local market.

➔ www.point-sourceaudio.com
➔ studioconnections.com.au

BUSINESS

Licht Produktiv appointed CLF distributor



The Licht Produktiv team seal the deal with CLF's Martijn Gerards (top right)

[Europe] CLF Lighting has appointed Licht Produktiv as its second distribution partner in Germany. Licht Produktiv has a 15-year history of being a truss and staging distributor, adding pro audio to its offering more recently. Following continual requests for lighting products from its customers, the addition of CLF Lighting products completes the company's offering. Director René Haarseim comments: "Too many times we had to say no to our customers. From now on we can fulfil our customers' needs to buy quality lighting products at Licht Produktiv, with the service they are used to."

➔ www.licht-produktiv.de
➔ www.clf-lighting.com

TRAINING/EDUCATION

Free wysiwyg for students and teachers

[Canada] As part of its commitment to education, the CAST Group of Companies has made a free version of wysiwyg Design available to all students and teachers enrolled on a full- or part-time lighting design course. Students are also invited to attend any publicly-scheduled training courses at a reduced cost and have been given the opportunity to enter the annual wysiwyg Design competition with a chance to win CAST swag and have their work showcased online.

➔ cast-soft.com

PEOPLE

Exertis confirms international appointments



[Europe] Exertis has made several senior appointments across its international divisions. At Exertis Nordics, Christer Svärd (pictured) has joined as MD. Svärd was most recently CEO at property company Higab AB and has also been CEO of Volvo Parts. Also joining the Nordics division is Helena Byström as supply chain director. Meanwhile, Nadine Bloch has joined Exertis France as team director of purchasing and procurement, whilst Noel Shannon has been promoted to financial controller at Exertis Middle East.

➔ www.exertis.com

www.lsonline.com



domino

the master of the elements

The master of the elements can dominate the most extreme conditions.

DOMINO was designed to confront hot or cold temperatures, wind, rain, hail, sand, dust... It can withstand arid environments, heavy rainfall, and sudden climatic variations.

No other luminaire has performed so effortlessly in hostile weather conditions.

DOMINO is THE master of the elements.

A new member of AYRTON'S IP65 multi-function luminaire family designed for intensive outdoor use, DOMINO is a marvel of technology that combines extraordinary light power with full-featured standard equipment.

In the realm of light, DOMINO reigns supreme.

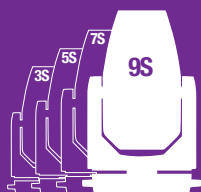
9 Series - Source
1,000 W - 7000 K

Lumens
51,000

Zoom aperture
6° to 60°

Frontal Lens
178 mm

Weight
52 kg



www.ayrton.eu



AYRTON

INDUSTRY ISSUES

Event industry campaigns unite in joint taskforce

[UK] A new body has been formed to directly represent the interests of the live events industry as it continues to lobby the UK government for crucial coronavirus support funding. Launched under the motto of *One Industry, One Voice*, the taskforce unites three prominent campaigns - We Make Events, Let the Music Play and We Create Experiences - and three trade bodies - PLASA, the UK Live Music Group, and the Business Visits and Events Partnerships (BVEP).

Simon Hughes, chair of BVEP, comments: "Many different industry sectors will be looking to government for additional help and assistance in the next few weeks, alongside the more public/corporate targeting with the narrative of confidence and expertise. So it will be critical to ensure that messaging with the various target audiences is aligned across the extended ecosystem that comprises the whole of the event industry in the UK and the extensive supply chain that supports many thousands of livelihoods and enriches the lives of millions of people from all parts of society."

Greg Parmley, chair of UK Live Music Group, adds: "With a long dark winter ahead for many in the arts, culture and events spaces, it's imperative that we work closely together. Bringing the campaigns under one collective cross group addresses the need to communicate both short and medium-term tactics as well as the longer term plans required to support the industry."



PLASA MD Peter Heath says: "PLASA started the We Make Events campaign in May as a response to our members' plight. We are immensely proud of how this has galvanised into over 22 trade bodies, along with thousands of industry professionals from over 28 countries, all working together voluntarily to create awareness of the whole events supply chain and the urgent need for financial support. The alignment of the major hashtag campaigns allows us all to communicate more, maximise our efforts and streamline our voice to government."

To support the campaign, visit:

➔ [//mustbeonit.com/oneindustryvoice](https://mustbeonit.com/oneindustryvoice)

BUSINESS

Prism appoints Trimac for India



Pankaj Kumar with Prism Sound's Lyra

[India] Prism Sound has appointed Trimac Products to distribute its range of converters and audio interfaces in India. With offices in Delhi, Mumbai, Kolkata and Chennai, Trimac works with over 400 channel partners and represents more than 20 pro audio brands in the region. Alongside its sales business, Trimac is also involved in studio design and installation.

➔ www.prismsound.com

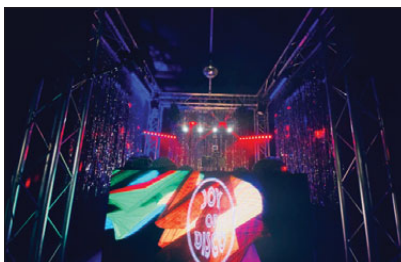
➔ www.trimacpl.com

BUSINESS

Pioneer DJ and Chauvet DJ open studio

[Germany] Pioneer DJ Germany and Chauvet DJ have collaborated on a broadcast studio to meet the growing demand for livestream productions.

Located in Chauvet DJ's German headquarters, the new facility can accommodate a range of production needs,



from talks and product demos to DJ sets and live band performances. The studio is outfitted with over 25 Chauvet DJ fixtures plus Pioneer DJ's DJM-V10 mixer, a DJS-1000 Performance-Sampler and XDJ-XZ. Both companies are already using the studios to successfully communicate with customers.

➔ www.chauvetdj.com

➔ www.pioneerdj.com

EVENT

Paule Constable delivers Trotter Peterson Lecture

[UK] Acclaimed lighting designer Paule Constable delivered this year's Trotter Peterson Lecture organised by the Society of Light and Lighting (SLL) on 10 September.

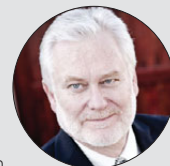
This was the first time the event was held online, with free access for viewers across the globe possible via registration. During the lecture, Constable discussed her award-winning work, motivations and experience as a lighting designer. She also answered questions from attendees during a Q&A session.

PEOPLE

Symetrix boosts customer experience team

[USA] Denny McLane has joined Symetrix as the new manager of its customer experience team. McLane began his career as the president and owner of Sound Techniques in North Hollywood, California, where he designed and installed sound and video systems for churches, auditoriums, theatres, and provided live sound production for producer David Foster and his roster of artists. He later spent seven years at BSS Audio (Harman Professional) presiding over sales and support for Soundweb London for the Western US and most recently held the position of Consultant Liaison with Atlas-IED driving architectural projects toward their product offering.

➔ www.symetrix.co



The Trotter Peterson Lecture was established in 1951 as a biennial event to commemorate Alexander Trotter and Sir Clifford Paterson, both past presidents of the Illuminating Engineering Society and founding members of the SLL.

➔ www.cibse.org/society-of-light-and-lighting-sll

WOMAD announces training bursary scheme

[UK] In response to this COVID-19 crisis, WOMAD and the WOMAD Foundation have launched The Training and Professional Development Bursary Scheme to help fund festival production crews and artists. The foundation has also launched a separate fundraising appeal.

"At WOMAD, we know as well as anyone how important these people are to making festivals and events happen and what an extraordinary range of skills they possess," says the foundation in a statement. "These are skills that can transfer into other areas of our economy now and into an uncertain future. This community of crew, technicians, caterers, artists and everyone who makes the difficult look easy, the people who #WeMakeEvents need help."

WOMAD founder Peter Gabriel adds: "Live events around the world and across the entire landscape, from major festivals to grassroots venues and business events have been devastated. The live events sector employs over 600,000 highly-skilled people in the UK - event production, audio, lighting, video, logistics, planning, transportation, and technology - over



From the archives: WOMAD site crew at Charlton Park

70% of which are freelancers. All of whom have had no work for the past six months with little likelihood of restarting until Spring 2021 at the earliest.

"A lot of 'high arts' have now been given some support, but people working on the festival side of things and in live events have been forgotten about and I hope they are not forgotten about any longer. This industry urgently needs proper support of the like that has been given to many other businesses. Without this immediate support from government, the entire supply chain is at risk of collapse."

➔ www.womadfoundation.org

BUSINESS

disguise lands spot on Sunday Times index

[EMEA] Visualisation technology specialist disguise has earned a spot on the *Sunday Times* Tech Track 100 index, which ranks the top 100 British private firms with the fastest-growing sales over the last three years. The company was also recognised as one of the fastest-growing technology companies in Europe, Middle East and Africa in 2019 according to the Deloitte Technology Fast 500 index released in August.

disguise CEO Fernando Kufer comments: "We are truly proud and humbled to be recognised for our efforts and to be included among these industry leaders. As a result of the COVID-19 pandemic bringing all live events to a standstill, disguise has accelerated the development of xR and engaged with customers to transition them, at a deep level, to the new xR arena with free education to create new opportunities for them to meet market needs."

➔ www.disguise.one

BUSINESS

EAW appoints Sound Technologies

[USA] Eastern Acoustic Works (EAW) has made Chicago-based Sound Technologies its manufacturer's representative for Michigan,

Indiana, Illinois and Wisconsin. TJ Smith, president for EAW, comments: "Sound Technologies' principal Jim Bobel not only spent four years as part of the EAW sales team, but he has over 25 years of experience working with some of the top brands in the industry, so he brings in depth product and technology knowledge to the table. We are excited to once again be working with Jim as he grows his business. Sound Technologies will be a great asset in helping serve customers in the region."

➔ eaw.com

➔ www.soundtechnologiesllc.com

TRAINING/EDUCATION

HES announces Hog Factor USA 2020 finalists

[USA] High End Systems (HES) has announced the finalist teams for the 2020 Hog Factor USA Collegiate Lighting Programming Competition. They are: The Ghost Lights from Webster University; Bacon Powers from Southern Methodist University; and Hamburglers from Texas State University. A panel of HES and ETC employees chose the finalists based on a performance lighting piece programmed on a Hog or Hog 4 PC that each team had submitted. Due to the cancellation of the 2020 LDI tradeshow, the competition's final will take place online as part of ETC and HES' *Study Hall* events in October - details on the contest date, format and judging will be announced soon.

➔ www.highend.com/hogfactor



VOICES IN THIS ISSUE

"I'm frightened about the future. I miss my life and I miss my colleagues..."

p18 Lighting pros reflect on life during the COVID crisis

"We wanted to showcase artists who wouldn't normally have the chance to play on a set designed by the Prodigy's LD..."

p26 Tyrone Brunton on Warehouse Manifesto

"We could have productions that are made up of purely generated, 'deep fake' characters..."

p34 James Simpson ponders the future of tech

"I was so excited to be back in a theatre that I couldn't sleep last night. It is so much better than working at a supermarket..."

p46 Chris Vaughan on working on *Sleepless*

"Social distancing means we can't get close to the actors to wire up their mics..."

p54 Simon Hutchings on new tech challenges at the Minack Theatre

"Legend is it debuted on the original *My Fair Lady*..."

p63 Can you guess what this month's Classic Gear subject is?

"We bent over backwards on price to help them all out financially..."

p64 Dave Whiteoak on the struggles of making drive-in shows happen

TRAINING/EDUCATION

ALD schemes support emerging talent

[UK] The Association of Lighting Designers (ALD) will assist over 60 emerging lighting designers through its Lumière 20:20 mentorship scheme, instead of the planned 20. 38 applicants will benefit from one-to-one mentoring - with mentors having elected to waive their fees - whilst a further 22 will join Team Lumière, a group programme initiated to accommodate the high standard of applicants, who will work as a collective on the course syllabus. There are participants from Scotland, Wales, Northern Ireland, England, Italy, Poland, Malaysia, Australia and the US.

Katharine Williams, project manager for ALD Lumière, comments: "It started with one person waiving their micro-bursary and then the whole thing snowballed as many

others decided to pay theirs forward too."

Rory Beaton, leader of Team Lumière, adds: "I'm extremely excited to be leading Team Lumière. Alongside copious interviews and discussions with lighting designers, we hope to create a real sense of community amongst the group. Imagine a world where 22 of your peers came to support you at your next press night. We'd all love that support and that's part of what we hope to create."

In related news, the ALD's 2021 Sponsored Student Scheme is now open to applicants. The scheme is funded by ALD corporate members and offer students the opportunity of free ALD membership until the end of March 2022. Other individuals who haven't been members for at least



Photo: Mihaela Bodlovic

three years will enjoy discounted membership to March 2021, with further savings for those paying by monthly direct debit.

➔ www.ald.org.uk

BUSINESS

Creative Production Group acquires Dobson Sound

[UK] The Creative Production Group, owner of live events and equipment hire business Visions, has purchased London-based sound reinforcement company Dobson Sound Productions.

Visions CEO Chris Norman comments: "We have always looked at opportunities to expand our service to our clients and have been keen to have a base in London. We intend to keep Dobson Sound Productions at its historic location in Deer Park Road, Wimbledon where David Lewis, Bill Woods and key members of the team will be on-hand to look after customers. The acquisition allows the group to significantly expand its stock holding of sound equipment with a specialist audio provider, it also allows expanded services to Dobson clients."

Paul Dobson adds: "It is great news that Dobson Sound can continue to look after its clients. Becoming part of the larger family with the services Visions provides creates exciting new opportunities."

➔ dobsonsound.co.uk
➔ www.visionsgroup.co.uk

BUSINESS

Symetrix appoints MediasPro for Germany

[Germany] Symetrix has appointed Eckersdorf-based MediasPro as its exclusive distributor for Germany. MediasPro has been an audio system supplier for 20 years. Led by CEOs Joachim Schwarz and Michael Voessing, the company specialises in paging and evacuation systems, room

acoustics, conference solutions, processing and networking of control signals, to rack assembly, training courses and technical seminars, and research and development.

➔ www.mediaspro.de
➔ www.symetrix.co

TRAINING/EDUCATION

ROE Academy introduces online crash courses



Victor Kortekaas (pictured), Tim Hamberg, Mike Smith and Neil Abel will lead the sessions

[China] ROE Visual has introduced crash courses in LED technology to enable clients and AV techs to update their knowledge. Offered via the company's ROE Academy, courses will be offered in suitable US and European time slots and feature training on processing technology as well as interactive Q&A sessions where attendees may ask questions on processing technology and types, bug fixing and their specific project requirements.

The sessions are open for all but spaces are limited to 10 participants. To sign up, visit the web address below.

➔ roevisual.com/academy

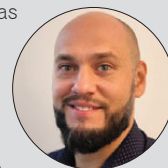
➔ www.lslionline.com

PEOPLE

Atlona grows EMEA team

[Germany] Atlona has added Mustafa Bostanci (sales engineer) and Timo Schonmeier (technical sales engineer) to its EMEA sales and engineering teams. Bostanci (pictured) joins from AVI-SPL in Germany, where he oversaw the installation, inspection and approval of AV systems and collaboration solutions for their end customers. He also brings 12 years of experience as an IT and network technician with at Messe Frankfurt. Schonmeier is an experienced system support engineer and joins Atlona from Extron. His most recent position as system support engineer saw him focused on the commissioning of AV systems at end-user facilities.

➔ atlona.com



BUSINESS

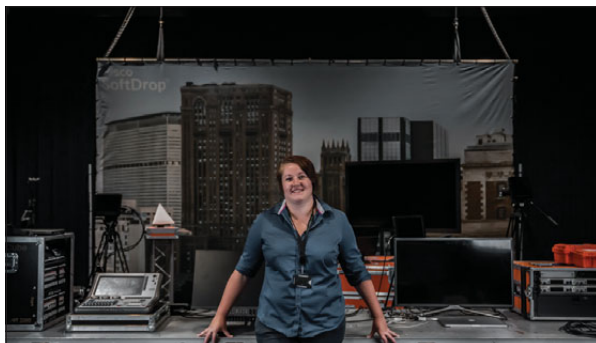
GDTF website migrates to VPLT

[Europe] General Device Type Format (GDTF) founders MA Lighting, Vectorworks, Inc and Robe have transitioned the GDTF website to VPLT, the German Entertainment Technology Association. This will ensure a compliant platform for the exchange and future development of GDTF, which aims to create a unified definition for the exchange of data for the operation of intelligent luminaires. The unified standard provides a constituent and dependable way to adapt new fixtures and devices in the lighting industry.

➔ www.vplt.org

TRAINING/EDUCATION

Backstage Academy leads on COVID safety



Rachel Nicholson, head of Backstage Academy

[UK] Backstage Academy has been recognised by the Quality Assurance Agency for Higher Education (QAA) for adopting COVID safety measures on its premises in time to welcome the new student cohort this September. The Academy, which offers degrees, short courses and bespoke training for the live events industry, believes the measures will ensure "the long-term survival of the industry, worth a vital £30bn to the UK's economy".

The QAA's report focused on providers who overcame difficulties due to size, resource and specialisms, and recognised Backstage's fast response to the pandemic's onset in March, plus its scenario planning for current students and detailed contingency plans for new students in October.

➔ www.backstage-academy.co.uk

PEOPLE

Senior promotions at Meyer Sound



L-R: Tim Boot, John McMahon, Mike Ulrich and Marc Chutczar

[USA] Meyer Sound has promoted four key staff. Global brand manager Tim Boot has become director of global marketing, with responsibility for product management, marketing, communications and education worldwide. John McMahon has been promoted to senior vice-president, assuming company-wide executive responsibilities; vice-president of digital programme management Marc Chutczar has moved up to the post of vice-president of R&D; and Mike Ulrich, who has broad experience in both engineering and new product development, has become Meyer's new vice-president of operations, taking charge of all aspects of manufacturing, purchasing, quality control and test engineering.

➔ [//meyersound.com](http://meyersound.com)

All the latest industry news :
www.lslionline.com

Source 4WRD Color

Retrofit for any stage
etconnect.com/s4wrddcolor

visual environment technologies
etconnect.com

ETC

EVENT

ISE 2021 rescheduled from February to June

[Europe] Due to the pandemic, Integrated Systems Europe (ISE) 2021 has been pushed back to June instead of its usual February slot. Organisers Integrated Systems Events said ISE 2021, which is moving from the Amsterdam RAI to Fira de Barcelona, will take place on 1-4 June, with a virtual programme for networking and content set to run alongside the show.

"The health and safety of our team, exhibiting companies, industry partners and attendees is our number one priority," comments Mike Blackman, MD of Integrated Systems Events. "Given the understandable concerns among all of our stakeholders regarding coronavirus, and the uncertainty regarding travel restrictions and country lockdowns, we have concluded it is not prudent to maintain our original schedule of an in-person February 2021 tradeshow. From our many conversations, it is clear the industry can't wait to get back together doing business face to face



Fira de Barcelona will be ISE's new home

and we are committed to delivering an engaging and safe in-person ISE in 2021. We feel by moving the event to June, it provides time for the industry to adapt and restore balance. We look forward to hosting the global AV community in our new home in Barcelona."

➔ www.iseurope.org

BUSINESS

Audiologic expands into Ireland with Ecler

[UK/Ireland] Audiologic has signed up to a wider exclusive distribution partnership with Ecler that will now include Ireland and Northern Ireland, alongside its existing territory in the rest of the UK. The extension of this partnership will bring about an "even closer and more dynamic" relationship from two organisations that have worked together for more than a decade. It follows the successful appointment of Andrew Matthews as business manager for Ireland and Scotland back in August.

➔ www.audiologic.uk

➔ www.ecler.com

another year of amazing support from ROE Visual", states Miles Marsden, industry partnerships director at Backstage Academy. "With new developments for virtual production, we envisage this partnership will be even more mutually beneficial for the year ahead."

➔ www.backstage-academy.co.uk

➔ www.roevisual.com

BUSINESS

Adamson adds Osaka Onken as partner



Osaka Onken staff with the new Adamson S-Series inventory

[Japan] Adamson Systems Engineering, together with its exclusive Japanese distributor, ReWire, has announced Osaka Onken as its latest S-Series partner in Japan. With its substantial investment, Osaka Onken now boasts the largest S-Series inventory in the country.

➔ www.adamsonsystems.com

➔ www.osaka-onken.co.jp

PEOPLE

TIG appoints UK regional sales manager

[UK] Technological Innovations Group (TIG) has appointed Courtney Hercules as regional sales manager for the UK team. Reporting to TIG's regional director UK & Ireland, Phil Breitschadel, Courtney will focus primarily on the Crestron range of solutions and will support integrators by advising on the most suitable tailored solution for their clients' specific needs - in any commercial, corporate and collaborative setting.

➔ [//tig.eu](http://tig.eu)



TRAINING/EDUCATION

ROE Visual and Backstage extend partnership



Backstage Academy students

[UK] LED panels manufacturer ROE Visual has vowed to continue its support for the Backstage Academy. The company offers its ROE Academy classes and has supported other training events and learning initiatives at the school since 2019. Meanwhile, Backstage students have been able to work with a range of LED panels that are often the standard choice for tours, events and film and broadcast productions.

"We are looking forward to enjoying



The Ko Team players

partnership being finalised remotely due to travel restrictions.

Both Woods and Oz recognise the market potential in Israel. Oz comments: "There are over 1,000 nightlife locations in Israel. We are very excited to start installing Funktion-One systems; upgrading our customers and raising the sound quality of installs in the country."

➔ www.funktion-one.com

➔ www.kot.co.il

BUSINESS

Funktion-One appoints Ko Team for Israel

[UK/Israel] Loudspeaker manufacturer Funktion-One has appointed Ko Team as its distributor for Israel. Following a meeting at ISE in early February, the conversation between Funktion-One's director of business development Bill Woods and Ko Team's Keynan Oz continued, with the

TRAINING/EDUCATION

EZ Pro hosts Symetrix training



[China] Symetrix has partnered with EZ Pro International to bring the Symetrix Composer Certified training series to system designers in China. Courses started in Shenzhen in July and will be held in Shanghai, Beijing, Chengdu and Xi'an throughout the rest of the year.

The training is divided into basic, certified programmer, and master; attendees need to progress through all levels to complete the training. The first step requires students to learn how to upload finished configuration files into their systems and learn basic Symetrix functions. The certified programmer level covers programming Symetrix devices with Composer, and the final training is about mastering Symetrix system design, programming, and debugging.

➔ www.symetrix.co/support/certified-training

BUSINESS

Adam Hall Group partners with SE in China



[China] Adam Hall Group has welcomed Speaker Electronic (Jiashan) Co as an exclusive distribution partner in China. Brands now represented by Speaker Electronic (SE) in the region include: LD Systems, Cameo, Gravity, Defender, Palmer, and Adam Hall.

www.adamhall.com

BUSINESS

SXS Events becomes Pytch and opens virtual venue

[UK] Responding to the effects of COVID-19 on their business, Johnny Palmer, MD of SXS Events, promptly rebranded his Bristol-based company to Pytch, and

constructed The Virtual Venue in one of the empty warehouses on the industrial estate in Brislington which he owns. He explains: "We rationalised that the world was in chaos, and in any case our old name was a mouthful. Our industry is full of three-letter acronymed companies, so we came up with Pytch instead."



He continues: "We are here to share messages and create memorable experiences. We decided the broadcast model was better, so I built TV studios." This includes a 12m x 15m main stage, a Green Room and audio solutions from Martin Audio.

➔ pytch.co.uk

➔ www.lsonline.com



ENGINEERED MOTION SOLUTIONS FOR THE ENTERTAINMENT INDUSTRY

#THEATREENGINEERING
#STAGEMACHINERY
#THEATREWINDCHES
#RENTALSOLUTIONS
#ENTERTAINMENTWINDCHES
#PRODUCTDEVELOPMENT

www.stagesystem.it

Este PD - Italy
T +39 0429 2820 info@stagesystem.it



TRANSFORM YOUR THEATER
Providing social distance solutions

www.stagingconcepts.com

OBITUARY

Unusual Rigging's Paul Taylor

[UK] Unusual Rigging's electrical and design engineer Paul Taylor - known affectionately as PT - lost his battle with cancer on 17 August. He was 64.

A statement from Robin Elias reads: "PT started his 'Unusual years' in March 1988. He joined the company because he felt that as he was now a family man, he should have a quiet nine-to-five job. It did not quite turn out like that. He soon became one of the foundation stones of the company. PT was a pioneer in the field of automation and quickly established his position as our electrics and automation guru."

He continues: "We have lost an encyclopaedia of knowledge, a depth of experience that spanned many decades, and a dedicated colleague. But mostly we have lost a true gentleman, enthusiast, mentor, father figure, and friend. It might be that he and AJ [Alan Jacobi] are already putting their heads together to make celestial events even greater . . ."

www.unusual.co.uk



OBITUARY

KV2 Audio's David Croxton

[UK] KV2 Audio has announced the sudden passing of its sales director David Croxton as the result of a fatal accident. He was 59.

A company statement reads: "David joined the KV2 Audio family in 2011 to fulfil a new sales director role within Asia Pacific, but initially as a curious non-believer of the technologies and theories of our founder and developer, George Krampera Snr. As was typical of David, he soon discovered . . . that he could not only understand and accept what was being proposed, but could provide essential and additional complements with his quiet, considered approach, linked to a deep well of knowledge and advice, usually delivered with his inimitable dry wit. Once on board, he rapidly became the fiercest proponent of the company's outlook and presentation. His determination, energy and endeavours were certainly a part of the company's success throughout the world."

"Having worked in the audio industry throughout his career, David's knowledge of touring systems and studio production recording coupled with his experience of having run a successful distribution business in his Australian homeland, provided unparalleled access to unique insights and knowledge to those involved with him throughout his work - insights and knowledge that will now be greatly missed. His passing has left behind a huge hole in everybody's hearts, especially his family and friends, and we are all thankful for having had the privilege of being his friend and colleague. We miss him hugely."

www.kv2audio.com



OBITUARY

PAMA pays tribute to Mark Brunner

[USA] The Professional Audio Manufacturers Alliance (PAMA) is mourning the loss of long-time Shure executive Mark Brunner. A former president of PAMA from 2011/13, Brunner was also a key member of PAMA's marketing and retreat planning committees, where he lent an important and consistent voice to the strategic planning and implementation of various PAMA activities.

Brunner joined Shure in 1989 and during his tenure held several key positions, including director of advertising and MD of the Musical Instrument and Touring Sound business unit. Most recently, Brunner was the vice-president of global corporate and government relations, where he worked on numerous industry issues, including the FCC rules for wireless device operation/frequency spectrum allocation and lobbied to protect the pro AV market sector.

On behalf of PAMA, Greg Beebe, chair of the board of directors, states: "With the passing of Mark Brunner, we have surely lost one of the leading and most impassioned and valued voices of our industry. Mark always had a remarkably positive attitude. He was a mentor, a sounding board, an advocate of best practices, a good friend and generous supporter to all who knew him. He was the voice of reason and truly made a difference. Our loss is shared by the entire music community, as he has left an indelible imprint on this industry."

www.pamalliance.org



Mark Brunner (right) with engineer/producer Al Schmitt

OBITUARY

Lawo's Michael Mueller

[USA] Lawo North America has announced the passing of its vice-president of sales, Michael Mueller on 26 September following a "brief yet severe illness". He was 66.

A company statement reads: "Michael joined the company in 2008 when the Lawo brand was hardly known in North America. His incredible passion, hard work, dedication, positive attitude and pure likeability, are among the reasons that the company today enjoys such widespread success and reputation in this part of the world."

"Known for his witty sense of humor and kind-hearted personality, we will remember Michael as a key member of the global sales organization, skilled bass player in the Lawo band, a renowned face of the audio industry as a whole and a true gentleman and friend. He will be missed. Our deepest condolences go out to his wife, family and friends at this difficult time."

lawo.com



CHARITY

Backup's Pumpkin Challenge returns



[UK] The Backup Pumpkin Challenge returns this year to raise funds for event professionals who are seriously ill or injured. Individuals, companies and teams who wish to take part need to carve a pumpkin - using any props or technology they wish to bring their design to life - then post a photo of their creation on Instagram using #BackupPumpkinChallenge along with their team name. Entries must be posted by 31 October.

Winners will be awarded in five categories: Best Overall Design; Best Use of Tech; Best Design by Future Creative; Most Overall Likes; Cutest Fur Baby Pumpkin Pic. All winners will be announced on 5 November 2020. The judging panel consists of a board member from Backup, ALD and ASD.

"Due to the competition being open to anyone, anywhere, we will not be giving away any big prizes, but we will contact winners to send some Backup swag," say the organisers. "All winners will be promoted on Backup's social media pages, in marketing material and in the industry press. Plus, you get the prize of industry bragging rights!"

➔ www.backuptech.uk

EVENT

Harman Pro India launches *TechKnow Chats*



Aditya Todi of Harman Professional Solutions, India

[India] Harman Professional India has launched a new virtual event series that celebrates key contributors, projects and products across the industry. *TechKnow Chat* will include product demos, details of noteworthy projects and case studies that feature the company's range of solutions. Upcoming sessions include: Digital Switching and Conference Room Audio with Mradul Sharma (3CDN Workplace Tech Pvt); Entertainment Series Speakers with Sunny Sarid (Sound of Music India), and Architectural Lighting with Kelvin Ashby-King (T2 Technology Consulting). The full schedule is available via the web address below.

➔ www.facebook.com/HarmanProIndiaOfficial

Send your industry news to :
news@lsionline.com

PURITY • DEPTH
TEXTURE • DRAMA

REVEAL
THE
MAGIC

 **Strand**

STRANDLIGHTING.COM

LEKO
LED PROFILE

CODA
LED CYC

AURORA
LED STRIP

CANTATA
LED FRESNEL



Glimmers of light?

Rob Halliday checks in with just a few of the lighting professionals, manufacturers and suppliers affected by the on-going COVID-19 pandemic...

[UK] So here we are, six months in. Six months since the world was closed down around us and we were all sent home. For those involved in the day-to-day activity of lighting shows, that meant sent home with nothing to do as there were no shows to light. For others, that meant sent home with plenty to do in the fight to save their companies, working desperately to make the politicians understand their plight. It has been, to say the least, a strange time.

Back in April, we spoke to a number of those involved in lighting about what they were doing, what they were feeling - from "the grief, mourning and increasing frustration and irritation at not being able to practice the craft I love so much" of projection designer Nina Dunn, to the pragmatic "I've got my family, my home and my dog and I'm being asked to stay at home to enjoy them, which is also for the greater good" of lighting designer Tim Routledge (see *LSi April 2020*).

But six months is a long time with no income and no work. How have people filled that time? Have they received any government support? How are they feeling as those support schemes run out, without live performance being allowed to re-open fully? And about no longer being in the full lockdown with *no-one* working (which is at least, in some way, reassuring - "it's not just me, it's everyone"), but a strange half-world where a surprising number of people *are* out doing lighting?

CREATIVES

"I have gone through the various phases of denial, despair and frustration, and moved on to trying to embrace this time as a sabbatical," summarises LD Guy Hoare. "I did a long-overdue overhaul of my website; spent seven weeks with family teaching nephews and nieces; and am currently planning an exhibition of pictures I started making to pass the time in



lockdown. I have also started learning Italian and have beaten my previous personal best for completion of a tax return by about six months!" He still has projects due to go ahead in 2021, but with no official opening dates, work on them has slowed.

Like many, his concern is about how things will become tougher when the government support schemes close down: "I realise that without other mouths to feed I'm in a slightly less precarious position than a lot of people. Keeping busy hasn't generated any income, but has definitely helped my sanity. But I think things will get really difficult come the autumn when the self-employed support scheme runs out and we still have no work, or any prospect of reopening, during what is usually the busiest time of the year."

This desire to find things to do, rather than sitting idly by, is a common theme; perhaps that is the lockdown manifestation of the drive that normally gets us the next show and makes us strive for the perfect cue while working on it. For some, that

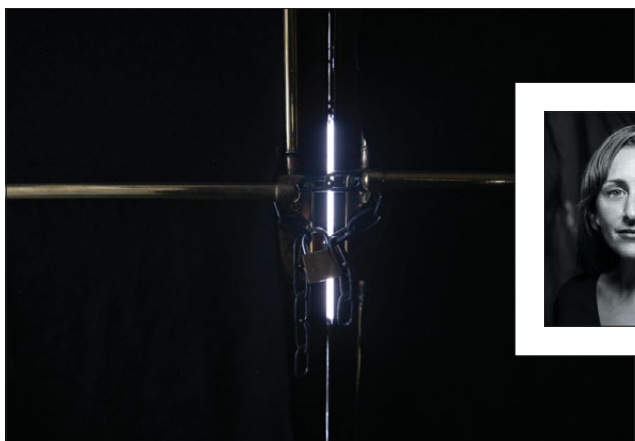
meant finding whatever paid employment they could; supermarkets seem to have benefitted from the abilities of those who normally work in our industry, with countless stories of people quickly promoted to lead in-store teams because of their organisational and motivational skills. For some, it's meant trying to work out how their skills are relevant and can be applied to new ways of presenting entertainment. "I'm really hoping we can develop new ways of bands communicating with their fans that can last beyond this," says LD Rob Sinclair, adding that in exploring this: "I don't think I've ever worked as hard as I am now for so little reward."

For others, it's meant reacting and responding to the situation around them. "It's been amazing seeing so many artists assert themselves in direct political action - in many ways returning to one of the most essential functions of an artist and their work: to reflect and challenge society," notes video designer Nina Dunn. "We have also had to talk about money a great deal more, which

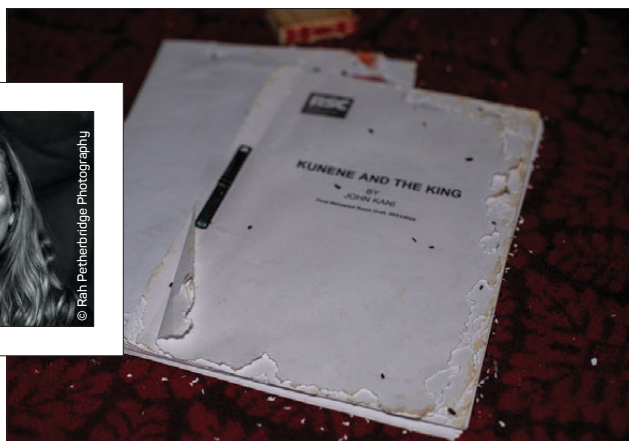


1 Top: The *Dark Theatres* project has resulted in a unique book exploring the UK's closed theatres

Above: Guy Hoare's lockdown projects included an exhibition of pictures he started making to pass the time



© Rich Petherbridge Photography



is not something that sits easily with artists. I hope the government now knows more about the value of arts and culture even if only in economic terms, and that they have come to better understand the way the arts workforce is made up."

Dunn has experienced the root cause of this whole situation more directly than some, having, she believes, contracted the coronavirus. "It was on the back of being in the theatre with *City of Angels*," she explains. "I thought it was show-lag as I was deathly tired and needed several naps a day, but they didn't seem to help and it didn't improve. Then as they were starting to talk about the anosmia (loss of smell) symptom, I realised I couldn't smell the lilies someone had bought me for Mother's Day, even with my nose right inside the blooms. I had excruciating headaches and was off my food. Though, of course, because it was so early and testing was so limited, I couldn't actually get tested . . ."

As her energy eventually returned, Dunn began to feel "a desperate need to create, starting with self-initiated projects like projection mapping a Lego hospital with my kids. But I also had an idea that I wanted to try to gain access to some of the theatres, to discover how they'd been left and what they felt like inside." With the help of theatre owners ATG, she was allowed in. "From this acorn of a one day photo shoot, the *Dark Theatres* project has evolved, with photos from inside the theatres accompanied by interviews with the casts and crews who were in those theatres when they closed. I released those online on

a weekly basis to keep the conversation about theatre going - I somehow seemed to be able to release the right image for the right news story at every step of the way."

Dunn has now turned those photos and stories into a book, the sales of which will support four theatrical charities ([//darktheatresproject.org](http://darktheatresproject.org)). And, as her children return to school - Dunn is turning her attention to new projects: working out how to teach her course at RADa under COVID conditions; starting work on a new book on video design for Bloomsbury; and even looking forward to real, live technical rehearsals for the Birmingham Royal Ballet this October, in a production which will include an AR iteration of elements of the show.

A few creatives have already been in tech; some of these shows (*Sleepless* and *Jesus Christ Superstar* - see pages 46 and 22 in this issue, respectively) garnered a lot of publicity through being the first shows back in the UK. But other countries have been ahead of ours, and some of those shows have involved British LDs.

Austria got going early, with Peter Mumford lighting an opera in Vienna whilst James Farncombe has lit one show in France and is about to light another in Holland. Farncombe considers: "We were extremely lucky during the first three months of lockdown: stayed healthy, have a garden and access to big parks. A comparatively lucrative year leading up to lockdown meant we were cushioned from the economic impact until now; I hate to think what it must have been like with large families in small flats with no outside

↑ Nina Dunn (inset) released a collection of photographs from inside empty theatres in her book *Standing By* (see opposite page)

→ Peter Mumford lights *Madam Butterfly* in Vienna, with all the necessary precautions



space, or for people whose fledgling careers have evaporated, or whose income was low. For me, it was a much-needed pause and some quality time with family; it would have been a very busy year and I would have been very absent. Now I feel closer to my daughter than ever before. Though with about three weeks to go before the schools started, we really had to dig in deep to stop from going a bit nuts. The child/parent vs child/teacher dynamics can be so contradictory. . . ."

Farncombe, too, has made an industry-related side project, the *Making Theatre* podcast produced with fellow LD Bruno Poet, which talks about subjects

"I hope the government now knows more about the value of arts and culture and the way the arts workforce is made up . . ."

- Nina Dunn

far wider than just lighting - including, in the first episode, the #FreelancersMakeTheatreWork campaign - and is a fascinating listen. But he's also been working. "I lit an opera in Aix-en-Provence in July," he explains. "It would have been part of an opera festival there. That was cancelled, but the management were keen to at least make a show that can be presented next year and received by co-producers. It felt like a rare luxury, and it was great to be back at a production desk, albeit sweltering under PPE in the heat of southern France. Though it was a little odd, since we made it to a piano dress then everyone packed up and went home..."

The show in Holland represents a more complex choice since it will involve quarantining when returning to the UK. "I feel I have to honour the contract, because the money, frankly, is spent," he explains. "I've decided to endure the quarantine on my return. Some people might think it's irresponsible; personally I don't feel like I've got a choice. I did receive some support from the government. It will help for a month or two. What do they expect us to do after that? I continue to have cancellations and postponements; they now reach into 2022. So there's a weird mix of optimism and dread. The seesaw between the two is, frankly, exhausting."

Others, even those who are finding bits of work to do, echo this challenge of dealing with the uncertainty, but also speak

of their relief at being back at work. "I have been extremely fortunate to have been involved with the *Old Vic: In Camera* season," says lighting programmer Sarah Brown. "It's given me a few days of work and therefore income, but perhaps more importantly, I've had some time in the theatre. I have realised more than ever how fortunate we are, in the normal world, to collaborate in a room with others to dramatise stories in a real space where people are willing to pay to come and see it." But she also speaks of a sense of guilt that she is working when so many others aren't, and of "a frustration at not feeling that I'm helping to fix this for us. I'm frightened about the future. I miss my life and I miss my colleagues."

LD Tony Simpson, meanwhile, has a confirmed booking to light a Christmas trail. "Come Christmas, families will realise there's no panto to go see and will be looking for something else to do," he says.

Production electrician and practical maker Dan Large did have some re-assurance that audiences would return: "I managed to get a week's work on the Secret Cinema drive-in in at Goodwood. It was right on the cusp of us being allowed to do anything at all, so it felt a bit risky - but ultimately seeing cars full of kids enjoying an 11am showing of *Cars* and being entertained by a couple of actors made me choke up." He also sees signs of the industry waking itself up slowly. "There seems to be a growing trend for

customers getting things costed 'while we have time'," he explains. "I've quoted a lot of jobs for making things for Christmas and the future, but no one has so far come forward with actual orders or actual money. I suppose that just represents the uncertainty in our market."

For some, the uncertainty means it's already too late. LD Luke Edwards has already announced that his company, Cue Design, is in liquidation. "It is gut-wrenching for something I built up first as a freelancer then as a company for five years to be snatched away from me by something we can't control," he says. Typical of so many in our industry, his thoughts immediately turned to others: "Our industry thrives on helping each other. I am lucky; I have a partner who works so I have a roof over my head. But I keep getting messages from friends who are worried about just having a roof over their heads; genuine people that in a few weeks' time will be homeless."

Part of the strangeness of this period has been that while live performance has effectively been shut down, other parts of our industry have continued - broadcast, for example. "Most broadcast lampies and gaffers I know are pretty busy,"

comments LD Tim Routledge. "Studios are fully-booked. We've been giving some jobs to concert lampies, just to spread the work around." However, he also notes that the shoots he's been involved with have been quite different from the mega-concerts he has become renowned for over the last few years. "The term 'white-glove LD' has disappeared completely; I've been back in my shorts, unloading trucks, hanging lamps, generally just getting stuck in, hot and sweaty in a mask. There just isn't the budget to do it any other way - but it's been quite refreshing." And what of live music? "Artists are starting to come out of hibernation, asking for different ideas, but all on massively reduced budgets. I don't think we're going to really see any more than that this year."

MANUFACTURERS AND SUPPLIERS

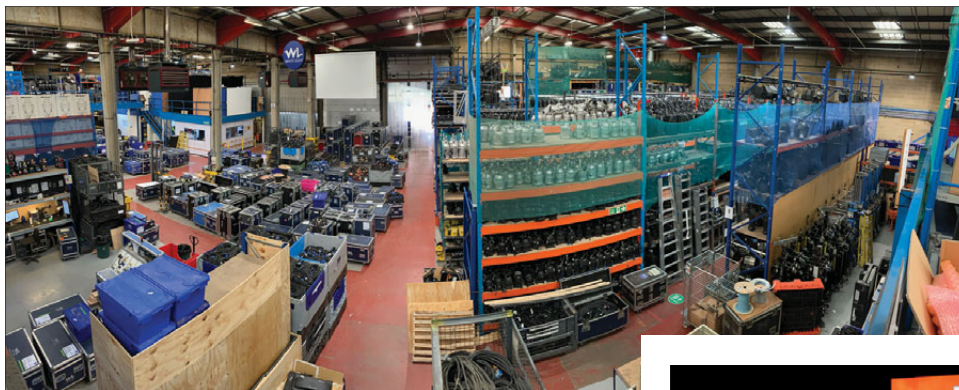
Manufacturers and suppliers who work in the construction and architectural side also seem to have been able to keep going, as the building trade - in England at least - ploughed on as if nothing untoward was happening - including two big theatre refurbishment projects in London, at the Theatre Royal Drury Lane and the Gillian Lynne,



↑ ← Tim Routledge lights Paloma Faith's performance on BBC's *The One Show*

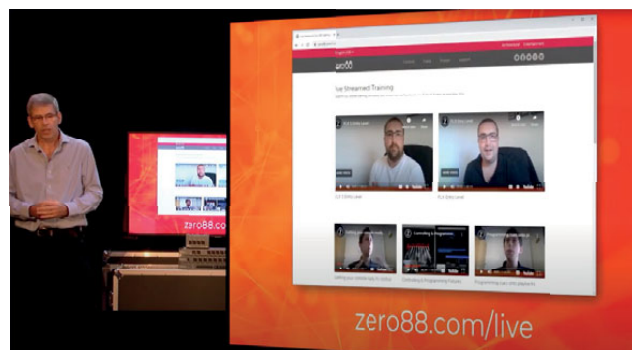
→ Facing page, clockwise from top left: White Light's warehouse inside and out; Zero 88 continues its training initiatives

Photos: @ggphotographyofficial



"I think we have to accept that things are not going to go back to normal this year - and so you just have to re-invent what you do..."

- Tim Routledge



both using theatre contractors for some areas of work that might normally have gone to traditional construction firms.

There were new logistical challenges, though. "Finding hotels that were open, places to eat and organising things are a constant juggling act as the government issues new guidelines" says Stage Electrics' Adam Blaxill.

Push The Button's Nick Ewins adds: "My team and I started back on construction-based projects on 18 May. We had to adjust to new ways of working involving additional PPE, socially distanced accommodation, daily health reporting and temperature screening - a way of working where COVID-19 risk assessments are now required to carry out even simple site visits."

On the manufacturing side, Artistic Licence's Wayne Howell explains: "We're quite lucky to cross over into architectural work as that has been keeping us going while we've seen a massive drop in sales from theatrical and touring. We've chosen to invest in R&D during lockdown, made use of furlough and also not replaced staff who have moved on, so I have a realistic expectation that we'll be here when this all ends. Like, I suspect, many small owner-run companies, the workload on those not furloughed has increased massively. So we have a weird situation, an industry

split between those desperate to get back to work and those desperate for a break!"

Simone Capeleto of Claypaky describes a similar focus, the company's R&D department fully operative, "designing the Claypaky future," while "measures such as the redesign of production spaces and time shifts, and wide adoption of smart working have been implemented in order to guarantee both the health of all our people and of the company's operations."

David Catterall of Zero 88 reflects: "Thank goodness we have a global footprint of 100 countries as orders are still coming in, mostly for smallish projects. But I am very worried for the entertainment industry in general; I expect our industry will shrink considerably, which is a matter of real regret for all of us who have spent our lives building it up into a greater whole that is world-class."

RENTAL

Caught somewhere in the middle between the designers not getting to design and the manufacturers trying to keep manufacturing are the supply and rental companies, with higher overheads than the individual designers and technicians, but with no income if no shows are happening - particularly because many long-running shows are citing the exceptional nature of the times as

a reason not to pay for equipment that is still sitting in theatres.

Like his equivalents at similar suppliers, Bryan Raven of White Light seems to have spent six months fighting fires in every direction - trying to negotiate payments from existing projects, hunting down any new work at all, ultimately having to let some people from the company go, while also working to get recognition and support for the industry as a whole.

For Raven, that has meant supporting the many campaigns that have appeared during lockdown, from #WeMakeEvents and #LightItInRed, to the #FreelancersMakeTheatreWork group. But he's also been exploring other routes, as he explains: "You realise the government isn't interested in the art argument, and the Culture department doesn't really seem to understand how our industry works at all. But the government does understand money and the financial impact of unemployment. In trying to figure out how to make them understand how serious that will be in our industry, particularly when the furlough and self-employment schemes end, it occurred to me that our bank, HSBC, almost certainly had high-level contacts in the Treasury, the kind we don't have. So we've been working with them to make them understand

how seriously this will affect us, and just how many other companies there are like us - manufacturers, suppliers and freelancers usually in-demand around the world.

"If we're all made to downsize or even to shut down, the banks will suffer like everyone else. So we're asking them to take our requests for support to their contacts in the Treasury itself rather than through Culture, and I'm suggesting that other companies have the same conversations with their banks. We've found these discussions very productive, and our bank has been very helpful. It's unfortunate, but true, that money talks!"

For those who make shows, Tim Routledge is the pragmatic voice once again: "I'm earning enough to pay the bills, not enough to get rich. I'm working harder for that money. I didn't receive any government support, so I'm catching up. But I think we have to accept that things are not going to go back to normal this year - and so you just have to re-invent what you do, do things in a different way or do different things entirely until it does come back. It sounds harsh, but I think that, unfortunately, is just the truth of it." ☹

For Phil Ward's update on the situation for sound professionals, see Dark Fader 2: The Phantom Menace in the September issue of LSi.

Superstar returns

Rob Halliday reports from Regent's Park Open Air Theatre as *Jesus Christ Superstar* signals a cautious return for UK outdoor theatre . . .

[UK] When the COVID shutdown finally reached the UK, it was abrupt and all-encompassing: live performance stopped. The re-opening? That's being a little more piecemeal, because of the way that different rules are being applied to different kinds of venues. Which is to say, if you were an outdoor, open air theatre, you were given a head start over the rest of the industry . . .

Of course, since that change was announced in the slightly random way that has marked much of the UK government's response to this, you got a head start - but very, very little notice of it, plus a relatively limited window of opportunity before summer gave way to autumn. What you really needed was not just a venue ready to go, but a show ready to go as well.

London's Open Air Theatre in Regent's Park had the venue. When the word was given that audiences could come again, their first thought was to just rent their theatre out to other producers, to reduce their risk. But they quickly realised they had a show, a proven hit that would provide a measure of the unanswered question of whether people would want to come out to the theatre: their *Jesus Christ Superstar*, directed by the company's artistic director Timothy Shearer, which had already enjoyed hugely successful runs at the Park, then indoors at the Barbican and on tour across America. Getting it on would also give work to the cast, creatives and crew who had been sitting largely idle for months.

So they jumped, technical director Andy Beardmore brought back from furlough. "We made the decision to do the show via a Zoom conference," he says. "Five weeks to the day later, the show opened!" One key change: the set was still in America, so for expediency, *Superstar* designer Tom Scutt adapted Soutra Gilmour's set from last year's production of *Evita*. Another change: even though outdoor theatres were



Photo: David Jensen

"The first few days everything felt very slow and stilted as everyone had to modify and be aware of their behaviour to keep social distancing . . ."



Photo: Mark Senior

allowed to reopen, social distancing rules were still in place, so only 390 out of the venue's 1,280 seats could be sold, and the same distancing rules would have to apply to cast, crew and orchestra. "Plus, of course, we had to ensure that if one cast member was absent due to COVID during the run, we'd not lose them all," Beardmore explains. "So we worked very hard to ensure that social distancing was maintained at all times: 2m apart normally, 3m if singing face-to-face, face coverings worn at all times when not on stage. For the band, we had 11 players who are normally all

together on stage, but due to distancing measures, we needed to split them - we put five on stage, then the brass section in a tent backstage. And for the crew, there isn't a huge amount of space here - there's one production office and traditionally everyone piles in here during the dinner break during a fit-up, so we've created an outdoor space with distanced tables and everyone is having their breaks outside, which is much safer."

Beardmore also brought in Chris Luscombe of Production Safety Ltd, a regular health and safety advisor to much of the UK theatre world and now

1 When it was announced that outdoor theatre could resume, Regent's Park Open Air Theatre revived its popular production of *Jesus Christ Superstar* for a series of socially-distanced performances

expanding his role to include COVID readiness, though with the same pragmatic, practical approach he's always brought to his H&S work.

"As always, it's about reading the government guidance and interpreting it, making it site-specific, working out how you can achieve things. Here, having outdoor space makes things easier - though it's frightening how much space you take up when you try to distance people backstage," Luscombe explains. He also comments on the problematic nature of official guidance that seems to be ever-changing, citing in particular a day where he had two downloaded versions of the same document with the same date but differences in their text.

LIGHTING

Though faced with a different set and revised staging, lighting designer Lee Curran knew what he was trying to achieve. "We've done the production three times before and it's got bigger each

time," he says. "Cutting it back down was quite a big job, but the confidence that comes from having done the show so often was very helpful in terms of pairing it back for this version. In terms of the different set, it's just a big set of bleachers, a big open space; we added a metal structure from the roof of the band to put in fixtures - Vipers, P5s doing backlight, lots of sidelight, lots of PAR cans."

On the practical side, the theatre's head of lighting Adam Squire adds: "From the off, we split the lighting department into five teams of two-person bubbles, so that if any of them got in trouble with COVID, it was just those two people not the whole department. We scheduled the fit-up over a longer period of time, with separate time for set, sound and lighting, so there was less working on top of each other. We were temperature-checked on site, and had sanitisation stations everywhere. We talked to White Light, our lighting supplier, about how the gear

was prepped, who did the prep, and we had it delivered in two wagons instead of one, so no double-stacking, sensible packing, more meat racks each with less weight than normal. Tipping racks is a challenge; lifting moving lights works with a good ratcheted pulley. The only tricky rigging things were the additional lights on top of the band structure, but we came up with a COVID-safe plan using a scaff tower and socially-distanced people."

For programmer Andi Davis, the new routine meant that he worked in isolation from the control gantry position rather than setting up next to the lighting designer during production, and also being the only one to touch his Eos Ti console as well as taking charge of wiping it down regularly. He also offers the top tip that "you can use cans as an ear-saver when wearing a mask."

For Curran, a glasses wearer, the mask was more of an issue: "We had a few really hot days, which was a challenge with heat,

suncream and sweat. When it got colder at night, my glasses were steaming up." He does also wonder about the slight impediment the mask is to communication: "Not necessarily here, because we'd done the show before, but I'd worry about the detailed communication required if doing something new. Here, the first few days everything felt very slow and stilted as everyone had to modify and be aware of their behaviour to keep social distancing, not just huddling together or grouping around production desks as we're used to."

SOUND

For sound designer Nick Lidster, another veteran of the show, the call came "out of the blue and right when we at Autograph needed a bit of good news, after our toughest period during the lockdown." But his thoughts also turned quickly to the COVID-era practicalities. "The principals are double cast, but where they'd normally share microphones and transmitters,



Picture by: Faber Audiovisuals

Are we to witness the end of the green-screen era?

LED panels are the ideal solution to portray set and backgrounds created in virtual reality. Creating the right canvas is not just building any LED screen. It's where the LED panel, processing and camera setting come together that stunning results are achieved. With its high-end manufacturing and premium parts the ROE Visual LED products are perfectly suited for virtual stages and productions. More information on: www.roevisual.com

ROE
CREATIVE DISPLAY
WWW.ROEVISUAL.COM



Photo: David Jensen

here everyone has their own system. The guitars and other instruments used in the show all also have their own transmitters, whereas in the past they might have shared. We've been using Shure's Axient Digital radio mic system, because it allows you to adjust things and monitor battery conditions remotely; no-one backstage needs to get near the pack or an actor during the performance."

Contact reduction also extends to getting the cast to mic themselves up. Lidster explains: "Every performer is on a DPA 4066 boom mic. They put them on themselves with our sound number two, Casper Ikeda, standing by to help them if necessary - he is wearing full PPE and replacing gloves after helping individuals as required. At the end of the show, the cast leave their radio equipment in their dressing rooms; Casper collects them the following day, cleans, tests and has them delivered back before the cast arrive for the next show. We feel that time plus cleaning equals safety, and this way we also reduce person-to-person contact time to a minimum."

The mixing work is split between two people, James Hasset and Gareth Tucker, so the role is covered if one becomes ill. During the production period, Lidster worked from a remote console surface in the middle of the auditorium, away from the



Photo: Mark Senior

show's engineers.

In some ways the spaced-out, screened off orchestra makes Lidster's work easier. "It's all of the things you've always wanted," he says. "It sounds like you are getting a lot more detail and clarity from each player." The mixing console is a DiGiCo SD10T, and this year the loudspeaker system is a d&b Y-Series line array. Though there was a reduced audience count, distancing meant they were spread across the whole auditorium and so full coverage was still required. Autograph's Shane Kavanagh and Ben Lloyd oversaw the installation.

FREELANCE SUPPORT

All involved backstage are delighted to be back at work. "William Village and Timothy Shearer, the executive director

and artistic director of the theatre, both said that one of their key motivations was giving jobs to people who haven't had work for a significant period of time," Beardmore notes. "That's about 140 freelancers across the whole production." All sound happy to be back and being properly paid, though Adam Squire notes: "It does feel like a bit of a strange bubble, working as normal when the rest of the industry is on its knees."

And for the audience? "The seats are sold as clusters of one to four people from the same household or support bubble," Beardmore explains. "We only use every other row, and there are spaces between each cluster, so there's at least 1m between clusters. The audience members have their

temperature checked, they have to wear face coverings, and there are hand sanitisers."

But did people come? "It's been incredible," says Beardmore. "We sold out the first few shows very quickly - Londoners clearly wanted to see a bit of theatre, and there's a big following for this show."

"Yes, they've come," Lidster adds. "And we've made a big thing of the time we're in, the masks - at the beginning you get the *Superstar* theme as the cast enter wearing their masks. We've made a massive point of them all taking their masks off together, and that gets a huge round of applause." Ultimately the show has also been relayed to a big screen elsewhere in the park, to meet the demand for tickets.

Sadly, the ending of the summer provides the ultimate limit on how long this, and other open air shows, can run. "We're going until 27 September," says Beardmore. "We've never gone this late into September - it gets colder, it gets darker and at some point, the weather will just turn."

For just a little while, though, *Superstar* provided a little beacon for both those who enjoy theatre and those who make theatre. It replaced the shows planned for this year, all of which have been moved to 2021. Hopefully by then some kind of route to normality will have been found or invented so that more than 390 people a night can experience the magic of theatre, outdoors or in. ✖

➤ www.autograph.co.uk
➤ www.whitelight.ltd.uk



THE WHIRLWIND PATCHMASTER WITH OUR LEGENDARY W1 CONNECTORS

In a world of uncertainty it's refreshing to know that some things always work! Like all things Whirlwind, we pride ourselves on our ability to manufacture the smartest, most road worthy gear money can buy and our Patchmaster® is a sound example! Log on to our site or hit up one of our sales representatives, and we'll help design and build your next system together!

whirlwind
 europe@whirlwindusa.com



PATCHMASTER60-2



DRUMDROP-M



C12010W11MF



PATCHMASTER60



FM120NRW11M00355



B12MNRW1CF(COLOR)

Warehouse Manifesto

LSi reports on an industry initiative that saw an inspired crew create an events series in aid of Music Support . . .

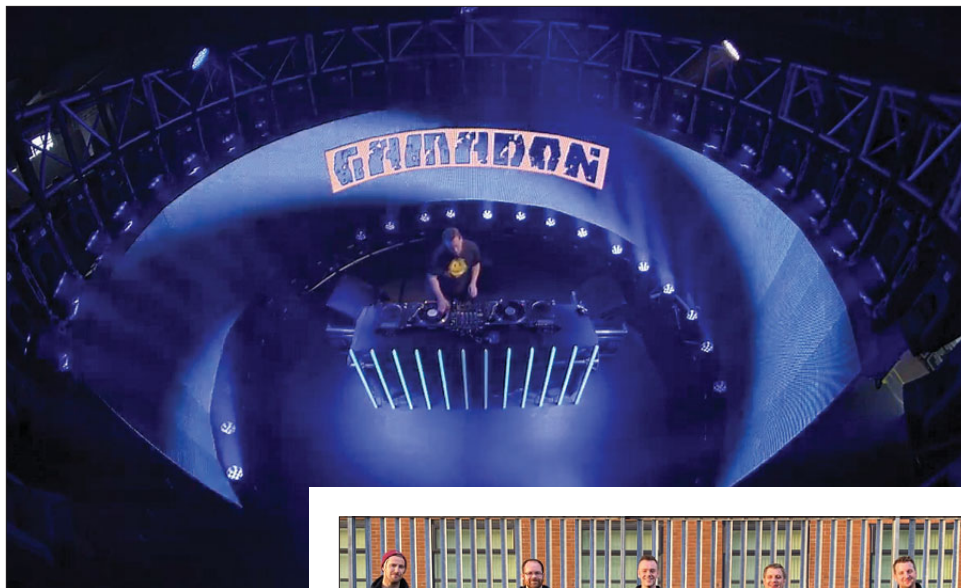
[UK] After just one month in lockdown, production manager Tyrone Brunton had found plenty of motivation to come out of his forced temporary retirement. But his response wouldn't include the sharing of banana bread recipes on Facebook - instead, his desire to help his industry brethren was overwhelming, and before long, a hybrid event DIY project had broken loose.

"When I spoke to my crew in April about the initial idea, I knew they'd be available for a gig," recalls Brunton. "But I had to gauge interest on if they were up for creating a streamed event post lockdown - with zero funding." Brilliant Stages' Adam 'Bullet' Bettley, who would later become the event's project manager, was the first to respond. "Bullet suggested Production Park's The Mill in London as our venue, and we struck gold because Subfrantic had a rig set up that we could walk in and utilise," says Brunton.

In early July, with some of the restrictions lifted and with crew in tow, the first event went ahead - a livestream of three DJ sets on a Saturday night, with all donated proceeds benefiting mental health and addiction charity Music Support. Warehouse Manifesto, as the event was called, soon developed into an event series. A total of five events have already been hosted, but apart from that pilot Production Park affair, the latter four were held 200 miles north, at 4Wall Entertainment's industrial estate in Blackburn - a location that was closer to get to for the majority of the voluntary crew and one that provided ease of access for the free kit supplied by Heywood's Wigwam and Burnley's BPM SFX.

BACK TOGETHER

Not only has the venture succeeded in raising funds, it's brought people from all areas of the industry back together, and that in itself is powerful. The team regularly produce five



hours of non-stop livestreamed music whilst encouraging the general public to donate what they can to the cause. "We wanted to showcase artists who wouldn't normally have the chance to play on a set designed by The Prodigy's LD," says Brunton, whose brainchild has now raised over £1,500 towards Music Support's emergency COVID fund and amassed thousands of views. The events have seen DJ sets from DJ Gamadon, Northbase, D-Code and Indika.

London-based DJ Gamadon, who has been involved from the beginning, says: "To be a part of an amazing team and stellar production like this in such difficult times has been really great." Show designer Tim Fawkes agrees: "Just being able to have a conversation with friends has been a vital morale boost. The exciting thing for me personally wasn't just having the chance to design a show again - streaming allows you to take a music-video approach with camera placements and do things you normally can't get away with."

Fawkes designed a 360° DJ booth with a curved video wall backdrop made up of Martin EC-10 panels on a 6m truss circle. Robe Robin 64 lighting fixtures allowed for a club look,



and video was run via Resolume, which also pixel-mapped the lighting. Finally, BPM SFX sent Josh Cokerton to deliver additional production values for big look pyro gags. For video capture, camera operator Craig Lees used a mixture of static and handheld cameras to create an intimate atmosphere for home viewers. Viewers were also able to choose the set colours via a colour picker button in the

1 From top: DJ Gamadon in performance at 4Wall's Blackburn space

The crew - standing, L-R: Tyrone Brunton, Andy 'Bullet' Bettley, Jordan Hanson, Matt Brown, Tim Fawkes; relaxing: Jack Langfeld (left) and Will Lucas

Rock band The Hara join the livestream production

livestream, alongside personalised screen messages.

4Wall's Jordan Hanson who was co-project manager, explains: "I wanted to do whatever I could to help, and it's been great seeing the warehouse in use for a good cause. It's so disheartening to look at gear piled up. The industry just isn't used to it."

"4Wall has been the ideal location for us," adds Bullet. "We've got everything on site, or very local to site with the other suppliers nearby. But in reality, we can't sustain self-funded gigs forever. We keep thinking it's going to be the last one, then we have more ideas and want to do it all again!"

Lighting tech Matt Brown, whose last gig was Halsey's Manchester show on 12 March, muses: "I think we're going in the right direction with the shows, but just being able to laugh together in the same room is enough to keep us all motivated."

"It's helped with focus and routine," agrees Bullet. "I think

everyone's mental health has benefitted - you don't realise how important seeing your mates at work is until it suddenly stops."

A WELCOME OUTLET

The last rendition of Warehouse Manifesto involved a second, smaller stage for the warm-up DJs, and a third stage for live band, The Hara, who performed in the adjoining warehouse space, making for a multi-room livestream. The band told LSI: "It was so good to get back into a live show environment, albeit with no audience. Knowing that people were tuning in at home and having a taste of what we've all missed since lockdown was incredible. It's important to be able to adapt and this fresh approach to livestreamed gigs has been a welcome outlet for us and our fans in an otherwise frustrating live music climate."

To hear the full force of the stream, Wigwam's Jack Langfeld and Will Lucas supplied the audio set-up

comprising d&b audiotechnik wedges and small-format PA, an Allen & Heath Q Series mixing desk, and Pioneer DJ DJMs.

The shows are streamed via online platform Livefrom Events, co-founded this year by Steve Machin and Alan Rakov. Machin comments: "When we talked with Tyrone, it was clear that there was a mission here. It's been really wonderful to work on this while generating awareness for Music Support's amazing services. We're looking forward to seeing where we can all take Warehouse Manifesto in the future."

On the future, Brunton says his vision continues to evolve. "We'd love to be able to fill these rooms with people when we're allowed to do so. It's been a great space for us to create something different and meaningful. 4Wall has become an unsuspecting, special venue." 🍷

🔗 www.facebook.com/warehousemanifesto

🔗 www.justgiving.com/music-support



CREW:

Production manager/director:
Tyrone Brunton

Livefrom Events co-founder:
Steve Machin

Show & lighting designer:
Tim Fawkes

Project manager (Production Park): Adam 'Bullet' Bettley

Project manager (4Wall):
Jordan Hanson

Camera director & operator:
Craig Lees

Monitors:
Jack Langfeld, Will Lucas
(Wigwam Acoustics)

Lighting & catering:
Matt Brown

Pyro operator:
Josh Cokerton (BPM SFX)

Presenter: Roger Lyons



TAKE THE STAGE

WITH SHOWTEC'S PERFORMER RANGE



Performer Pendant
Q6



Performer 1500 Fresnel
Q6



Performer 1500 Fresnel
Tungsten



Performer 1500 Fresnel
Daylight

Contact for a demo: 📞 01249 819494 | ✉ uksales@highlite.com | www.highlite.com

FOLLOW US: [f](https://www.facebook.com/showtec) [i](https://www.instagram.com/showtec) [y](https://www.youtube.com/showtec) [t](https://www.tiktok.com/showtec)

Opera finds its voice

Mike Clark reports on how this year's Verona Arena Festival adapted to proceed with its programme of operatic delights despite current restrictions . . .

[Italy] To avoid one of the world's opera shrines remaining silenced following the COVID-19 lockdown, Verona Arena - the famous Roman amphitheatre worshipped by opera fans - hosted *The Italian Heart of Music* to kick off an exceptional 2020 summer season. The event was dedicated to Italy's healthcare workers, who courageously faced the pandemic, because, as general manager and artistic director Cecilia Gasdia says: "Art and life go hand in hand. It would be unthinkable to start again without first considering the commitment of those who worked for months to safeguard our health and at the same time remembering the sacrifices of the greatly-penalised Italian artists."

During the 11 nights of the 2020 Verona Arena Summer Festival - which ran during July and August - fans heard compositions rarely performed at the venue and others that were true firsts, such as Mozart's last masterpiece *Requiem*, performed in memory of COVID-19 victims. There was also the welcome return to the podium of Israeli conductor Daniel Oren and, during the Puccini Gala, a rare performance of *Gianni Schicchi* in semi-staged form conceived by iconic baritone Leo Nucci who also performed the title role.

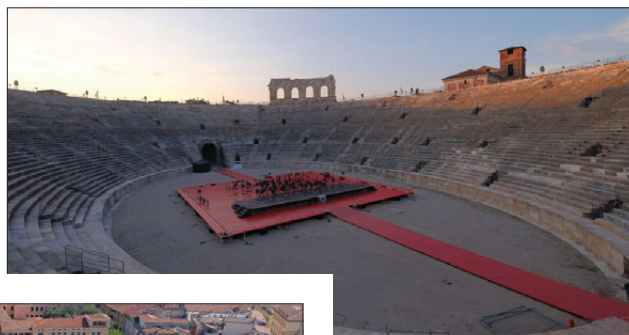
On the last two evenings, the 'protagonist' was Plácido Domingo, a true *divo* for Arena spectators: firstly in a gala dedicated to the venue and its re-birth in this difficult year, with baritone arias conducted by Jordi Bernàcer, and then with the show *Opera in Love*, in which Domingo was the conductor, exalting the stage charisma and vocal power of Vittorio Grigolo and Sonya Yoncheva, protagonists of one of opera's most beautiful romantic duets.

A NEW LOOK

Michele G. Olcese, director of stage design at the world-famous Roman amphitheatre, explains the work that went into



giving the venue a new look for a summer opera season *sui generis*: "The 2,600sq.m area occupied by the stage and stalls seating during normal opera seasons had to be completely freed [installation work was already at an advanced stage



⬆ Lighting was tasked with complementing and highlighting the musical performances

Two weeks were needed to build the new stage and podiums

⬅ Verona Arena's new layout

All photos: Ennevi

when the pandemic struck]. Following a week's dismantling, two weeks were required to install the new layout. It features a centre stage, a walkway leading to it from either end of the Arena, and a series of podiums for chorus members."

To ensure sufficient distancing between the orchestra players, the new stage measured 25m x 25m. It was painted evocative red, as were the 90 podiums - measuring in nine different heights from



40cm to 160cm - placed around the perimeter of the area for the chorus members. All this contrasted with the bare sand that covers the rest of the venue's circular floorspace.

"It was a case of making a virtue of necessity," Olcese adds, "as complying with the regulations on health matters enabled us to achieve a highly symbolic result with a great visual impact, as well as being completely unique at the Arena."

LIGHTING

Thanks to the Arena's renowned acoustics for opera and classical music, lighting had the relatively straightforward task of highlighting and complementing the performances.

LD Paolo Mazzon explains: "For these special concerts, we wanted the lighting to help the music to reach as high skywards as possible, highlighting the emotion created by the music, already powerful in its own right, and paying tribute to all the COVID victims."

14 of the 25 Claypaky Sharpy beam lights deployed were installed on the ground around the stage for the first show, then moved to form four semi-circles behind the orchestra. The remainder were positioned on the topmost stone step of the Arena along with the other fixtures - 30 Martin MAC III Performance, 20 SGM P-5 LED wash lights, 30 ETC 750W profiles, 25 Robe BMFLs and 100 PAR CP60s. Meanwhile, 90 Spotlight Domino 1kW cycloramas were positioned between the chorus podiums, providing 'architectural' lighting for lower part of the Arena. LED Neon Flex ran along the walkways leading to the stage and around the latter's perimeter, and the entire rig was controlled by a grandMA 2 light console and an MA onPC command wing.

The lighting team led by Mazzon, the LD with Fondazione Arena since 1994, comprised console operators Gianfranco Bortolotti, Marco Rossi and Daniele Faroldi, and 'maestro alle luci' Giancarlo Marani, who was responsible for adding lighting cues to the music score of each performance.

SPECIAL EFFECTS

Flavio Guerini and his company Effetti Speciali have been supplying SFX solutions to the Arena for over 30 years. For the 2020 festival's Rossini Gala, the pyro effects were those designed for the finale of *Il barbiere di Siviglia*, staged at the Arena since 2006. The F2 category effects (Night Eagle, Midnight Thunder and Silver Cascade) were all by specialist manufacturer Martello of Rovigo; these were taped firmly to the stone steps above the centre arch and fired using a Pyromac Master Compact unit. For the Puccini Gala, Guerini released 16 cannon shots using gunpowder for *Tosca*. Apart from the strict protocol laid down by Verona Arena for spectators, the entire production staff also had to adapt its work to take all the necessary health precautions, as Olcese explains: "During load-in and set-up, we reduced the simultaneous presence of workers on site as far as possible, scheduling different time slots for the various phases and reducing risks of interference between house staff and contractors' employees to a minimum. All the workers received appropriate info and training [integrated with safety signage and job-specific information leaflets] regarding necessary behaviour, particularly regarding personal hygiene, the use of personal protection devices, safe procedures for using workplaces, and disinfecting shared tools."

Summing up, Mazzon says: "Although we had the advantage of working outdoors, everything had to be sanitised to the utmost and we obviously disinfected the console frequently. Our work is often carried out in small groups - for example, in the area dedicated the lighting control set-up, we all wore face masks - and with the suffocating daytime heat in the Arena, that was no easy job! But it had to be done for our health and above all, that of the people alongside us."

Hopefully, next year's event, slated to run from 19 June to 4 September 2021, will once again provide a much-needed reprieve. ☒



ColorSource Spot jr

✓ Small Price

✓ Small Size

~~Small Performance~~

Read more at
etcconnect.com/ColorSourceSpotjr

visual environment technologies
etcconnect.com



Group dynamics

LSi talks to France's Novelty Group, an emerging force on the production rental scene . . .

[France] In the southern suburbs of Paris sits the central warehouse of an event production supply group that is among the fastest-growing in Europe. Novelty Group, already a leading force in its domestic market, is pursuing a strategy of international growth that has in the past decade seen it extend its operations beyond France. Like the rest of the industry, the company is currently navigating the troubled waters of the COVID-19 shutdown - but they have been putting the pause to good use (more later) . . .

Don't take the name too literally: Novelty Group is neither new nor a passing fad. It consists of a carefully-chosen selection of specialists, the oldest of which, JLT, was formed in 1973. Novelty Group's CEO, entrepreneur Jacques de La Guillonnière, founded his first company, Euphonie, in 1987 whilst still a student at the Institut Supérieur de Gestion (ISG), one of France's leading business schools. Euphonie later became Euroson, which would become a key component of Novelty Group. Since 2003, La Guillonnière has steadily expanded the Group through a series of astute, targeted acquisitions.

Recent years have seen the biggest statement of Novelty's intent. In 2016, the company merged with Magnum, a leading provider of lighting, sound and power distribution equipment and services to France's live events industry. This was followed in 2017 by the acquisition of Potar Hurlant, a live sound rental specialist of 30 years' standing. 2018 saw the acquisition of sound engineering specialist, De Preference, and the takeover of another giant of France's event production industry - Dushow Group.

GLOBAL EXPANSION

By this time, Novelty Group could boast 800 employees and a turnover of €200m from servicing 20,000 projects annually in France and overseas. It had become one of

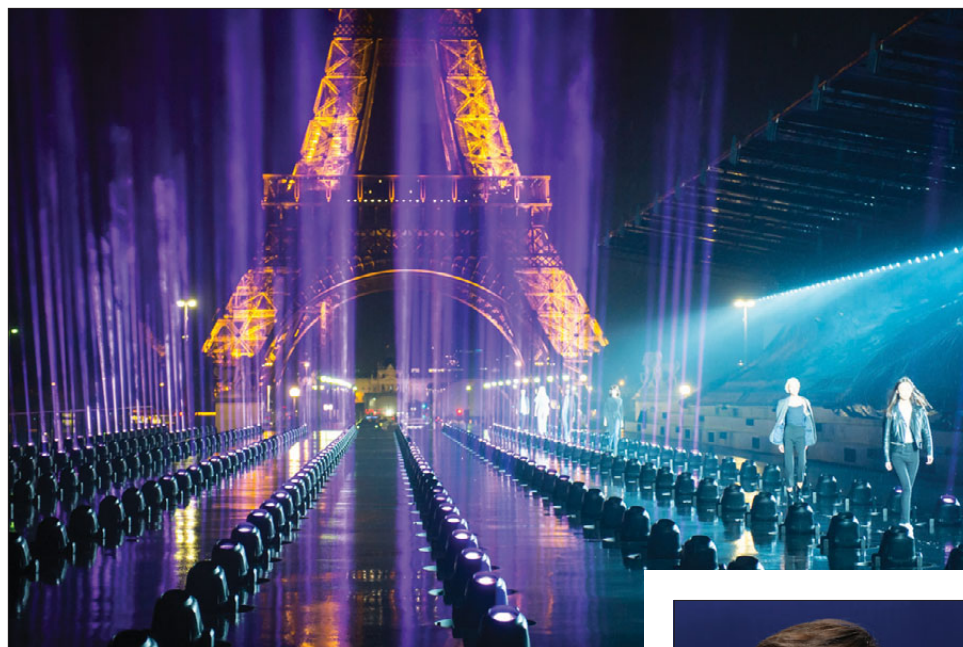


Photo: Stephane But

Europe's leading players in the provision of pro audio, lighting, video, rigging, trussing and power distribution equipment and services. The 34,000sq.m warehouse at Longjumeau is now at the heart of a network of locations covering all of France, plus branch locations in Belgium, Spain, Morocco, the Middle East, Brazil and the UK.

Opened in November 2014, Novelty Group's London branch is headed by director Marc Wegscheider, who has more than 20 years' experience in the events industry. He says: "The UK office came about because we were working with many events clients from the UK, realising their events in Europe and the Middle East, and we found that often they were not happy with the suppliers they were using for similar events. They said: 'We wish we had you in the UK as well!'. So we knew there was a demand for what we were able to offer - and here we are."

ASSET MANAGEMENT

Through its strategy of acquisition, Novelty Group has transformed from a niche specialist, providing event services to France's luxury and fashion markets, to a global operator, active in every

entertainment sector, across five continents. The company stocks a vast array of equipment from premium brands and routinely reinvests 5% of its turnover in new technology.

Whereas many popular service brands in the production industry tend to disappear following acquisition, Magnum and Dushow have continued to trade under their own respected names. They have been allowed to maintain the links of familiarity and continuity with their existing customer bases, while at the same time being recognised as members of Novelty Group - with all the additional strengths and advantages that that entails.

Importantly, Novelty has also retained key people from its acquisitions. Dushow's CEO and founder Eric Alvergnat continued as part of the Group's management team, while Magnum's Jérôme Chupin also stayed to oversee Magnum's operation. Olivier Hagneré, now general manager of Novelty France, became part of Novelty in 2003 with the acquisition of JLT Services.

"The strength of our Group is its people," says La Guillonnière. "We consist of a number of complementary businesses, all of which have established great



Photo: Charline Bon



Photo: Charline Bon

➊ Top: The YSL show at Paris Fashion Week, 2019

Jacques de La Guillonnière, CEO

Marc Wegscheider heads the London-based UK office

➋ Facing page, top: Novelty projects include Fête des Vignerons, Switzerland . . .

. . . the amfAR Gala, Cannes (left)

. . . and an exclusive restaurant experience at Al Ula, Saudi Arabia

"Novelty Group has transformed from a niche specialist, to a global operator, active in every entertainment sector, across five continents ..."

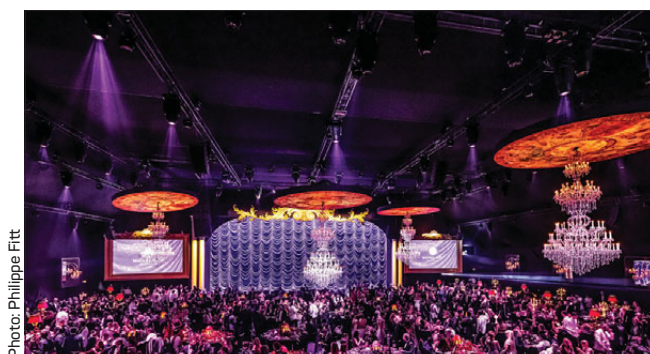


Photo: Philippe Fitt



personal relationships with clients over many years. There can be no doubt that it's those people and those relationships that are the true power of Novelty Group. We want them to become a part of our family and continue providing the great service that made them leaders in the first place."

Although specific details are understandably under wraps, the company does have plans for further acquisitions and geographical expansion in the future, both in Europe and further afield.

BOXING CLEVER

Like many event production suppliers, Novelty prides itself on its ability to offer a bespoke service for its high-end clients. "Our integrated design office produces specifications, preliminary drafts, 2D plans, 3D animations, graphic inlays, models and more," explains Nicolas Savigny, Novelty Group's technical director. "Its purpose is to understand and record, in advance and in the finest detail, the technical elements of an operation and

exactly how it will be executed."

However, for customers at the far more populous lower end of the market, such detailed show planning is not required. For these customers, Novelty Group developed its 'MyBox' range of off-the-shelf, turnkey production packages. These are tailored for small- and medium-scale applications in a wide range of target markets including live music, exhibition stands, business meetings, weddings, sports viewing, catering and parties. The MyBox strategy understands that for many customers, a headache-free, value-for-money set package - delivered, set-up and taken away after use - is exactly what's required.

GREEN CREDENTIALS

Novelty Group's senior management have long taken a positive stance on environmental responsibility. Along with Dushow and Magnum, Novelty is a signed-up member of a French initiative called Prestadd, which was introduced in 2011 by Synpase, the French trade association

representing scenic and AV suppliers.

By carrying the Prestadd label, suppliers guarantee a commitment to sustainable business practices. Members collaborate to identify and adopt best practice; for Novelty Group, this includes a range of initiatives including investment in power-efficient LED technology, and in projectors with long-lifespan lamps and lower-than-average power consumption. Such an initiative has never been more relevant, or more necessary, than in 2020.

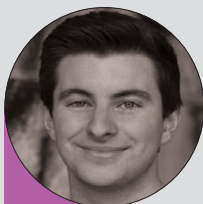
Originally driven by an acute awareness of the risks posed by climate change, Novelty Group's commitment to sustainability has been given even greater impetus by the COVID-19 crisis. La Guillonnière explains: "The lockdown has meant that many in the industry who used to travel all over the world for meetings and exhibitions, have had to look for alternative methods of doing business. For example, COVID-19 has driven our collective adoption of video conferencing platforms more than the fear of climate change

ever did. The reduction in travel is just one of the many areas that we, as an industry, need to learn from."

Novelty Group has also used the downtime to continue to improve and refine its internal processes and working practices, its supply lines and its service offering, to ensure maximum sustainability for the future. Much of this is integral to the company's efforts to achieve ISO 12121, a voluntary international standard for sustainable event management, in order to put sustainable development at the heart of events production.

Policies on recycling and waste management are also important. But the Group's environmental care does not stop there. Beehives have been installed on the rooftops of its Longjumeau HQ, where bees (kept under the care of the logistics department, naturally) make the production industry's first "technical" honey. If that's not a sweetener for a new business relationship, what is? 🍯

➡ www.novelty-group.com



early stagers

Ryan Perry, Rose Bruford College

"It's great to be at a college where we have people studying in every discipline of technical theatre. It means we can make a full production between us and really call it our own..."

Name, age, place of study & course?

Ryan Perry, 21, Rose Bruford College, Performance Sound

What attracted you to this business?

I've played music since I was really young and whilst at school I got the opportunity to manage everything backstage for shows and events. I loved it and wanted to learn how to do it properly. There seemed to be a natural progression from music to sound, so I decided to specialise in sound for theatre and live events.

What do you think of the course?

I've enjoyed the variety of projects I've had the opportunity to get involved in as part of the course, but also the contacts that I've been able to make, too. It's great to be at a college where we have people studying in every discipline of technical theatre. It means we can make a full production between us and really call it our own.

What work experience have you had?

Over the last two years, I have been doing some freelance work too, mostly in smaller London Theatres - Omnibus Clapham, Theatre503, The Old Red Lion, etc. I've mostly been doing sound and lighting technician roles and doing load-in and outs, but it's been a great taste of how smaller and fringe theatres work. Through Rose Bruford, I also got the chance to work at The Royal Academy of Music on their summer musical season last year. It was a privilege to work with such talented performers and musicians (and quite a treat to work with an orchestra of 30+ musicians!).

Who has been your biggest mentor/s?

We had some great visiting tutors at Rose Bruford - I have learned a lot in sessions with Paul Groothuis and Simon King, who both taught us a lot about life in the industry as well as designing and mixing. Outside of college, I have spent time with Mike Walker at Loh Humm Audio - he has taught me a lot about sound and how to approach a project and really get the best out of it.

What's the best career advice you've received so far?

"Be the person people would want to work with again." That's something a college doesn't particularly teach you, but I think it's especially important in this industry.

What's the most valuable lesson you've learned so far?

One thing that has stuck with me was being taught to save show files all the time during programming practice sessions. Fortunately, I had it drilled into me and now I just do it without thinking about it.

Who would you most like to emulate?

After working with Mike and the team at Loh Humm Audio, I have so much respect for the work they do and their attention to detail. Mike has taught me a lot, and I've taken a lot of the things I've learnt from him into other projects I have worked on.

What would be your dream project to work on?

My last show before the lockdown was a college production of *Spring Awakening*, and would have been my first chance to mix a musical. Unfortunately, due to the COVID pandemic, I never got to do it, so I'd still love to get behind the desk on a big show.

What's the toughest thing about entering this business?

The most challenging thing for me has been knowing which direction to take within the industry. We get shown a really broad spectrum of things at college, so it's about knowing whether to go freelance, work for a company, go to the cruise ships, be a designer, be an operator, be an engineer, etc. There are so many paths you can take and it's hard to choose when you enjoy doing a range of things.

What's your experience of the industry's attitudes towards students?

I've done quite a few jobs as a freelancer now, and everyone I have worked with has

been brilliant. It's good to get a bit of experience under your belt and that's so much easier when people are welcoming and friendly.

What advice would you give to anyone following in your footsteps?

Probably the same as I said earlier, be the person you would want to work with. Also get out there and make that extra effort to network and get your foot in the door before graduating.

What do you want your job title to be in 10 years' time?

Once I have a few years' experience, I'd like to start my own business back in North Yorkshire, providing staging and technical services for live events and theatre. I'd aim to start in my local area and hopefully be able to expand and work further afield, too. 🍷

STATS

ROSE BRUFORD COLLEGE

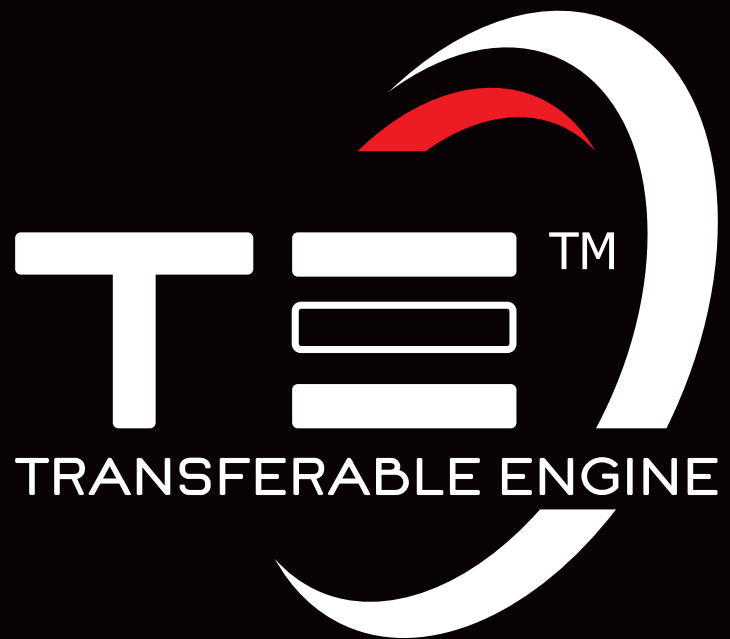
Location: Sidcup, Kent

Industry courses: Design, Management & Technical Arts BA (Hons) courses in Costume Production; Creative Lighting Control; Lighting Design; Performance Sound (Live Design and Engineering); Scenic Arts (Construction, Props & Painting); Stage and Events Management; Theatre Design (Set and Costume)

Industry links: Ambersphere, Claypaky, ETC, Green Hippo, High End Systems, MA Lighting, PRG, Robe as well as many theatres and production companies.

Industry relevance: Graduates have progressed into a range of careers not only in theatre, dance and opera but also the wider creative industries including film, TV, concerts, radio, corporate events, festivals, architecture, cruise liners, live art and public relations.

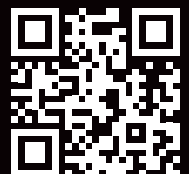
➡ www.bruford.ac.uk



true
lighting
innovation.

ROBE[®]
robe-te.com

Watch How
We Do It!





future tech

Deepfakes | James Simpson predicts the shape of tech to come . . .

"We could have productions that are made up of purely generated, deepfake characters, who can perform without their likeness ever being involved . . ."



With an important election looming in the US, it felt timely to cover a new technology that is both creative and a weapon for misinformation and disruption:

'deepfakes'. A digital recreation of something, or someone, that is indistinguishable from reality, deepfakes started to populate the internet in the early days when people would Photoshop images of celebrities over porn star faces to create an image that had never existed in the first place. Today, the deepfake is being supported by artificial intelligence (AI) that can learn a person's speech patterns, gestures and behaviours in order to create an incredibly realistic video of a person doing or saying something that had never happened.

POLITICS

It may be funny to see Boris Johnson or Donald Trump say incredible things that are amusing and not something a leader would normally say - although in those particular cases, it could be hard to tell the difference - but in a more serious way, it may be possible for someone to share a video of a political leader declaring war, advising panic-buying, or spreading dissent. As 2016 democratic presidential candidate Marco Rubio said: "In the old days, if you wanted to threaten the US, you would need 10 aircraft carriers, nuclear weapons and long-range missiles. Today, you just need access to our internet system . . ."

This point was highlighted recently during a controversial exchange between CNN journalist Jim Acosta who kept having his microphone taken away from him by a White House intern who was trying to stop him from asking difficult questions of president Trump. The video of the exchange didn't look good for the White House and shortly after, a new video emerged that looked identical in every way - except that Jim Acosta was seen to be attacking the intern. This video was a deepfake and completely changed the narrative of a confrontation, subsequently changing the minds of those who refused to believe the reality. "Seeing is believing," but now, "believing is seeing."

CAN YOU TELL THE DIFFERENCE?

Shallowfakes - low-quality, hobbyist attempts at deepfakes - are usually quite easy to tell, but as technology is becoming more available, amateurs are able to harness the power of AI and CGI with easy-to-use controls and interfaces. This means anyone can turn around a video that could fool the majority of people. It

could be used to disrupt politics, brands and even families and relationships - a fake video or images 'revealing' a faked affair, for example.

The first adopters of the technology were national intelligence agencies, who also have the technology to spot and identify deepfakes - they are the ones who are constantly scurrying the internet for deepfakes and removing anything that is potentially dangerous to the public interest.

Could you and I spot a deepfake made by a Russian intelligence agency? Very doubtful, and once it is out, the damage is done. For instance, many people remember some of the people who were identified as sex offenders from operation Yewtree, but those that were found to be innocent later have never managed to recover their reputation.

THE CREATIVE POTENTIAL

Let's look beyond the doom and gloom for a moment. What can this technology do for us? First of all, it is being used for digital doubles in films - like a young Princess Leia in *Star Wars: Rogue One* - or as a digital replacement for stunt scenes too dangerous for a human to perform. A large number of shots in recent blockbuster films contain photo-realistic characters by utilising AI to control their look and performance.

For theatre and entertainment, this can be used to bring digital characters to stage as an illusion or effect. We have seen re-creations of performers from history for live music, but imagine if those performances could be interactive and live without needing to be recorded in advance? AI could study a character from a play and actors who have played the part in the past and create its own performance - a blend of all of the best from recorded history. We could have productions that are made up of purely generated, deepfake characters, fictional or based on famous people from history, who can perform in productions without their likeness ever being involved in the process. The potential for this is so vast that many A-list celebrities have now filed intellectual property on their likeness before and after their death, to prevent producers from ever using them as performers without their consent or even knowledge!

Troubling as it may seem to have a technology that can duplicate an indistinguishable version of another person, it does demonstrate to us the advances in AI and visual graphics that are emerging and can be used, for better or worse, for our general entertainment. 🌀

James is a creative technologist and designer working in the world of digital theatre. He is a pioneer in the use of VR and AR in theatre and is trying to evolve the production design process with his research in design visualisation.

Design your floor to fit your event



World leaders in bespoke event floors

Harlequin is the world leader in advanced technology floors for performing arts, theatres, events and productions. Harlequin's event and display floors are the industry choice for TV and film production, concert and tours, fashion shows and for special commercial projects such as museum exhibitions, large scale product launches and shopping centres.

Harlequin Clarity is a clear vinyl floor that can be reverse printed with any design, logo or pattern. This method of reverse printing is ideal for projects with high foot traffic, as the print is always protected.

Over forty years after its creation Harlequin remains global leader in its field with offices in Europe, the Americas and Asia Pacific.

+44 (0) 1892 514 888 events@harlequinfloors.com



HARLEQUIN
www.harlequinfloors.com



← Clockwise, from top: Protesters in Berlin march for #AlarmstufeRot

Florida's Hard Rock Hotel lights red for #RedAlertRestart

The Empire State Building in New York joins the US action

South Africa's flightcase movement in Pretoria . . .

. . . and similar action in the Spanish capital, Madrid



GLOBAL OUTCRY

The industry's fight for survival continues, culminating in a worldwide #WeMakeEvents day of action . . .

On 30 September, event professionals around the world united to 'Stand As One' for the #WeMakeEvents Global Day of Action. The mission: to highlight how the global live events industry urgently needs to get back to work or - where that's not possible due to on-going COVID-19 restrictions - be offered extended and significant financial support.

The action resulted in a wave of light spreading around the world as iconic buildings and landmarks once again joined the #LightItInRed movement in an expression of the industry's current 'Red Alert' status. In many locations, beacons of white light also lit up the night sky, each signifying potential vast numbers of job losses, while creative demonstrations also took place around the world, helping to drive the message home and gain mainstream media coverage of the plight.

BUILDING MOMENTUM

In the weeks leading up to the Global Day of Action supporting events took place around the world, including in the US, Canada, Sweden, Slovenia, Belgium, Latvia, Brazil, France, Germany, Spain and the UK, to raise awareness of those impacted in the event supply chain.

In the **US**, #RedAlertRestart action on 1 September spread coast to coast (also taking in the Pacific and Caribbean oceans) with a goal of urging Congress to vote for the Restart Act and to offer extended and expanded financial support. More than 1,600 buildings, venues and structures joined the movement, which also included demonstrations in many cities. A four-and-a-half-hour livestream on Facebook, hosted by lighting designer/programmer Christian Jackson, featured reports from many locations, including New York, San Francisco, Cleveland, Youngstown, Kansas City, Pittsburgh, Santa Fe, Phoenix, Miami and Hawaii, plus many more.

Action included numerous 'flightcase movements' (socially-distanced mass gatherings of event professionals with flightcases symbolising the number of livelihoods at risk); technicians in Trinidad using lights to spell out #WME, an allusion to the #WeMakeEvents hashtag; a 144-vehicle parade in Nashville; and an outdoor event in Las Vegas featuring a staging area filled with 68 pieces of truss, each one symbolising 1,000 locals out of work. The day gained high-profile endorsement from artists and performers including Alice Cooper, Foo Fighters, Pearl Jam, Dropkick Murphys, Slash, Barry Manilow, Jack Black and more.

In **South Africa**, 200 industry professionals including business owners, technicians and freelancers, staged their own flightcase movement as they gathered at the Paul Kruger Statue in central Pretoria on 8 September to submit a memorandum of demands to the Department of Sports, Arts and Culture. The action followed the region's #LightSARed action - inspired by #LightItInRed - which took place in August and saw over 500 venues and sites take part - including the iconic flat-topped Table Mountain.

In **Germany**, on 9 September, the Red Alert Action Alliance organised a large demo in Berlin with around 15,000 people taking part. They marched under the banner #AlarmstufeRot before the final rally began at the Brandenburg Gate, lasting for several hours.

GLP founder and MD Udo Künzler took to the stage to represent event technology manufacturers at the rally. Reflecting on the event, he said: "The tragic thing from a manufacturers' perspective is that our business won't immediately pick up once larger events become feasible again, because our customers will first need to earn money before considering new investment."



Photo: Lorcán Doherty



Photo: Joe Okpako



Photo: Joe Okpako



Photo: Skypixels



Photo: MdAu Shimul Photography



Photo: YOY Production

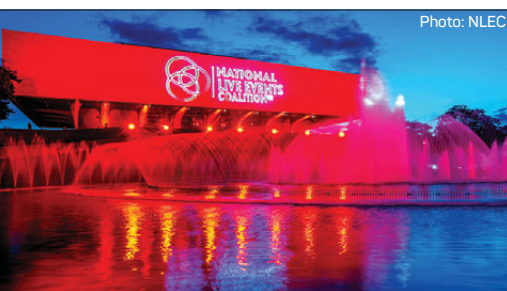


Photo: NLEC

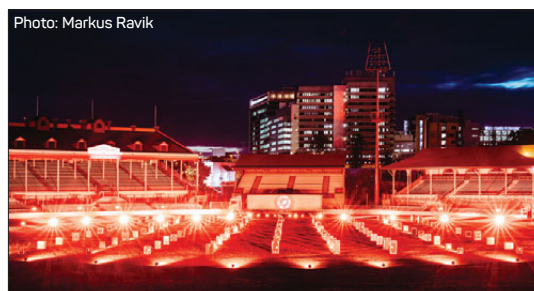


Photo: Markus Ravik



← Clockwise, from top left: Protesters gather in Belfast's Custom House Square

A beacon of light at Foyle Bridge in Derry highlights job losses

India's Sound Land joins the #LightItInRed movement

South Africa's Table Mountain helps #LightSARed

Event professionals raise awareness for the plight in London

A silent protest in London's Parliament Square

"Everyone I know in the industry is very passionate about events. This is our life! In order for it to continue, we urgently need effective political support and an effective rescue plan. What we also need is a perspective of how we can gradually resume our work over the coming year."

In **Spain**, trade associations and MUTE - a union of event professionals - carried out countrywide peaceful protests on 17 September under the #WeMakeEvents banner - adapted to the Spanish #HacemosEventos - with many taking to the streets in key cities.

Juan Jose Villa, from Equipson and Spanish trade association, AFIAL comments: "The situation in Spain is terrible and we're working very hard to highlight that to our government. Our event on 17 September got coverage on most of Spain's regional TV and radio stations, and we believe that we have shown how important live events are to the Spanish economy."

Meanwhile, in the week leading up to the #WeMakeEvents Global Day of Action, **Northern Ireland** event professionals carried out a socially-distanced demonstration in Custom House Square in central Belfast, with more than 500 event professionals taking part - from stage crew and riggers, to lighting, audio and video technicians, AV companies,

stage and set builders, accountants to front-of-house staff, box office and ushers, and more.

Driving the region's effort was Sean Pagel of PSI, who told LSI: "The event was a huge success and passed off without a hitch. We were, after all, working with professionals - the people who, day-in and day-out, make events. To stand in front of the assembly of these people, to tell them that #WeMakeEvents is working for them, for their recognition and right to return to work, was overwhelming, emotional and encouraging. The event was a success, not only because of the orderly way everyone assembled, attended and dispersed, but also with regards to getting the message out. We had fantastic coverage in the media, and very positive comments from the public."

He adds: "For me, the only negative of the event was that we had to stage it at all. Our industry is vital in so many respects; we've always been the tonic for the public during times of hardship. First to close, last to open; we must be retained, as when we come back, we will be the fastest to recover, and have the greatest economic input to the nation in a short space of time. People need events. But without the people who make them, they won't happen."

In **England**, on 29 September - the eve of the Global Day of Action - over 1,300 crew, creatives and company representatives from across the industry gathered in London's Parliament Square for a peaceful 'creative demonstration'. Days before the event, Chancellor Rishi Sunak had announced details of the UK government's new job support scheme, saying it would target "viable jobs which provide genuine security." The statement prompted outrage in the arts and live events community who feel excluded from the provisions and insulted at the insinuation that their jobs are no longer considered 'viable'.

Banners held aloft at the protest proclaimed: "We are viable!"; "Save our industry!"; "Interval not curtain call!" and "Live audio - always making sure your voice is heard - time to listen to ours!" Whilst a series of prop gallows demonstrated how many feel the industry has been 'hung' out to dry by the UK government.

Present at the protest, Avolites director Steve Warren told LSI: "The creative demonstration at Westminster provided the sombre 'opening act' for the #WeMakeEvents Global Day, magnifying the press inclusion, social coverage and public awareness. We stood as a representation of all sectors of our industry in a safe, peaceful and quietly urgent protest. I believe that ongoing

non-confrontational protests and activations such as #LightItInRed and the beacons of light will continue to be effective tools for the campaign. 'We will not be ignored!' has become my mantra in recent weeks!"

WAVE OF LIGHT ACROSS THE GLOBE

With an estimated 30 million-plus people across the globe working in live events, the #WeMakeEvents Global Day of Action on 30 September quickly gained widespread support. More than 2,300 buildings and structures from across Europe, the Americas, Australia, Africa, Asia and Oceania registered on the #LightItInRed website as having joined the global wave of 'emergency red' light, making the movement the single largest coordinated global event to take place since the campaign launched in the summer.

Just as with the regional events that preceded it (see LSI September for coverage of the UK's 11 August Day of Action), the demo saw thousands of cultural buildings illuminated in red, whilst the #WeMakeEvents and #LightItInRed hashtags trended on social media.

With most action taking place at 8pm local time, the Day of Action kicked off in **New Zealand** and **Australia**, where key landmarks such as the Auckland Sky Tower, The Domain in Sydney and Perth's Matagarup Bridge were illuminated.

Those wishing to follow the action live could do so thanks to a livestream created and broadcast by the team behind the event and Auckland Live. Speaking from the Circa Theatre in Wellington, Nick Creech, who has worked as a rigger for Cirque du Soleil, said: "I feel the pain of my friends in New Zealand and around the world who are struggling. We work behind the scenes we are not the ones making the noise out front, but tonight we want to make sure people know that what we do is important."

The red wave of light then swept through other countries including **Bangladesh, India, the Philippines, Dubai, Greece, Turkey, Poland, Italy, the Czech Republic, Austria, Norway, Denmark, Slovenia, South Africa, the US, Canada and South America**, to name just a few. Venues lighting up red included: Ostrava Aréna in the Czech Republic; the Palazzo dello Sport in Rome, Italy; Poland's Palace of Culture and Science; Turkey's ICEC (Istanbul Convention & Exhibition Center); Telenor Arena in Norway; Slovenia's Ljubljana Castle; the Iloilo Convention Center and Ateneo de Manila University's art complex in the Philippines; South Africa's Cape Town Stadium; and Dubai's JW Marriott Marquis Hotel.

← Clockwise, from far left: Joining the #LightItInRed movement - The HQ of Blues Communications in Dhaka, Bangladesh

Slovenia's Ljubljana Castle

The Sky Tower in Auckland, New Zealand

The Brisbane Showground, Australia

The Iloilo Convention Center in the Philippines



Photo: Jonathan Gonzales - eclipse Staging Services



Photo: Luděk Kouba

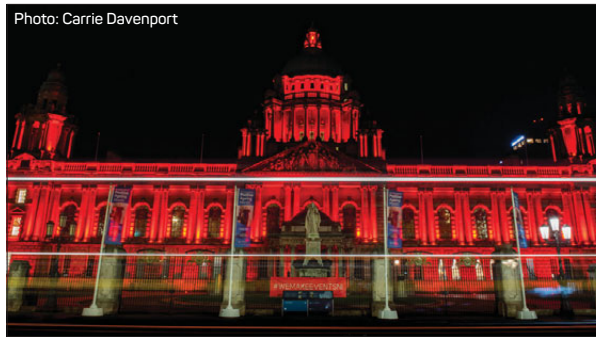


Photo: Carrie Davenport



Photo: Luke Dyson



Photo: Wolverhampton Grand

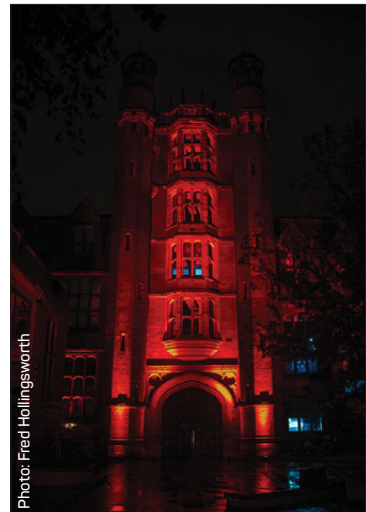


Photo: Fred Hollingsworth



Photo: Tom Arran



Photo: Mikal Ludlow

⬆ Clockwise, from top left: Dubai's towering JW Marriott Marquis Hotel

Pisek Theatre in Čedké Budějovice, the Czech Republic

Pantomime dames from Wolverhampton Grand join a BECTU march on Westminster, London, aligned with the Day of Action

Newcastle University

The O2 Arena

Belfast City Hall



Photo: Jim Carey

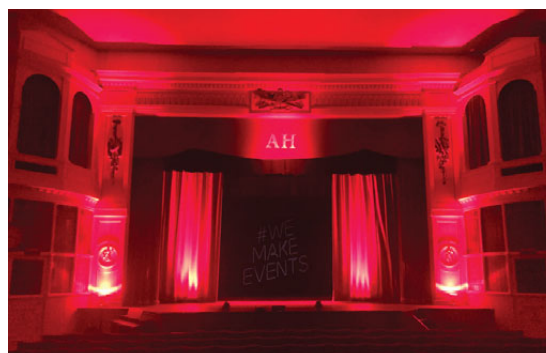


Photo: Jakob Ebrey

⬅ Clockwise, from far left: Protesters outside Hull New Theatre & City Hall

A rally at Cheltenham Town Hall

The Albert Hall in Llandrindod Wells, Wales

Silverstone race track

Brighton's i360 attraction beams the message into the night sky



Speaking from South Africa, DWR Distribution director Duncan Riley said: "The past seven months have really been trying times for our industry. To see the freelancers struggle and having to say goodbye and retrench our own staff, has been the most difficult part. Simply put, in South Africa we cannot continue as a live events industry as the country now stands."

In the UK, where the #WeMakeEvents campaign first started, the day's activities began with a BECTU-organised march of pantomime dames from the West End to Westminster, whilst in the evening, countless theatres, music venues, clubs and company headquarters joined a long list of cultural landmarks to be lit up in red. These included the London Eye, Royal Opera House, the Royal Albert Hall, O2 Arena, Glasgow's SSE Hydro, Cornwall's Minack Theatre, Brighton's i360 tower and Concorde 2 music venue, the Royal Welsh College of Music & Drama, Birmingham Hippodrome, Rochester Cathedral, Silverstone Race Track, Cheltenham Town Hall, Scotland's Borders School of Music, Newcastle University, London's ExCeL Centre and many more.

Jeremy Rees, CEO of ExCeL London, comments: "Before COVID-19, the UK events industry was a world-class sector worth £70bn, employing over 700,000 people, across 25,000 businesses. The pandemic has had a devastating impact on our sector. We're calling on the government to extend the support available to our industry and provide clarity on when the events sector will be able to reopen. We are totally committed to continuing to work with the government to explore ways of resuming business in a safe, COVID-secure manner and are determined to build confidence around this."

Clearly moved by the widespread action, #LightItInRed's Phillip Berryman told LSi: "It was amazing to get 650 buildings lit around the UK on 6 June during the first #LightItInRed action day - to grow from that to nearly 2,500 all around the world is mind-blowing. The fact that so many iconic buildings were lit is so humbling. And it's not just photos that we are getting sent through, it's also production-style videos of the illuminations."

Sarah Berryman adds: "This time we also got videos from universities and colleges, because the students there want to have an industry to go into when they graduate. So we are reaching more and more people."

STAR SUPPORT

A raft of celebrities and artists endorsed the campaign, including Coldplay, Radiohead, Elbow, Mumford & Sons, Melanie C, Noel Gallagher's High Flying Birds, Frank Turner, Keane, The Libertines, Faithless, Massive Attack, The Happy Mondays, Biffy Clyro, Madness, Fatboy Slim, Skunk Anansie, and many more. Scottish singer-songwriter Amy Macdonald went a step further, pledging to host special livestream event on 1 November with all proceeds going to the #WeMakeEvents campaign.

Big-name festivals, record labels, promoters, clubs and events also helped to raise awareness, with social media posts from Download Festival, Live Nation, Island Records, Boomtown, EMI Records, Old Trafford Football Club, Green Man Festival and countless more helping the message spread to their considerable social media followings.

Glastonbury Festival's Emily Eavis also shared a message of support. Posting on Twitter, she said: "We are part of a UK creative industry which contributes over £100bn to the economy each year and which puts this country on the map. An industry that brings people together like no other, to watch performances in theatres and venues and fields; performances which inspire, delight, move, educate and create memories to last a lifetime."

"But as it stands, there is no sign of the live events industry returning in the coming months. We are an industry in crisis. If we don't speak up, many theatre companies, venues, promoters, artists and crew could struggle to such an extent that this industry is simply never able to return to the incredible force it was before the pandemic struck."

She continues: "We need the government to recognise what the performing arts bring to the fabric of this country, and how much it adds to the well-being of so many. We need them to offer financial support not just to venues and organisations that put together these performances, but also to the crews that actually make it all possible."

ONWARDS

With such vast coverage and the campaign's vital message being heard on a global scale, it is hoped that the respective governments will work with the live events industry around the world to provide the support it needs.

Andy Dockerty, managing director of Adlib and one of those behind the now industry-spanning #WeMakeEvents conglomerate, comments: "This was an important event as it truly did show a real sense of comradeship and proves how we're all in it together. Speaking to other participants in the various countries, it seems as though certain governments are actually helping companies and venues find ways in which to put on events, whereas others are simply ignoring all pleas. The purpose of this event was to get all governments to ensure our normally thriving industry survives this current crisis, be ready to help the global economy recover, and that hundreds of thousands of jobs are saved in the process."

Posting on Facebook the morning after the incredible show of global solidarity, the #WeMakeEvents team said: "Yesterday, friends and colleagues around the world united in their belief in the live events and entertainment industry and their determination to safeguard its future. Thousands of amazing global activations were shared and awareness was raised. We stand as ONE, empowered and proud. We will keep the momentum going as we move into Restart, the next phase of creative action. Keep connected and keep safe. Thank you."

For details on how you can support #WeMakeEvents, visit the web address below. 📄

➡ www.wemakeevents.com



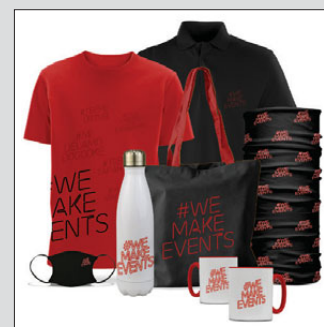
#WEMAKEEVENTS MERCHANDISE SHOP OPENS

Supporters of the #WeMakeEvents campaign can now purchase a range of branded merchandise from a new online store.

A range of items are available, from t-shirts, face coverings and mugs, to tote bags, water bottles and pin badges. The shop

ships globally, with a minimum of 80% of profits from commercial sales going to industry charity, Backup. Visit the store via the web address below...

➡ www.wemakeeventsstore.com





audio file

Always the bridesmaid | Phil Ward speaks volumes . . .

"Is there a snowball's chance in Hell that audio will ever be granted the same privileges of video? Exactly the same chance that a snowball would have, in Hell . . ."



Ever since the Earth cooled and the dinosaurs came, audio has played second fiddle to the leader of the entertainment orchestra: video. Primitive man scrawled buffalo on the cave walls, but where are the master tapes for the accompanying soundtrack? Wiped by BBC archivists, probably. All that remains is some Stone Age footage of woolly mammoths rutting, narrated, in one of his earliest appearances, by Sir David Attenborough.

The habit of overlooking the audio details continues today. Promoting "an immersive audio-visual experience" in Helsinki called *Laila*, the designers offer highly detailed insight into how it was created with the Finnish National Opera. So, we get the collected thoughts of the computer graphics guy, the motion designer and visual artist, the experience and visual designer, the robotics researcher, the AI interaction designer, the choreographer, the media technology engineer and the guy who made the tea. The sound designer is nowhere to be seen. I'm sure he was very busy.

I know of one UK installation that's meant to be audio and visually interactive with random triggers, but when corners were cut it was the sound, not the lights, that got replaced by a singularly non-interactive compromise. As one of the (audio) protagonists declares, "they wouldn't do that to the architect".

Audio is actually so crucial that artificial crowd noise has been added to televised sport all around the world, during the pandemic that keeps the stadiums and arenas empty. Not perfect - at worst the disconnect between live action and pre-programmed sound beds can evoke the awful spectre of canned laughter - these FIFA-derived hologram hubbubs do put some tension back into the spectacle, and without them the viewing experience is so dull it would surely damage ratings.

But what about the players? Don't they need a similar psycho-acoustic boost? In London, renowned theatre sound design and rental company Autograph Sound has recently begun to recover some business by supplying sound reinforcement to one soccer club for just this purpose - by arraying the speakers around the pitch and facing onto it.

According to sound designer Ian Dickinson, using d&b's Soundscape for this application has "helped with the perceived spread and clarity around the stadium of what we're trying to do. It's also given us a bit more of a creative license in achieving a more realistic environment [that] sounds less 'static' throughout the match - and has helped with the perceived location of things like specific chants and crowd reactions.

It's still early days, as we had to switch systems and get a new configuration up and running for a match this weekend, but I suspect the more games we do, the more we'll learn and the more we'll be able to explore the possibilities."

The next challenge, depending on how long this wretched interlude will last, would be to resolve the conflict between any pitch-orientated artificial crowd noise - which would ordinarily be picked up instantly by the spot mics used for broadcast ambience - and that used by the broadcaster in the blended television feed. Guaranteed to catch the audio off-side, unless tackled.

Multi-sensory experiences are becoming all the rage. One aquarium in California includes floor shakers, wind machines and scent generators, no less. Out Board's TiMax SoundHub has been used to spatialise an exotic soundtrack with data from accelerometers placed inside real bee hives - yes, that's exactly what I said, hives, as used by real bees - to trigger randomly different audio sequences, via MIDI. This created a dynamic soundscape effectively mixed by the movement and activity of the honey-making little critters themselves. There was also LED lighting responding to nature's call in the same way. Yes, you can say that this multiplies the neurological thrills. But, in another way, it dilutes them.

As soon as there is a visual element to a production, in that very second the audio is taken for granted. It is relegated. Not in importance - it always remains more direct, emotionally, than the visuals - but in concentrated attention. Suddenly, there is something else in the foreground, and the exquisites of pure listening are blinded by the light. It's as if human audiovisual perception is on a single-pole toggle switch. There is nothing we can do about this. Is there a snowball's chance in Hell that audio will ever be granted the same privileges of video? Yes, yes there is. Exactly the same chance that a snowball would have, in Hell.

I was being very harsh earlier; the sound designer of *Laila* is the very quotable Tuomas Norvio, but he doesn't work for the company behind the visual design and, therefore, does not figure in their PR. But the dramaturg on the project, Paula Vesala, does say this about her experience during pre-production: "I'll never forget the feeling with the sound only, when you could really hear all the sonic interactions when you were guided by your ear only. With the massive visual elements installed, you just don't hear it all in the same way anymore, but that is one of the things that must be accepted."

I rest my case. 🎧

After turning a simple 8-track home studio into a hugely successful Miss Factory, Phil Ward turned to pro audio journalism and became an editor and now freelance writer. He lives in Cambridgeshire where he also runs a small taxi firm for the exclusive use of family members

PRECISION TOOLS FOR PERFECT SOUND

High-output, full-frequency NEXO sound just got a whole lot smaller. ID Series is the ultimate toolkit for creating thrilling, immersive audio experiences.

- ID24 compact and ID14 super-compact speakers
- Touring and install versions
- Optional / variable directivity
- Black, white or custom RAL colours
- Dedicated partner subs
- Plug & Play amplification and processing solutions
- Full range of mounting accessories
- NS-1 System Configuration and Simulation Software.



Corporate &
Public Spaces



Theatres



Bars &
Restaurants



Houses of
Worship



Immersive
Experiences



Video
Mapping



NEXO



NEW
iD14



NEXO

SYSTEM DESIGN SERVICE
nexo-sa.com/design

between the lines

Richard Cadena reviews **Concert Design: The Road, the Craft, the Industry** . . .

"This is not a book that teaches you how to light a stage; it's more about how to get to become one of the people that does so . . ."

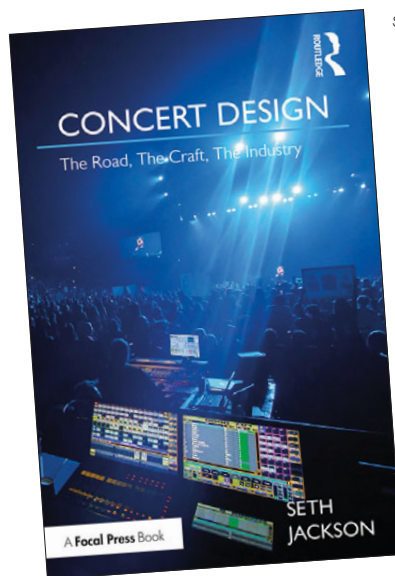
→ When I first met Seth Jackson probably 15 years ago or more, I just thought he was a really nice guy. I remember one particular time talking with him before the Parnelli Awards at LDI just outside the venue, and he was telling me about working with Don Henley as the lighting designer. The story made it obvious that Seth was more than just a nice guy - he was well-versed in the arts, art history, architecture, and the psychology of dealing with people like Henley.

Many years later, my acquisitions editor at Routledge, Stacey Walker, asked if I could recommend someone to write a book about stage lighting. By this time, Seth was teaching concert lighting design at his alma mater, Webster University, so he was the first person who popped into my mind. As I recall, he was interested, but he was also extremely busy, so a long period of time went by with nothing happening. Then I saw him at USITT in 2019. He told me his new book was soon going to be published . . .

I'm not claiming any responsibility for setting the book in motion - I was probably only one of many people who threw his name in the ring - but in March 2020, a fresh copy of *Concert Design: the Road, the Craft, the Industry* by Seth Jackson arrived in the mail, and it's even better than I anticipated.

The book covers a variety of topics, from how to get into the business of lighting stage, to life on the road, the psychology of dealing with personalities, and a lot more. This is not a book that teaches you how to light a stage; it's more about how to get to become one of the people that does so, and how to be the most in-demand person who lights stages, and it comes from someone who has built a great career lighting stages.

One of the great debates in the live event production industry is the question of whether or not to go to college for technical theatre or to learn live event production. How many times have you heard someone diss a tech school because of a bad experience with one of their graduates? Or maybe you're the one dissing them? No one addresses that topic more honestly or openly than Jackson does in this book. As an associate professor who has actually lived his life on the road doing what he teaches, he is perhaps more qualified to address this topic than the average person living out of a tour bus. But he doesn't claim to have a patented one-size-fits-all answer. He spells out the options (Bachelor of Arts, Bachelor of Fine Arts, or trade



school) and describes each one, pointing out the pros and cons, but ultimately lets the reader decide for themselves. Much of the book follows this pattern.

Whether or not you choose to attend college or university to study lighting design or technology, Jackson has good advice for you, as in the section titled *Sweep the floor like you are lighting Pink Floyd*.

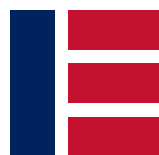
As is the case throughout the book, he illustrates his advice with stories from his career as well as those of other people who have successfully navigated the live event production waters. Not only are they good stories, but they all deliver a message that is one more piece of the puzzle that paints the big picture of the industry. I particularly like the message: "Always say 'Yes', then figure out the rest later." I've built a career on doing exactly this, and I've also witness people plateau because they were afraid to say yes unless they had a lock on what

they were saying yes to. This does not apply when safety is involved, so rigging thousands of pounds of kit over people's heads or working on a live electrical circuit certainly don't apply. But when we're talking about designing a lighting system, programming a console, or many other aspects of the industry, it's the best advice anyone can offer. The next best advice Jackson shares just might be: "Make sure your tattoos are spelled correctly." If you don't have a tattoo spell-checker, then you're not living right.

And it's not just advice that you'll find in this book - it's peppered with stories, observations, and more tips from some of the world's best lighting designers, techs, captains of the industry, and industry mavens like Jeff Ravitz, Howard Ungerleider, Eric Loader, Mike Golden, Michael Strickland, Dizzy Gosnell, Raj Kapoor, Jim Lenahan, Chris Lisle, and more. Even the forward is a great story by Steve Cohen and the book is also filled with lots of insight from one of his bosses, Barry Manilow.

Jackson has an easy-to-read narrative style of writing that reminds me of sitting down with him in a big, comfy chair talking about what he's been doing with himself. The content is made up primarily of lessons - big and small - that are very intelligently relayed but in a language that's relaxed and familiar. The stories will make you want to keep reading, and before you know it, you're at the end of the book and still wanting more. ●

▶ [//plasma.me/concertdesignsethjackson](https://plasma.me/concertdesignsethjackson)



INDU-ELECTRIC

Power Distribution



www.indu-electric.de/en

Customized Power Distribution Systems

For over 30 years **INDU-ELECTRIC** has supplied companies and event organizers around the Globe with Power Distribution Systems.



The **INDU-ELECTRIC** Power Distribution Boxes are famous all over the world for their build quality, reliability and unfailing performance.

INDU-ELECTRIC – Uncompromising reliability at the highest level!

Contact us: info@indu-electric.com



Sleepless: A Musical Romance

If you could have just landed in the middle of the Troubadour Wembley Park Theatre on the western edge of London in late August, it would have felt completely normal at first glance: just a new show in tech, pulling together all of the elements piece-by-piece. Until you noticed the masks, the face visors - even the director wearing one. The spaced-out production desks. The white crosses on the seats, indicating which were not to be used. It was a familiar process, just not quite normal . . .

But you couldn't just land there. You couldn't even just drop in: access meant arriving at 10am to be swabbed for an on-site test, then a carefully-distanced hour waiting to be declared COVID-clear. Then, and only then, would you be given a wristband - your pass to enter. This is definitely not your average day of tech - though through all that was an overwhelming feeling of delight that tech was happening at all after so many months of nothing.

This is the world of *Sleepless: A Musical Romance*. Not quite the first theatre show to get going - outdoor theatres claimed that prize - but very probably the first show to get up and running in a relatively normal manner, with nightly performances to a live audience in a relatively standard indoor theatre.

Given that some of the biggest names in theatre seem to have just shut everything down and run for the hills, getting this to

happen has fallen to Michael Rose, a producer quite happy to describe himself as "not the biggest fish in the pond, though I've been around forever." In getting the show back on - it had loaded in and just started tech' when shutdown came on 18 March, and everything has just been sitting in the building since - he's found himself the centre of attention for an entire industry, and while neither that nor being one of the very few shows actually playing can do any harm from a publicity or possible ticket-sale point of view, he'll tell you that's not his reason for doing this. "I admire the work that's been done raising charity funds for the many thousands of freelancers that have dropped through the gaps in the government support scheme, but that money will be gone in a flash. The only real answer to this is to get back to work."

From the audience's point of view, that's meant sticking to the current guidance and reopening with social distancing of at least a metre between people in the auditorium, unless they're part of the same household bubble. The Troubadour theatre is in some ways ideal for this: it's a former film studio that's been converted to a performance space by the insertion of a large single-tier bank of 1,200 seats; removing some of them has created more aisles for better circulation. There is a large foyer and plentiful large, spaced-out toilets, and none of the pinch-points of narrow corridors that traditional West End theatres have. In normal times, it arguably lacks the intimacy of the



Rob Halliday checks in with the crew behind the musical adaptation, which marked the return of indoor theatre shows in the UK...

Performance photography by Alastair Muir

best of those theatres, but for the circumstances we now find ourselves in, it might just be the perfect place.

DAILY TESTING

More interesting, though, is how things are handled for those working on the show, the key part of which is the daily test. Every single person - cast, crew, band, backstage visitors - is tested every single morning, using an on-site test lab that can get a result in about half an hour. Allow half an hour to swab people then load the samples into a 24-slot testing machine and that's about an hour turn-around in total, with the test team running two of those machines in tandem to improve the through-flow. You receive a pass or fail message through the Yoti identity app on your phone, or sometimes the company manager gets to you first. Pass and you're in, fail and it's off for the official Health Service test. Once everyone's been through, the test team and their equipment leave (to another gig, presumably) and you're in for the day - hopefully having remembered to bring something for lunch!

Rose found the company capable of doing this himself, using a test developed in Poland. Rupert Graves from GeneMe UK, the company that has brought this test to the UK and is running it for *Sleepless*, explains: "The test is called FRANKD, which stands for Fast, Reliable, Accurate Nucleic-based Kit for COVID-19 Detection. FRANKD uses

RT-LAMP technology, a much newer technology compared to what's generally being used in traditional labs. It's different because there is no RNA extraction stage, which means we can run the test on-site. It also means we can deliver results in 30 minutes from each test run. Since we are running 24 tests per machine, it means we can run 48 tests per hour. We have two machines at *Sleepless* so we can process nearly 100 people per hour."

GeneMe UK has an on-site team of three or four people, with those being tested only really having contact with the nurse who swabs them. "That's a first filter: we are only testing people who are asymptomatic. If someone turns up with obvious symptoms, they shouldn't be there in the first place and we'll just send them away," Graves explains. "We can swab the nose or mouth, it makes no difference. The swab goes into a buffer that contains a binding agent, which renders the virus inert if it's present. Then we pipette that into a reaction tube that contains our patented enzyme. The reaction tube then goes into a PCR machine which heats it to a constant 65°C. If fluorescence is detected, it means that SARS-CoV-2 RNA is present and that particular sample is considered positive."

"The protocol at each testing location is a bit different," he continues. "At *Sleepless*, if there's a positive test, we will move them to one side and test again immediately. If it's positive



Photo: Alastair Muir

- ↑ Top, right: Ken Billington at work
- The band played on a platform stage-right
- ← Director Morgan Young (centre)

again, they get sent home to self-isolate and request a test from the NHS." He admits: "We do get inconclusive results every now and again. In such cases we also re-test immediately."

He notes that a key complication of on-site testing is actually dealing with group dynamics when results are announced. "Normally, people get test results by post or email when they are at home. In this type of testing environment, everyone gets their result at the same time and there is a group pressure to share the result. This being the case, it is really important to consider psychological welfare in addition to the risks of COVID-19."

The Yoti app offers a secure route for then communicating the test result and allowing a person to display when they last took a test. "Yoti is a UK-based digital identity company that works with both governments and large corporations," Graves continues. "The close integration with Yoti means that it is a fast, secure and totally paperless resource. We are so much more data-secure compared to most testing processes, where results are shared on pieces of paper that anyone can read." The claim is that this test can detect the virus' presence within a few days of someone being infected, early in what is now accepted to be the roughly 14 days before physical symptoms appear.

A key question is, of course, cost: testing every person every day quickly adds up. "The standard testing-as-a-service price is £50 per test," Graves reveals, hinting that's not what they're paying here. Michael Rose puts the cost of testing at £60,000 for the show's run, which ends on 27 September. Inevitably, the question becomes whether the testing regime has to be this rigorous, and in early discussions with the people and unions involved with the show, Rose had proposed the test not be daily. He does now concede that doing it every day "has given the cast, the company and the musicians great confidence," and he has achieved concessions from some of the unions that the time spent waiting for the test doesn't count as 'on the clock' time.

During production, testing took place in the venue's big lobby; there was a strange hushed calm over this in the early days, a strange nervousness about the process from those waiting to be tested (with newcomers happy to take advice from those who'd been through the process - throat less intrusive than nose, but only allowed if you haven't drunk or eaten anything for the preceding half hour or so), and about the possible result from those sitting patiently post-test. Regulars had quickly learnt to bring a book or other distraction to while away the time. But once everyone was in, there was a definite sense that you might now be in the safest place in London . . .

A few weeks after *Sleepless* restarted, the UK government announced their Project Moonshot, in effect proposing to extend this test-and-passport-app-as-proof approach to the entire British population.

ONCE INSIDE

Accept that the test proves everyone is COVID-free and there is an argument that masks could be dispensed with - but everyone is still wearing them. It does no harm, of course, plus whilst the show's policy is testing, the venue's is that masks must be worn. The only exception was for the cast performing on stage, but apart from that, even director Morgan Young was masked up, though he did switch to a transparent face visor while working with the cast. "It just works better, because people can see your mouth," he notes before reflecting the general sense of everyone there about being "so excited to be back."

During tech, the scene was familiar - production desks across seats, but with everything a bit more spread apart than usual, with people who might normally sit together (such as the video designer and programmer) on separate desks, and with specific areas behind each desk taped off to try to control who could get too close to whom. The biggest effect on the usual way of working was, as lighting designer Ken Billington notes, "just in

those little moments when you want to run down to someone and have a chat with them about something. That wasn't really possible any more." This audio department was tasked with helping to overcome this problem, upgrading the comms system in use on the show to a Clear-Com HelixNet/FreeSpeak digital system able to give more rings to allow both private communications within a department and easier communication across departments.

While this was the first indoor production to be back, it should be noted that it is not entirely a COVID-era show: the load-in and first day of tech was all achieved pre-COVID. The load-out at the end of what is now a relatively short run will be COVID-era, something production manager John Rowland is giving consideration to. But the two particular problems presented as part of getting going again were of walking back into a building and turning on equipment (lighting, sound, automation, video) that had sat idle for almost six months, and then adapting both working methods and the show as a whole, including its staging, to deal with COVID.

The equipment part went better than some had expected: with a few tiny exceptions, everything powered up and worked, though caution was the watchword with Rowland bringing both TAIT, who'd supplied the scenic automation, and Unusual, who'd supplied the rigging, "back in to re-commission everything as if we'd just finished the load-in."

For the working practices, Rowland turned to his heads of department for their thoughts. "We had a big Zoom meeting, after which each head of department wrote their COVID assessment. I thought we'd have to go through lots of versions of this, but we're at version 1.1 and everyone seems happy. Of course, some of that might just be because everyone wants to come back to work, but equally some have kids and the like, so everyone also wants to be safe." The final document covers the testing procedure, general procedures for the rehearsal room (including all actors being off-book straight away so that no hard copies of scripts or scores were required), for inside the venue (including hand sanitising, one way systems, masks worn backstage at all times, designated items such as comms and hand-held mics for anyone using them, and wiping down and disinfecting of equipment), and then department by department. Generally the aim was to reduce contact points and interaction times, so careful timetabling for cast members to be fitted with wigs by wig crew wearing PPE, and cast members doing much of the work of fitting their own radio mic and pack. Much of the detail is common sense in



the style of so many health and safety risk assessments, but it only now feels like common sense because it's been thought about, written down and is being followed. The show also has two nominated COVID reps - the company manager and one of the cast - to allow issues to be identified and resolved.

In practice, the two very noticeable things during tech were the director's willingness to make changes to the blocking or staging to separate people slightly more or to ensure they weren't singing directly at each other, and then the work done by stage manager Luciano Macis and his team to manage people backstage and coming on and off stage.

Macis notes that director Morgan Young "just wants this to work, and is always happy to make sure we're all on the same page. He'll request something, then we just make sure we don't have unnecessary crossovers, and that people come down just before their entrances so we don't have unnecessary contact." That extends to the cast when they're not on stage. "The dressing rooms are stage-left, and we have all of the ensemble on the downstairs level with the principles upstairs," Macis says. "The ensemble also contains the covers, so if one of the principles becomes unwell their cover has been separated from them as much as possible." Another new duty has been "track and trace on the props - if it's going to be used again, it gets cleaned as soon as it comes off stage, and every day everything is cleaned down and sprayed with an anti-bacterial mist." Infection control also extends to clothing and, particularly, shoes. "Anyone coming in from outside has to wear a different pair to come on stage," he explains. "The stage also gets misted, and will be mopped with disinfectant before each show."

If the general COVID document required just one revision, dealing with the band, who live on a platform stage-right, has required a great deal more work from

John Rowland and sound designer Simon Biddulph. "There was talk early on about just recording it and doing it to a track, but that didn't sit well with the show's general philosophy of getting people back to work. But I think Simon is up to version 15 of his band layout now," Rowland notes.

Biddulph himself thinks he's on version 30, in part because the guidance from government about the risks to musicians and from different instruments kept changing without ever really being made definitive. "The result is that we are more spaced out than normal, and we have more screens than normal, though that's been a bit of a challenge because there's been a shortage of perspex, since it's a by-product of oil and there's less oil being used," he explains. "It's quite a tight fit; if anyone from sound has to get in there, they will be in full PPE."

There's also, of course, the potential for a musician to arrive and fail the test. "What we've agreed is that we'll make an announcement and start the show without them, hoping the audience understands until a dep arrives and can be tested in," Rowland explains.

SET DESIGN

Designed by Morgan Large, the set consists of a diamond-shaped stage point towards the audience, with a large revolve by TAIT and Adder Engineering set in to it. On that stands a permanent structure representing the domestic locations of the show (principally the houseboat of leading man 'Sam' and the house of leading lady 'Annie'). That can be hidden from view by flown slatted blinds (also by TAIT, engineered to concertina inside each other because of the limited flying height in the venue) that drop in to surround it. This also provides the exterior of the top of the Empire State Building for the show's final scene. All of this is controlled from a Stage Technologies/TAIT Illusionist console and overseen by automation head Nick Page and his deputy James Brittle.

WHAT IS AVAXHOME?

AVAXHOME-

the biggest Internet portal,
providing you various content:
brand new books, trending movies,
fresh magazines, hot games,
recent software, latest music releases.

Unlimited satisfaction one low price

Cheap constant access to piping hot media

Protect your downloadings from Big brother

Safer, than torrent-trackers

18 years of seamless operation and our users' satisfaction

All languages

Brand new content

One site



AVXLIVE ICU

AvaxHome - Your End Place

We have everything for all of your needs. Just open <https://avxlive.icu>



"Despite only a third of the seats being sold, this particular auditorium didn't feel quite as empty as you might have feared..."

Backing all of this are a series of LED video wall sections (from PRG) with then a header section of LED wall following the set's diamond shape, and with two Panasonic 20K projectors allowing imagery to be projected onto the screens when in. All are used to set the detail of each location using architectural blueprints, reflecting Sam's profession.

It's one of those designs where in some ways the set designer has provided a blank canvas for the video designer, that role filled here by Ian William Galloway, who explains: "Morgan Large and I have been through many different shapes for the set, but the concept has always been the same: the essential conceit is that Sam's an architect in the early '90s, so he lives on stage in an architectural model of his houseboat. The video around that is low polygon '90s silhouettes and architectural sketches, a concise and abstracted idea that is very quick to create. The nice thing about a show with such a pure minimal design is that, once we knew the idea there was no tug or pull - we did some test versions, drew it all, it was very simple."

Despite the relative simplicity of the design, Galloway is using a high-powered playback system - a disguise gx2c programmed by David Butler - a choice made because behind the imagery on the screens is almost always a coloured background layer. "The design is white lines, black silhouettes, and I don't really care what colour goes behind it," says Galloway. "We knew that every time the lights changed, the sky would have to change colour too. If the lighting designer is choosing those colours, I'd have to match it. It's much easier just to let the LD colour all the things that need colour, so we've given him two controls, one for the top colour, one for the bottom then we work out the gradient in-between. To make that as good as possible we're working with 10bit colour, for which we needed the gx2c."

This has started opening up new possibilities for next time in the designer's mind: "The show is all drawn at the

moment, but having that server means we have Notch, and if we do the show again, it would be interesting to turn some of our locations into 3D models that Notch could then manipulate."

On COVID-era working, Galloway says: "What we've found is that with the desire not to exhaust everyone and with the time for COVID testing every morning, we've ended up doing much nicer 1pm-8pm sessions, then with the option for 8pm-10pm technical time if needed. It ended up being a much nicer working day than the usual six long days a week."

LIGHTING

"I've now seen the preview of retirement; I have no interest at all in seeing the actual show," is Broadway lighting veteran Ken Billington's comment on the time between leaving the venue to catch one of the last flights back to New York back in March, and arriving back in the UK to serve his two-week quarantine in August. He was thrilled to be back at work, back in a theatre and reunited with his team (including associate Dale Driscoll, programmer Vic Brennan, show lighting crew Tom Boucher and Lizzy Gunby, and Chris Vaughan deputising for production electrician Sam Floyd). The team, too, were delighted to be there, as Vaughan expresses: "I was so excited to be back in a theatre that I couldn't sleep last night. It is so much better than working at a supermarket, which is what I have been doing!"

The first task: moving the followspots, three Robert Juliat Cyranos originally clustered together at centre on the venue's rear catwalk, further apart to conform to the UK's 'one metre plus' social distancing rules. Here, too, extra consideration has been given to covering these roles: there is a desire not to have extra people tested and in the building each day, but John Rowland explains that "we have a cover who lives locally who knows all the plots who we will call in if necessary."

With the show produced to quite a tight budget, Billington's rig is a bit of a mix-

and-match of equipment that PRG had available, including ETC Revolutions, PRG Icons and Best Boys, Martin MAC Vipers and Auras, GLP impression X4 washlights and X4 Bars lining the back of the flown blinds, and tungsten ETC Source Fours fitted with colour scrollers. These, plus the video wall-coloured background and various practicals built into the set (including City Theatrical QolorFLEX LED tape run wirelessly via SHoW DMX) were all controlled from an ETC Eos Ti console, which also sends cue triggers to the video playback system.

Throughout the show, Billington displays his usual mastery of colour, especially the delicate lavenders and pinks that in less experienced hands can often become muddy; his ability to get right in to the performers' eyes, and his skill at taking a scene seamlessly from clear naturalism to highly colour musicality. He may have been less inclined to run down to chat to the director, but that just resulted in a little more occasional shouting to get the director's attention before switching back to using comms (though he does note that "it's uncomfortable to wear a mask with a headset, but those are the rules"). He is also full of praise for his producer for getting the show back on at all. "Michael has had to do so much," he says, "including even finding the testing, which is what's really making this possible, and has done much of that without any support. I think he's done a remarkable job - and I am delighted to be back to finish this!"

SOUND

Lighting, video and automation can generally operate physically distanced from each other and from the performers. This is less possible for the sound department, where the mixer has traditionally been surrounded by audience and the crew backstage have been fitting and checking radio mics, and so it is the sound team of Harry Barker and Luke Capay who have had to make perhaps the biggest changes to their day-to-day procedures. Mics and packs are

cleaned and disinfected each day, and the cast fit their mic pack (placed inside a balloon to keep it dry) and run the cable up to their head themselves before coming, one at a time, to a sound check point where the sound #2 in full PPE will fit and check the mic, replacing their gloves before moving to the next person.

At the end of the show, the cast remove mics and packs and leave them to be collected; the sound department clean the kits before storing them in plastic Nano Silver anti-bacterial containers overnight. There are enough mics on-hand so that everyone, including covers, has their own dedicated mic. Out front, the seats closest to the sound desk have been removed, the operator wears a mask whilst mixing, and the console is wiped down and cleaned each day.

The sound system itself is run from a DiGiCo SD10 console, fed from Sennheiser SK6000 radio mics and then sent out to the audience through d&b loudspeakers - a T10 centre array, ground-supported Y8 arrays on either side, E6 front-fills and E8 delays, Y-series subs, and E3 and E4s for foldback and spot effects. System Sound & Light supplied the equipment in a slight shift from its regular work in live music, orchestras

and opera. "But it was great to be back, and to get some lovely reviews about the sound, which is a rarity in theatre," Simon Biddulph notes, crediting also the work of production engineers Sam King and Margot Gloaguen, and programmer Simon Sayer alongside Barker and Capay.

AUDIENCES RETURN

The last great unknown in the process of getting shows back on is whether an audience will come. Do they want to come to an unusual venue with unknown air quality to be surrounded by strangers, or would they much rather just stay at home? The evidence as the UK's lockdown was first loosened and vast crowds of people flocked to the beaches suggested people were happy to be around others outdoors, but that didn't answer the question about being inside . . .

Sleepless suggests they will. The socially-distanced capacity of the theatre is a (slightly quirky) 401, and while it's hard to know for sure by glancing around the auditoria, it certainly felt like there were about that number of people there, undeterred by leaving home, by public transport, by the temperature check at the door, by the hand sanitiser, by having to register their presence to allow them to

be traced if an infection is later identified, or by having to wear a mask throughout.

Despite only a third of the seats being sold, broken up into blocks to suit groups of up to four from the same social bubble (and there's surely an opportunity for someone to manufacture 'don't use this seat' straps to replace the gaffer tape in use here), this particular auditorium didn't feel quite as empty as you might have feared, and actually a little room to stretch out is sometimes welcome. What the reduced capacity and extra aisles removed was the need to squeeze past people to get to your seat, even if any kind of one-way system seemed to break down somewhat in the interval and at the end of the show.

Most importantly: we laughed, we clapped, we collectively had a good time as a group, rediscovering all that we'd missed in watching theatre on TV, rediscovering the magic that makes live events quite unique. It's a first step back to normality, but a step someone had to make. It's still unclear who'll make the next, but during the performance, I did spot the masked figure of Andrew Lloyd Webber sitting auditorium centre just checking things out . . .

▶ [//sleeplessthemusical.com](https://sleeplessthemusical.com)

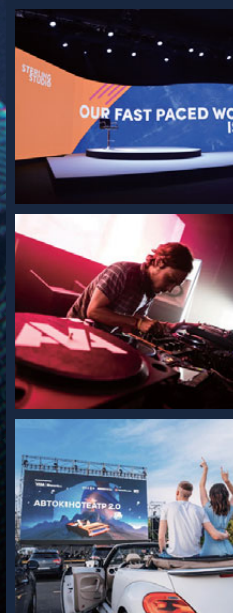
Absen

Explore Tomorrow, Together.

The future might be unknown, but Absen will always be on hand to support your current or future LED requirements. From virtual studios and xR stages to drive-in experiences and livestream events, whatever your vision or need - there's an Absen LED solution scaled, designed and priced to fit.

So, if you are exploring the possibility of using LED to enhance your business, why not speak with one of our experts and let us be part of your journey - let's plan for tomorrow, together.

Explore more at absen-europe.com/explore-tomorrow
or email us at europe@absen.com



IN STOCK now at PSCo!

www.pscoco.uk +44 (0)1344 592 222 sales@pscoco.uk

PSCo



crew cuts

The Shend interrogates . . .

Barry McClelland, tour manager / roadie

"I would go and make the tea if I got the opportunity to work for Iron Maiden . . ."

Name, Age, Job?

Barry McClelland, 48, tour manager, driver, roadie, merch monkey for Trucker Diablo.

Recent Activity?

Trucker managed to squeeze two gigs in at the start of 2020, a festival and a headliner in February, then lockdown hit. Since then it's been acoustic sessions and just recently pre-production and studio for a new album.

Worthy Past Glories?

Gigs with Foo Fighters, tours with Black Stone Cherry, Thunder, and Download festival.

Why are you what you are?

Because I can't say no! I love music, I love the creative process, the people I work with. I started off in a band and realised it wasn't for me - my strengths lay elsewhere.

Three best things about my job?

My band, my crew and our audience.

Three worst things about your job?

Early starts, late nights, long days.

Detail the equipment you use in an ideal world?

Now it's a VW Crafter van. Merch hoards.

Most crucial invention since you started?

Google Maps.

Proudest moment?

I'm proud every time I get my boys onto the stage because I have no control over the live end of things and I know they will give 100%. I can stand and enjoy the gig.

Best gig while working?

There have been so many, but I'd say playing with Thunder in Dublin, or at the Steelhouse Festival in Wales - one of my fave bands, Y&T, were on the bill and I got to listen to Dave [Meniketti] soundcheck his amps!

Best gig as a punter?

Again, so many. Recently, Iron Maiden in Geneva with my son, or a historic one would be Maiden at Donnington '88 - that was my first Maiden gig and the start of a long and expensive obsession . . .

Biggest nightmare on the job?

Something going down, technical issues, or bad weather at festivals are all a nightmare. We had a fire alarm at a festival once that cut our set short. Those types of things are very disappointing.

Most irritating request from a member of the public, artist or promoter?

A band at our level cannot carry 10 different t-shirts in 20 different styles and colours, but sometimes people don't understand that.

Artist from the past you'd most like to have worked for?

Past and current would have to be Iron Maiden for me. I would go and make the tea if I got the opportunity to work for Iron Maiden.

What phrase sends a chill down your spine while working?

"Are you missing a guitarist?"

What other member of the crew would you least like to be?

Sound man - if he does a shit job, everyone knows; if he does a great job, not many will notice.

Which other member of the crew do you take your hat off to?

We have a very small dedicated crew when we are out. Jon, our stage manager, runs the local crew like a conductor; Ian, our roadie, is tireless; Mandy, the guitar tech, is the best in the biz, and Ali, our merch person, is the most amazing salesperson you'll ever meet. They all give 100% and make mine and the band's job so much easier. When they are there as a team it's amazing.

Most irritating thing on the crew bus?

Probably my music choices - we have a wide and varied musical taste, but I have a soft spot for female-fronted bands, which sometimes doesn't go down too well - or the fact that I need music 24/7.

Best hotel you've stayed at while working?

Recently, a great hotel in Galashiels or a lovely B&B in Inverness, plus an old faithful: The Newman hotel in Wales.

Members of the audience you loathe?

The one-gig-a-year dicks who think it's OK

to jump around and bounce into people who just want to enjoy the gig - no gig etiquette at all.

Any artists you'd spend time with socially?

Loads, but our favourite would have to be our buds from Nasa Assassin - never a dull moment with the Nasa boys.

Best passing through customs anecdote?

Picking up a van in the US and not being able to start it was a bit embarrassing.

Most bizarre sight you've seen at work?

I would have to say the negative Wesley Snipes (if you know, you know, if you don't I might tell you for a pint).

Favourite artist to work for?

Trucker Diablo.

Favourite / Most hated venue?

I love Vicar Street in Dublin. Played some shitty clubs years ago, but they only make the nice ones stick out more.

Open air or under a roof?

On a rainy day in Ireland under a roof, on a nice day in Wales - open air.

Best festival?

Trucker Diablo have played Steelhouse in Wales three times so that will always be a special festival. But I would say Download will take some beating because of the stature it has.

Best item of clothing when working?

Shorts and comfortable footwear - it's a long day.

Closest you've come to death on tour?

Driving through a snow storm in the Brecon Beacons a few years ago after a headline show was the hairiest driving I've ever done.

Most outrageous thing you did on tour?

I threatened to take a festival backline home with me when I wasn't getting paid. I got paid rather quickly after that.

Most sensible thing you did on tour?

I know when to call it a day and have gone and slept in the van when the band partied on. Did I mention I don't like late nights and early starts?

✉ Email: bdtrucker@gmail.com



tools from beyond

A t-shirt, a book and a picture | by Rob Halliday



The dictionary says a tool is a 'device or implement used to carry out a particular function.'

You might think that description doesn't fit a t-shirt, a book or a picture - but the ones we're going to look at here have a very definite function: raising money to support those who need help during this ongoing crisis. Though as a bonus, they might eventually turn into powerful mementoes of this rather unique year.

Up first: *The Show Must Go On!* t-shirts (and other assorted things - face masks, tote bags, notebooks, cards, badges, mugs and pencils). The message is the phrase rather than any particular product - and not the phrase alone, true though that rings, but also the typography: each letter is taken from a different show that would normally be playing in the West End right now, H from *Hamilton*, O from *Phantom*, I'll leave the rest up to you . . .

It's a clever design because without even thinking about it, you know this is a message about supporting show people made by show people - in this case, backstage practitioners Chris Marcus and Damien Stanton. They are dividing the profits between three charities, Acting for Others (supporting performers and backstage front-of-house theatre staff), the Fleabag Support Fund (providing grants to freelancers working in the theatre industry) and the NHS COVID-19 Urgent Appeal. Add yourself to the over 22,000 orders they've already received, £250,000 they've already raised, and the no-end of celebrities already spotted wearing them.

Next, the *Dark Theatres Project* by video designer Nina Dunn. At the start of lockdown Nina was one of the people featured on these pages, describing the 'grief and mourning' she felt at not being able to practice the craft



she loved so much (see *LSi April 2020*). But as artists do, she found a different way of responding to the pandemic's effect: going in to some of those many theatres that had essentially been abandoned on government orders, and capturing images of their strange sense of emptiness, devoid of people or performance. She also interviewed a number of people who'd been involved with those shows, including *City of Angels* which hadn't quite opened. "People will say, 'you did that show that never opened.' It will become the stuff of legends," as the show's lighting designer, Howard Harrison, describes it in his interview. The pictures and interviews can all be found online, but Dunn has also crowd-funded a book version, available for pre-order now, and is selling prints of

the pictures. Money raised will be split between BackUp, The Theatrical Guild, the Theatres Trust and Acting for Others.

Last but not least: George Wing, an East 15 Acting School graduate who had been working as an usher and box-office clerk, has drawn 40 West End theatre buildings, collected together into a unique print available in a range of sizes in either colour or black and white. The buildings are depicted without any of the paraphernalia of particular shows, making the print both strangely relevant to this no-performance time, and also ultimately timeless. The colour version is on my wall already.

A percentage of the profit is split between the Theatrical Guild and MADTrust. There's a limited number of these prints and the website already shows them as low in stock. If you're interested, hurry along - the websites of all three projects are listed below. ☘

- ▶ [//theatresupportfund.co.uk](http://theatresupportfund.co.uk)
- ▶ [//darktheatresproject.org](http://darktheatresproject.org)
- ▶ [//plasa.me/westendprints](http://plasa.me/westendprints)

Rob has been working in and writing about lighting for more than 25 years, on shows around the world. He wonders if this makes him a classic... or just old!

ODIN
POWERFUL OUTDOOR
ZOOM PAR

- SMOOTH RGB+LIME COLOR MIXING
- IP65 RATING
- 11-50° ZOOM RANGE
- HIGH CRI & R9 VALUES
- SILENT OPERATION
- DEFINABLE USER MODES



WWW.CLF-LIGHTING.COM

f t i y CLFLIGHTING

THEATRE *on the rocks*


When the UK government gave the go-ahead for outdoor theatre performances to resume on 11 July, the Minack Theatre in the far west of Cornwall was one of the first to reopen. This stunning open air venue, located four miles from Lands End, was created in a steep-sided bowl in the cliffside, with twisting paths and steep steps leading down through banks of turf and concrete seating - some of which have the names and dates of past productions carved into their surface - to a pink, grey and cream hexagonal flagstoned stage. The deep turquoise sea and the opposite headland of Logan Rock form its ever-changing backdrop which is stunning in sunshine - and admittedly somewhat challenging in the rain or a strong Atlantic gale! - but unrivalled under a full moon with the path of light falling across the black surface of the bay. Listed as one of the world's most spectacular theatres, this is a unique setting in the true sense of the word, and the brainchild and handiwork of Rowena Cade who, with the help of her gardeners Billy Rawlings and Charles Tom Angove, spent her life building it into the world-famous site it is now.

"We expected to be amongst the first to open as soon as the government gave the go-ahead, so we prepared well in advance, so we could hit the ground running," says

the Minack's theatre manager, Philip Jackson. "We had a season lined up with several shows ready to go and opened on the first permissible date with a performance by professional storyteller, Mark Harandon - it felt great!"

Under normal circumstances, the Minack's season runs from May to September, with around 120,000 people a year coming to see a performance, and 180,000 paying an entrance fee to explore the site. The programme is mostly composed of amateur theatre companies from all over the UK, but this year's extenuating circumstances have made for a very different season, with a complete change of schedule and a totally different way of operating to facilitate socially-distanced performances, audiences and day visitors.

"As soon as lockdown was announced, everything was immediately cancelled, of course," continues Jackson. "We had already opened our season with a student production from Plymouth and we were about to go into our Easter programme with the Minack Youth Company's two-week production of *Hetty Feather* when everything came to a standstill."



Julie Harper finds out how Cornwall's iconic cliffside Minack Theatre has resumed its activities post-lockdown . . .

The Minack team, led by executive director Zoe Curnow, responded by transferring its whole 2020 season directly to 2021, with only one company unable to make the rescheduled dates, and looked to establish new shows that could be put on at short notice in the event of lockdown being eased. "Consequently, most of our 2020 programme supports local Cornish professionals, although as soon as the government announced outside venues could open, there was no shortage of producers from across the country asking to bring their shows here," says Jackson. "We've had to be specific in our choices, picking mainly one- or two-handers, casts that can socially distance on stage, or 'family troops' who have been able to isolate in a house 'bubble' for two weeks prior to performance - anything that can function within socially-distanced rules. We now have something lined up every week until mid-October with a mixture of local talent and West End shows - which is a first for us! All our summer performances to-date have sold out and a full season is in place from May to September 2021."

Social distancing measures also mean reduced audiences and therefore reduced income, so a variety of additional performances have been introduced to bolster the 2020 season which has been extended into October to bring in more, much-needed revenue. In addition to incoming productions, the new weekly programme includes two sessions of storytelling for local children on three mornings a week - delivered by Minack associate director and storyteller, John Brofly, and Squashbox Theatre's Craig Johnson - throughout the school holidays and on into September, and the introduction of Minack Music Mondays featuring local talent such as Port Isaac's Fisherman's Friends and Didjan, as well as national artists like Chris

Difford and Seth Lakeman. West End shows include the two-hander *Educating Rita* with Stephen Tompkinson and Jessica Johnson and *Mischief Movie Night*, a night of improvised comedy which was chosen to add variety to the season.

SCHEDULING & AUDIENCE SEATING

All performances are restricted to take place only within the circle (the Minack's iconic raised central platform) to allow audience seating to be extended onto the apron stage, maximising capacity in a socially-distanced way while still keeping the performers the requisite 2m from those in the front row. Performances are scheduled to start at 7pm instead of 8pm (3pm on matinee days), have no interval, and are restricted to 100 minutes in length. This ensures they take place in daylight and the audience can exit safely, minimising the risk of close contact in the dark. With no interval, performances are 'relaxed' so audience members can move around freely during the performance, visit the toilets, and buy refreshments from the Terrace kiosk which remains open throughout the show to recoup some of the losses caused by the café's closure.

Audience numbers are restricted to 250 (instead of 700) to maintain social distancing, and front-of-house staff - all wearing red





spotted face masks and well-trained in the new procedures - work in the same 'family groups' for each performance to further the safety bubbles. "Many of our front-of-house staff actually are from the same family - we employ multiple members of local families, which is very useful for fitting into staffing rotas," says Jackson.

Audience members are seated in their groups on alternate rows with a 1m space between each group. Front-of-house staff use a 1m stick to separate out each group from the next - which causes great amusement as well as demonstrably highlighting the safety aspects and increasing audience confidence.

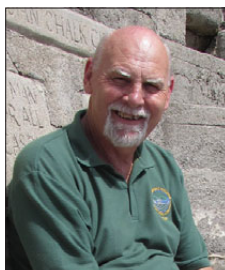


Photo: Toby Weller

↑ Clockwise, from top left: Technical manager Simon Hutchings; technical assistant Rory Locke; Philip Jackson, theatre manager; and Zoe Curnow, executive director

"We are keeping our approach 'light-touch' while visibly instituting social distancing measures to enhance the audiences' sense of security," says Jackson. "We have to be seen to be calm about it." Measures are laid out clearly on Minack's website, so pre-bookers know in advance what to expect and how to behave. "There may be a minority who object on the grounds of 'being on holiday to get away from all that' or who don't understand why an outside space like Minack needs restrictions, but the majority are considerate, understanding the need to control the numbers of visitors in and out to safeguard the public and staff."

Backstage arrangements are equally stringent, with guidelines and COVID-19 risk assessments for the Minack site and performances well laid out on the website. Dressing rooms are cleaned daily and deep-cleaned between changes of production (twice on storytelling days). There is no one-way system backstage because there are never two companies in at once. "With all of this year's shows being solo performances, two-handers or from cast 'bubbles', there is plenty of room backstage," says Jackson. "We have three dressing rooms, so they can have a dressing room each."

TAKING MATTERS IN-HOUSE

In contrast to the relaxed setting front-of-house, this year's changes have put more pressure on the small in-house technical team of technical manager, Simon Hutchings and assistant, Rory Locke, who are the busiest they have ever



been. "At the end of July, we had three different shows in one week - *Mr. Difford Changes Trains* for Minack Music Monday, six children's storytelling sessions, the weekly production which was *The Soldier's Tale* and a changeover on the Friday for *The Strongman*," says Hutchings, who also production-manages all the Minack's in-house productions, of which - a small respite - *Stones in Their Pockets* is this year's only one. "This is a big change from our standard scheduling of Monday to Friday runs with a Saturday changeover, to the current Wednesday to Saturday run, with an occasional Tuesday thrown in on a two-week run."

To make life busier still, with the control room and sound booth now out of bounds to incoming companies, Hutchings and Locke must tech every show themselves instead of handing that responsibility over to the incoming crews. "In a normal year, we show the incoming techs through any new kit, carry out safety checks on the set builds, and then hand over to the company for the rest of the run. We would then be on standby to power up and sort any technical problems," says Hutchings. "This year, we have to do it all, and also act as duty technicians for the performances which we take in turns to do on alternate days of the week."

With all performances now taking place in daylight hours, there are no large-scale lighting or technical shows scheduled. "Lighting is simpler and more focused on illumination than anything complicated," explains Hutchings. "However, twilight is the most awkward time to light as we need to create lift but also contend with the last of the sunlight before it disappears behind the cliff behind us. That said, I will welcome the re-introduction of the interval and normal start times as soon as it's possible, because the audience are missing out on that magical change-over between daylight into nighttime."

On the sound front, Hutchings is trialling the use of radio microphones instead of Minack's customary float microphones in order to accommodate companies that are not used to the challenges of open air theatres, and to reduce the amount of projection - and therefore any potential infection risk between performers and audience - needed from the performer. "Float

mics work brilliantly here because the amount of concrete at the Minack gives superb transmission," explains Hutchings, "but because this year's two-hander shows are so small and the environment so challenging, we decided to use radio mics to encourage actors to lessen their projection. But so far we have found that actors don't change their projection, so there's not much benefit aside from a slightly fatter sound - it just adds to the technical complexity. Social distancing means we can't get close to the actors to wire up their radio mics, and we can't do a proper soundcheck because we can't talk into the microphone. We therefore have to hand it all over to the actor and hope and pray they don't break or dislodge the cable during costume changes!"

As an alternative, and because of the close proximity of the audience seated on the front of the stage, Hutchings is also experimenting with custom float boxes. "On a solo production like *Great Expectations*, we could place the floats directly on the circle and the sound could travel unhindered. But with a two-hander like *Stones in Their Pockets* where the performers act right at the front of the stage, we had to relocate the floats to the step below and I noticed a real drop-off in the sound. So we constructed boxes in which the floats are set on top a foam insert, and locate them on the lower step to bring the sound back up to the top plane. We may have to fill the boxes with expanding foam or even concrete to give them solidity at the bottom, but I'll be listening to them on cans during the next production to see if they are a valid solution going forward."

COPING DURING COVID

Minack may be one of the fortunate venues able to reopen to the public, but adhering to COVID-safe guidelines still means a considerable loss of income. "We are in a lucky position in that we have a healthy reserve, but we still stand to lose £500,000 this year," says Jackson, "and that is only if we can get through the season without losing anything. The current conditions are not sustainable long-term."

As it stands, the Minack has furloughed many of its employees throughout the summer. "We couldn't have kept our staff without furlough," states Jackson. Even so, as furlough comes



Photo: Lynn Batten

⬆ Clockwise from left: The theatre illuminated for the Red Alert day of action

Staff use 1m sticks to keep groups at a safe distance

Lynn Batten and her 'social distancing' flower pots



to an end, the first round of redundancies is beginning which hits hard in such a tight-knit community where employment opportunities are scarce.

"The Minack receives no public funding so has no relationship with the Arts Council," says Curnow. "We currently invest over £120,000 a year into projects to engage, inspire and train local and visiting people in the performing arts. In the longer term, in order to rebuild our reserves, we are likely to have to cut back our education work. We will also have to re-consider our programme of Minack Productions, which has been subsidised by our operating surpluses."

The Minack does have another stream of income in the form of its day visitors who come in their thousands to explore the hand-crafted auditorium, dramatic backstage walkway and theatre gardens, all of which are open to the public. The subtropical gardens draw almost as many admirers as the theatre, with the busiest day on record clocking up around 3,000 visitors. This year numbers are restricted to around 720 a day - less on storytelling days.

Visiting is by pre-booked tickets only to stagger arrivals, with 30-minute entry slots for up to 60 people at a time. Tickets sell out rapidly and those without bookings are turned away at the door to preserve distancing and prevent congestion on site and in the narrow lanes that lead to the theatre.

A new entrance route has been established for better social distancing, with designated queueing routes from the carpark, social distance signage, large terracotta pots full of flowers to indicate safe spacing within the queue, and wooden post-and-rope guides on entry and exit to shepherd the public in a one-way system. All these, along with multiple hand sanitiser points on site, have been custom-built by Lynn Batten, whose

twin sister, Claire, is one of the new head gardeners responsible for the venue's gardens.

Refreshments, souvenirs (no handling prior to purchase) and plants are sold from an outdoor kiosk and shop in the car park which replace the lucrative gift shop, café and exhibition space inside the site, all of which are closed for the duration. Inside, a refreshment kiosk on the Terrace sells drinks and snacks, but without visitor numbers revenue is considerably curtailed.

Once inside, visitors are asked to respect social distancing and there are plentiful numbers of anti-bacterial hand sanitiser points on every level. All handrails (of which there are many across the steep-sided site), touchpoints and toilets are deep-cleaned between each of the two storytelling performances, before the day visitors arrive, after matinees and before evening performances. "It all adds to the cost, but we have no option this year," confirms Jackson.

On the day of visiting, the atmosphere was relaxed with no small sense of relief and freedom under a clear blue sky, with the spectacular backdrop more dazzling after months of lockdown.

"The public feel very safe here and we are getting excellent reports about how well we are managing the social distancing," says Jackson. "It's a good time to visit if you can get in as the crowd numbers are reduced and the atmosphere more relaxed than at the usual height-of-season. We work hard to make it a safe and pleasant experience for the visitors, and if the weather doesn't break on us, we can tread water until we know where we go from here. We will even take the opportunity to revamp the café this winter with a view to the future. It's not easy, but we are very lucky to be able to keep going." ❌

➡ www.minack.com



#WE
MAKE
EVENTS

DON'T LET EVENTS GO DARK!

Live events have stopped in their tracks. The entire festival season was wiped out, the West End went dark, and venues of all sizes closed their doors.

Without urgent support from government the entire event supply chain could collapse.

Join the collective effort to amplify the industry's voice and help us get the support we need.

#WeMakeEvents

WWW.WEMAKEEVENTS.COM



second fix

Now everything can be IP

Roland Hemming discusses the business of installations . . .

"When the technology scales up, loudspeakers won't look like loudspeakers anymore. We can have incredibly thin panels, in any shape, super lightweight, and with far better quality . . ."



Some of the work I do is to help manufacturers develop future products, and it's genuinely exciting to see things you have had a small part in creating finally come to market. Inevitably, the initial discussions involve blue-sky thinking where no idea is bad - 'what if we made loudspeakers out of chocolate?' - then slowly, we come back down to earth and the product ends up being an iteration of a previous model.

The desire to deploy the same software as other products and to push out a solution that will pay back the investment puts huge pressures on R&D teams. Compromise is inevitable, and it's rare that a team is told to sit in a room and report back when it's ready. One example of this is the Bose noise-cancelling headset that cost over \$50m and took decades to develop. But product development is evolving - some of the more radical ideas can now be realised and this is having a significant impact on how installations work.

COMPLETE IP SOLUTIONS

Whilst I have been using audio networking for years, the real difference now is the roll out of Power over Ethernet, or PoE. This technology allows you to power devices over network cables - CCTV cameras and wireless access points have connected this way for a while. Since a single cable is used for both power and data, it is cheap and easy to install.

PoE technology has now advanced to deliver higher power. For example, you can now get PoE amplifiers and move them nearer to the loudspeakers. There are also an increasing number of PoE loudspeakers, some of them boasting power storage technology that can deal with peaks in audio power whilst being fed from the continuous 'trickle' of the PoE feed. You can deliver a surprising amount of power this way, and more importantly, the technology significantly reduces the amount of rack space you need, or in some cases eliminates racks entirely.

Couple all this with PoE microphone and Bluetooth input plates, and you get system designs that are significantly simplified. Every cable is Cat5 or Cat6, this is cheap and can be installed and terminated easily. The complete IP solution is here for many installations . . .

I recently specified a job where the space divides into zones and each has a different stage position depending on the event. Whilst using PoE loudspeakers was more expensive in terms of hardware, this was offset by the cost of cabling, the lack of amplifiers, and the comfort that we have complete flexibility to zone and delay each loudspeaker individually.

For another project, I am using a networking solution that delivers both audio and video. The client doesn't know what video they can afford yet, and with the IP approach, it doesn't matter. We've simply run Cat6 cabling to every possible location and left a blanking plate. We can decide later to install anything from a simple stereo input, a 40-channel stagebox, or a video

connection. This approach can make us lazy designers, but really, there are few disadvantages.

An increasing number of IP microphones are coming to market and in conference rooms, for example, ceiling tile microphones eliminate the need for desk mics and also connect with a single cable. Video servers, speakerphones and other devices are slowly embracing audio networking, opening up the real possibility that in professional installations, analogue audio can be completely eliminated.

It seems to be that the only thing preventing us from going completely IP is that there is a limit to the power that can be delivered down one Ethernet cable. So far, PoE++ can deliver about 70W to a device; with some power storage technology, you can do more. Even with 70W, the more sensitive loudspeakers on the market could deliver 90dB over 25m away. This means you can do much more than background music, but it won't be a concert. And yet, there are a couple more developments that might change this . . .

SLIM CHIPS TO TRANSFORM AUDIO

Piston or motor-based subwoofers have been around for many years without enormous success, but improvements in mechanical engineering are making better more power-efficient solutions available. So much so you can deliver the same level using perhaps 15% of the power of a conventional bass speaker. This could potentially allow even bass to be delivered via network power, but we still need to wait a while before this specific development becomes reality.

The game-changer is to eliminate the moving coil design that has served us for 100 years.

A number of companies are working on loudspeakers using MEMS (micro-electromechanical systems) technology, which has been around for years - DLP video projectors used MEMS, as do many microphones within smartphones. For loudspeakers, they are essentially silicon chips with hundreds or thousands of tiny pistons pushing air. Some versions are already on the market, with more advanced ones coming fairly soon. These receive digital audio directly into the chip and are very efficient with practically no distortion. Importantly, you'll be able to array them into large clusters for more power.

Since each tiny actuator can be individually-controlled, beam steering will reach new levels of precision. You'll be able to sit next to someone and listen to individual beams of audio at different levels, or even in a different language.

Initially, the new chips will be available for the consumer market - headphones and smart phones are the obvious candidates - but when the technology scales

up, loudspeakers won't look like loudspeakers anymore. We can have incredibly thin panels, in any shape, super lightweight, and with far better quality. Then, practically none of the equipment we use will look like it does today. More realistic than chocolate loudspeakers anyway . . . ❌

Roland Hemming approaches 30 years of industry experience having managed two of Europe's largest audio projects and helping the industry with the latest technology and ideas.

Has your life been turned upside down by illness or an accident?



Backup The Technical Entertainment Charity
– provides financial support to industry technical professionals working in live events, theatre, TV and film.

If you, or someone you know is in need of help, please get in contact at www.backuptech.uk
Backup offers support and help to get you back on your feet.



the technical entertainment charity



the conductor

RCD woes

Electrical safety consultant James Eade lets sparks fly . . .

"Whilst we have left the EU, it's obviously not because our German friends raised issue over RCD use . . ."

→ At the dawn of technology, we invented electricity and saw it had many potential uses. But it is a source of energy, so when it burned down our homes, we realised it was dangerous and invented the fuse. Melting wire to stop other wires melting was seen as clever, but we then discovered that nails take longer to melt than wire, and that was bad. So, we invented the circuit breaker . . .

But the circuit breaker needs many amps to work, and we realised that the body does not conduct many amps, so we then invented the earth leakage circuit breaker (ELCB). Pleased with our new invention, which saved people from dying, we soon realised that it only did so if particular conditions were met, and frustratingly, it would trip when not required to do so, usually when something important was happening. We then saw the ELCB as annoying and bad, so invented the residual current circuit breaker (RCD), thinking (at last) we had solved the problem . . .

The RCD was, and still is, both good and clever. We told everyone that RCDs should be used and then made them compulsory on some circuits. Meanwhile, we turned our attention to energy efficiency and invented the switched-mode power supply and put it in everything from LED lights to laptop power supplies. Better efficiencies and smaller sizes were lauded - until we realised it bugged up our version A RCDs and stopped them from working. So, we designed the version B RCD to cope with our new technologies . . . and all was good again. Until the Germans invented something better.

The Germans said no version A or B RCDs were allowed on their veg patch because they won't work when a neutral fails. Others in the European allotment murmured approval. So the Brits left the European allotment waving two bulldogs at the Germans on the way out . . .

And there the story would end if it were a historical tale, but the last bit is far from history. Whilst we have left the EU, it's obviously not because our German friends raised issue over RCD use.

EASY AS RCD

It's not widely known that there are different methods used in RCDs to detect residual current, the common ones of which are described using the letters AC, A, B and F. The most common is the Type AC which is entirely electro-magnetic and can easily be defeated by the DC current generated by the switching action of electronics supplies and drives. Germany has widely banned their use (especially in events) as the protection can be defeated by the typical loads we have.

This is quite reasonable as there is no point in having a protective device that clearly won't work on a dimmer or video wall, for example. In the guidance books I have written for the IET (especially the new generator guidance which relies heavily on RCDs for protection), I have recommended that they are not used for that reason. Technically though, RCDs are still permitted under the Wiring Regulations, save for some special locations, but we can expect that to change.

Germany and some other EU countries have 'banned' electronic RCDs as they rely on the mains voltage to drive the electronic sensing circuit, so the loss of a neutral would result in a potential loss of RCD protection. Which would seem unreasonable, because if there's a power failure, there's no risk, so it doesn't matter. The Germans have rightly pointed out that neutral failures can give rise to voltage dips and swells, which is enough to stop an RCD working, but the system is still energised and a risk exists.

Of course, the main object of this 'ban' is the events industry as we are a higher risk than users of a fixed installation. The subject is being hotly-debated and PLASA is working closely with its German equivalent VPLT to provide guidance and support for members. The key message is to be prepared for warm discussions with staff in venues when they start to look closely at your devices - and you should inspect your tools beforehand, too. PLASA members can contact the association for more advice in this area.

In a rather amusing twist to the tale, I had a chuckle recently at an international standards meeting. I represent the UK on the International Standards Committee responsible for generating sets and automatic disconnection as a protective measure. The last meeting was in the UK and hosted by the IET. As is usual, the long table in the meeting room had an array of 13A four-way distribution blocks for everyone to connect their laptop power supplies to. I arrived a tad late; the sockets were mostly full with an array of adaptors deployed for the various national plugs in use. The German delegate was a bit behind me and pulled out his laptop charger fitted with a two-pole shuko plug, promptly grabbed a pen to open up the 13A socket shutter, and plugged it in. Unprompted, the Swedish delegate made an observation along the lines of 'Germans upholding electrical safety' to which the German smiled and replied: "I opened it using a tool as is required!"

We can all bend the rules when it suits us. Let's hope we can un-bend those set on RCDs. Watch this space . . . ☒

James Eade is a Chartered Engineer with a 25 year career in entertainment technology and events, with electrical engineering being a particular specialism.



classic gear

Strand Electric Patt 123 | by Rob Halliday . . .

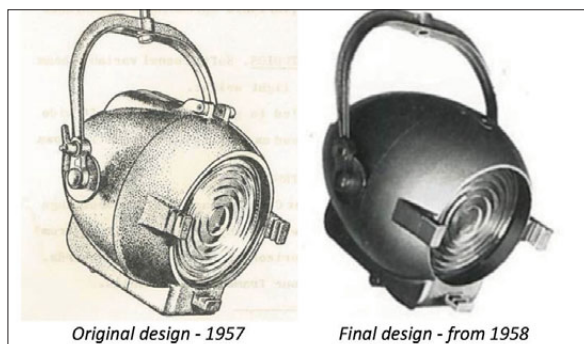
"Legend is that it debuted on the original My Fair Lady at Drury Lane, where its compact dimensions let one more scenic cloth be squeezed in . . ."

→ I'm saving for a special occasion what I think of as the 'classic of classics', Strand's Patt 23 baby spotlight. But that doesn't mean we can't talk about its sibling, the other of Strand's duo of 250-500W baby spots: the Patt 123 Fresnel.

Introduced in 1957, four years after the 23, it was by the hand of the same designer, Strand's Morgan McLeod. Legend is that it debuted on the original *My Fair Lady* at Drury Lane, where its compact dimensions relative to contemporary fixtures let one more scenic cloth be squeezed in. Look closely at the original brochure and you realise that those first 123s weren't quite the same as the 123s we knew later. Turns out that first production run really was intimately related to the 23, actually using the same cast aluminium body - only reversed. Where the 23's lens tube attached, the 123 had its rear ventilation casting, where the 23 had its rear access door you found the 123's lens assembly, also hinged at the top. Once you know this you understand why these two lights have always felt like a family, even though in many ways they don't look alike.

At some point over the next year, the design evolved. The body, while retaining roughly the same proportions, became its own one-piece casting that included the redesigned rear ventilation slots, but omitted the top ventilation hump inherited from the 23. While focus was by using the bottom-mounted focus knob to move the lamp directly, look at a cut-away of the 123 and you can see a clear path for the lead screw focus mechanism that was for many years listed as an option (designated 'I/s') in the catalogue. Other options let you have the 123 kitted out for pole-operated focusing for TV use, or fitted with a wider-angle lens or a lens with blackened risers to give less scatter.

The re-design changed lamp access, the front of the fixture now hinging down from the bottom. A particularly elegant feature was the top catch holding this closed, faired in to the casing to give a smooth surface and uninterrupted shape. Unfortunately, it didn't



take much to release it, and later (as the tooling wore out and it became more finicky) it was replaced with a more secure yet less attractive protruding latch. By then, the 123 was also sold painted in the corporate green the Rank takeover had brought to all of Strand's products. Barndoors were available - two leaf non-rotating early on, four leaf rotating later. The metal colour frame had spring clips which would help lock it in place in the colour runners. Strand also offered a range of accessories, including a motorised colour wheel and a flame-flicker wheel.

The Patt 123 wasn't quite as long-lived as the Patt 23, phased out five years earlier in 1978. But just like the 23, its robust build and elegant design means it lives on. Sometimes chromed up as eye candy in fancy apartments, but sometimes still going about its business: three of them, and one 23, still perform nightly wherever

Billy Elliot is playing, currently in Japan. And if you walk around London's South Bank Centre and look up, you'll still see some installed there, forgotten survivors of some long-ago architectural lighting scheme . . .

▶ **Patt 123 at TheatreCrafts:**

[//plasa.me/patt123](https://plasa.me/patt123)

▶ **Siblings:** [//plasa.me/designevolution](https://plasa.me/designevolution)

Rob has been working in and writing about lighting for more than 25 years, on shows around the world. He wonders if this makes him a classic... or just old!

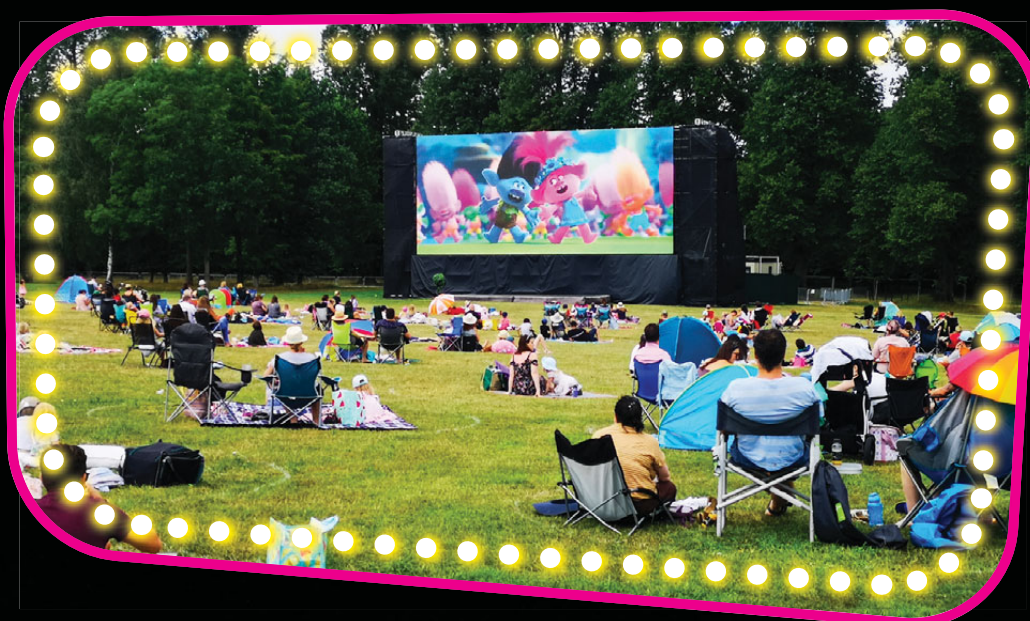


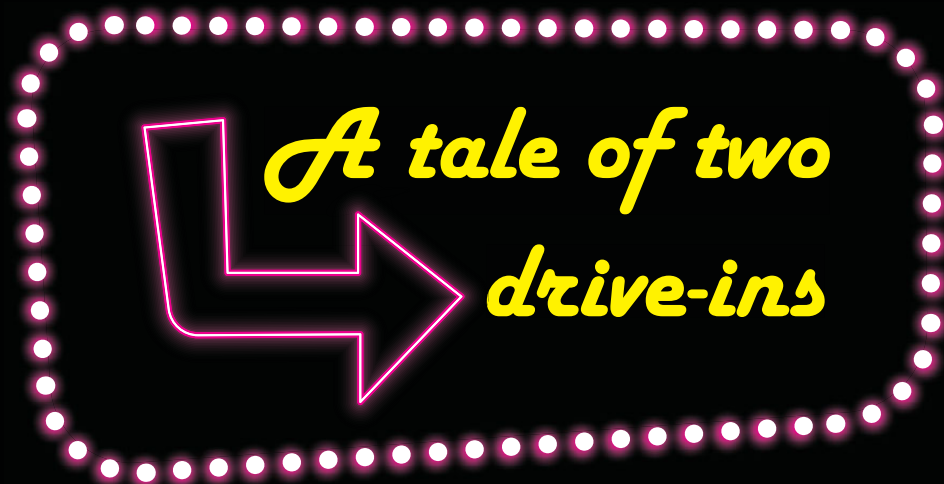
SUPPORT YOUR INDUSTRY!

Official merchandise on sale NOW!

wemakeeventsstore.com

#WE
MAKE
EVENTS





Kate Lyon reports on a series of UK drive-in events that marked the tentative comeback of live entertainment after lockdown . . .

As the summer draws to close, it would be an ideal moment to reflect on the impact that COVID-19 has had on our industry and what we might look forward to as we march towards 2021. Sadly, the future seems as uncertain as it has been since March, if not more so for those on furlough and freelancers who may have had a modicum of government support. Similarly, there are companies who have already decided there is not a viable future for them.

Against this desolate background, there have been moments of triumph and fortitude to find a way to survive; a dogged determination to help themselves, some of their crew and bring a little light to an entertainment starved audience. The drive-in cinema was one of the first ideas that seemed like it could be a viable possibility. An American tradition - the very first was, incredibly, way back in 1915 - it had its heyday in the 1950s and '60s when there were more than 4,000 locations across the US before home cinema began to tempt audiences to stay home. In this COVID year, around the world, the most unlikely of nations opted for the drive-in model as a way of offering socially distanced entertainment to the masses: Iran allowed a screening of *Exodus* while the Philippines set up a few trial events over the summer.

Back here in the UK, there have been a number of initiatives across the country. I spoke to two companies who decided the drive-in option was a plausible way to negotiate their way through the crisis . . .

THE SCREEN SPACE @ HATFIELD HOUSE

With the current pandemic effectively wiping out the entire live entertainment timetable for 2020 and still threatening to decimate a significant portion of our infrastructure and workforce, finding a workable pathway through these dark days is a venture to be both commended and applauded. The Screen Space was organised and run by Matt Gourd of Vortex Events, specialists in AV hire from corporate projects to sports and drive-in cinemas and the sorely missed UK festival circuit. Based in Hertfordshire, Gourd negotiated with

the nearby Hatfield House estate to set up and run the event from early July until the end of August.

He explains: "When the COVID-19 lockdown shut us all down, I started to think about what I could do to keep my team busy and provide something that the local community could enjoy. Like the rest of the industry, as a company, we had been hit hard with event bookings vanishing from mid-March onward. With little or no support from the government, we had to try and find a way to survive. Our experience of running large screen cinema events and sports screenings meant that was a sector where we could hit the ground running; a partnership with a beautiful local venue like Hatfield House made perfect sense."

Hatfield House in Hertfordshire, just 21 miles north of London, is a fine Jacobean house and garden in a spectacular countryside setting. Built in 1611, over 42 acres of beautiful gardens surround the house offering the perfect setting for a drive-in cinema event. "We opened on 4 July and it has proved a successful attraction for both adults and kids," says Gourd. "There is so much space at this venue, social distancing is very easy and the massive screen size means spectacular viewing from wherever your allocated space is. Parking is also plentiful - and free."

In addition to the movie programme, the venue has also been used for exercise sessions including fitness classes, sunrise yoga and dance, providing a way to exercise and feel good in a group session once again, but in a completely safe space.

On site, visitors are greeted by a large LED screen measuring 16m x 7m - a total of 112sq.m. The 4.8mm outdoor LED screen product is from Uniview and, as Gourd comments, the 1:2.28 format is best suited to display the full wide screen cinema experience in the open air environment. "With the ability to show films in a UHD resolution, the level of image detail is much closer to what you would expect from an indoor cinema visit. Our preferred screen support structure design



Photos: Courtesy of Vortex Events Ltd

← Previous page, top: *The Greatest Showman* plays at Kent Drive-In Cinema (photo courtesy of Video Illusions)

Middle: A picnic screening of *Trolls* at Hatfield House (photo courtesy of Vortex Events Ltd)

Bottom: Cars gather for a late screening in Kent (photo courtesy of Video Illusions)

↑ Above: From cinema to fitness, the range of events and activities at Hatfield House took place under strict social distancing guidelines

has been a great success too. It provides both safer access for our technicians while simultaneously looking much neater than the standard goal post structures used in the past."

The screen structure was provided by NoNonsense Group, whose director Liz Madden says: "We were delighted to provide the scaffold support structure. The structure is 20m wide x 6m deep x 9.8m high with working platforms to facilitate the screen install and de-rig. There is also a small stage deck in front of the structure that has been used for the exercise classes and comedy nights."

A pair of Panasonic robo cameras were used to shoot both the exercise action and comedy sessions on the stage and then display on the screen. This allowed for comfortable social distancing whilst remaining connected to the event on stage.

Audio was provided by Encore Sound who supplied a full d&b audiotechnik system of V8 and V12 line arrays supported by Y7Ps for front-fills and a hefty number of B2 SUBs under the screen to supply that cinematic bottom end. Control was courtesy of a Yamaha QL1 16-channel console.

Gourd continues: "This system has provided the perfect audio experience wherever visitors have chosen to watch: the whole event space runs to 22,000sq.m. Alongside the exercise fitness classes and picnic evenings film shows, we have also been running drive-ins - useful on those less than sunny days - making use of high-end FM transmitter system. This is fed from the mixing desk as a separate output into a stereo RDS variable output FM transmitter. We continue to run our main PA system at a lower level to allow our guests have the option of sitting outside their vehicles should they choose to."

Gourd chose to take on the mantle of event producer and production manager, providing full production services and selling tickets directly. "It was the only way we could make this work financially. We made a big loss in the first month; a new event with little time to promote it, so marketing it rapidly enough was the biggest challenge. We decided to take the brave option and extend to a second month to try and claw back some of the losses. This has provided work for a number of people who would otherwise have been without work: AV technicians; production assistants; trade vendors; first-aid cover and construction crew. I am proud of the fact that we have been able to offer work to companies we have a great relationship with and to freelancers that had no work otherwise as well as being able to take some of my staff off furlough."

"What we have gained out of this is a new relationship with a great venue (who want us back next year). We've also

shown how adaptable we can be as an event company," he continues. "This has given us great credibility in the industry and has helped us build relationships with other professionals. The upside is that, post-COVID, we will have more work than we would normally, so will hopefully be able to bounce back quicker."

Gourd's optimism is reflected in Madden's assessment: "It's been a pleasure working with Matt and it's been great to see so many people enjoying the events and screenings. It takes courage to put on an event under the current circumstances and we have been more than happy to support him. We offered a large discount on the equipment hire as we understand the risks involved in taking on such a project. It was great for us to be able to get the team out on site working - a real morale boost for everyone."

"There is no doubt that our event here at Hatfield has provided a safe way for people to exercise and be entertained over the summer, providing a wonderful outlet for people during this pandemic," concludes Gourd. "It's great to feel that my company has proved itself as a 'for the people, by the people' type company!"

KENT DRIVE-IN CINEMA

Video Illusions has a string of awards to its name, recognising the company's position as one of the premier suppliers of AV technology

to the usually vibrant and prolific festival market in the UK. Established and developed with the combined talents of Dave and Nick Whiteoak at the helm, the company was looking forward to a busy year: that is, until March 2020 . . .

Dave Whiteoak relates their lockdown experience, which will no doubt sound very familiar to so many in the industry: "Come 17 March, we started to hear about events cancelling. I was shocked - I couldn't really believe what was going on. We prayed and hoped that this was going to be a short blip and life would carry on as normal, but little did we know that, within seven days, our whole calendar of work would have almost completely disappeared. The year that was looking to be our best yet went to nothing so fast I couldn't even comprehend what was going on. I remember sitting there with my hands in my head at my desk with only the Boomtown Festival and Reading and Leeds left on our schedule. We had everything crossed that they would still happen, but as time progressed, we received the dreaded cancellation emails. We were at that time of year where we'd be receiving the deposits for the spring and summer work and just coming out of the other side of winter and that was it - a big fat £0 coming in from any client. Even the tours the lads were out on were cancelled, so all our gear came back to the warehouse and we spent long hours trying to squeeze money that was

"I am proud of the fact that we have been able to offer work to companies we have a great relationship with and to freelancers that had no work otherwise . . ."

- Matt Gourd

JTSE 2020

JOURNÉES TECHNIQUES DU SPECTACLE ET DE L'ÉVÈNEMENT

INTERNATIONAL EXHIBITION OF SCENIC EQUIPMENT

24TH EDITION

**Dock
Haussmann**

audio & video
training

**Dock
Pullman**

fair

**Dock
Eiffel**

lighting

PARIS
24 & 25
NOVEMBER
2020

WWW.JTSE.FR



Photo: Matt Bristow

owed to us, but our clients were all in the same boat; no one had any money - or the little they did have they couldn't let go of. That's when I realised, we were all in this together. Then the full lockdown hit and no one knew what to do; I had to lay off my guys as we couldn't afford to pay them and I spent night and day trying to work out what I could do to work our way out of this nightmare."

He continues: "Pre-COVID, 2020 was looking like a great year for us as a growing company. But I had to put that aside and focus on what we could do to survive. We had started a project called Lockdown TV (LDTV.UK) which was a livestreamed socially-distanced venue online and we had a working social bubble of crew there. When Boris [Johnson, UK PM] said drive-in cinemas were allowed, we started getting emails left, right and centre. I was having lots of conversations with people on the phone asking us to be part of their drive-in project from all parts of the UK. We quoted on so many but in the end, 95% of them couldn't make it work for one reason or another."

"We bent over backwards on price to help them all out financially as we needed the work just as much as they did; I wanted to help where I could, but after a lot of them didn't come to fruition, I thought to myself, 'Why don't we just do it?!' No one was looking at any of the possible locations on our patch of Kent and the south east. Anyone who did manage to pull it off was pin-pointing London and further north so, after some creative meetings, we were confident we had a solution and started up a new brand called Kent Drive-In Cinema. We contacted all the landowners at the Kentish locations we knew we would have the space for social distancing, got our local MP on our side, and the ball started rolling. Our final venue locations were Swanley Park which sits conveniently just inside the A20 and M25 junction; Betteshanger Park near Sandwich in east Kent; The Whitbread

Hop Farm which is between Maidstone and Tonbridge on the west side of the county and the New Dover Road just outside Canterbury. So, we pretty much covered the whole county."

Whiteoak continues: "We decided to take on all elements of the production; we knew the best way to keep a firm handle on the budget was to keep everything in-house wherever possible. So Video Illusions partnered with another Kent-based company, Taylor Egan's Centre Stage Solutions, who were able to complement our AV stock with power distribution, audio and rigging. Together we started up Kent Drive-in Cinema and we also brought in Protect and Tour, another Kentish neighbour, for our security and traffic management. They have been a huge asset to have on site alongside us."

Explaining the complexities of working alongside each other during COVID, Whiteoak says: "Our Kent-based colleagues had become a kind of working bubble during the Lockdown TV Live sessions we were running in London, so after working out a plan for the drive-ins, it seemed logical to work with those crew bubbles we already had established. The team has been made up of about 25 guys and being able to help them out has been amazing. If we could have opened the door to more, I would have; we have a fabulous pool of freelancers who work with us throughout the year and especially during the festival season, not being to help all of them has been one of the most distressing parts of the COVID effect."

The screens for Kent Drive-in Cinema screens were 16m x 7m of Video Illusions' own VI-L6 LED product with Q-LAB media server for playback with a VI Datavideo 1200 Studio PPU rack. For audio, the company's own Broadcast Warehouse TX-30 FM transmitters ensured crystal-clear sound in the audience's vehicles.

When asked to assess how successful the Kent Drive-in Cinema venture has

↑ A screening of *Dirty Dancing* at Kent Drive-In Cinema

been, Whiteoak has a perspective on both the financial and the less quantifiable results. "They have supported us a little, but it is obviously a drop in the ocean to where things should be by now," he says. "We've been able to help a few of our crew and keep our minds active through this, both of which have great value. And from an audience point of view, we've had nothing but wonderful feedback; people want to see more and eat more popcorn! If restrictions allow, we are planning to run scare night events over the Halloween period and also Christmas drive-ins which will help keep us busy."

STRANDED AT DRIVE-IN?

As for the future, both Whiteoak and Gourd are sanguine but realistic. For Matt Gourd and Vortex, he is confident that the enterprise, although costly, has established new connections that will pay dividends in the future. The less obvious positives lie in bringing a sense of achievement and satisfaction to him and his team.

Dave Whiteoak takes a more philosophical approach, despite being able to support the Video Illusions crew and collaborate with neighbouring companies, Centre Stage Solutions and Protect and Tour. "We are still in the same boat as everyone else and it is becoming less and less clear as to what the future holds; there is still no real light at the end of the tunnel for anyone in our industry. Without being overly political, I do feel we have been forgotten - our industry was the first to go and will be the last to return." ☹

- ▼ www.kentdriveincinema.co.uk
- ▼ www.thescreen.space
- ▼ www.videoillusions.net
- ▼ www.vortexhire.co.uk



**NRC Centres are now open
and fully COVID Compliant**



**TRAINEE
RIGGER**

The PLASA Trainee Rigger is a pathway for those seeking a career in entertainment rigging. This hands-on scheme enables candidates to train under experienced and NRC qualified riggers to prepare for the National Rigging Certificate.

Find out more at
www.plasa.org/trainee



NRC

The National Rigging Certificate (NRC) is the industry standard certification for rigging professionals. This certification demonstrates that you operate at a professional standard and provides a benchmark for employees and venues when hiring crew.

Find out more at
www.plasa.org/nrc

Looking for some guidance?



The National Rigging Advisory Group acts as a representative body for the entertainment rigging industry in the UK with representation from organisations and individuals involved in rigging and health and safety experts.

The NRAG promotes and produces rigging related guidance documents downloadable at www.plasa.org/nrag



help desk

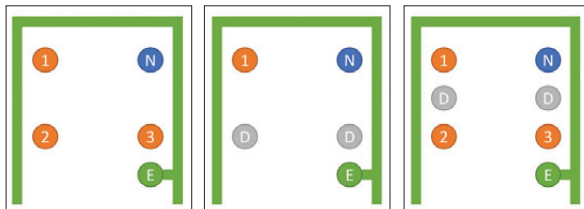
Digital light tracks | By Wayne Howell

"The reality is that transmitting DMX512 over a track is already breaking the rules ..."

→ I've recently seen a number of questions about digital track lighting appear via the Artistic Licence *Help Desk* and have also fielded a few calls from customers on the same subject. So, whilst I freely admit that this is not my expert subject, this column is based on the research I've done in order to help customers resolve problems.

For those unfamiliar with the concept, a track lighting system consists of an aluminium extrusion that allows electrical conductors to run in parallel and be accessed by light fixtures that clamp into the track. There are also assorted adapters that allow the tracks to intersect, connect to power and fixtures. There seems to be little intentional standardisation between manufacturers, although many of the systems on offer appear to interoperate.

Early track systems were designed with four conductors for three live circuits plus neutral, as shown in the diagram below, which is a cross section through the track. This design allowed three circuits to be externally dimmed. The extrusion provides the earth conductor, shown in green in *Figure 1*.



↑ Figure 1

↑ Figure 2

↑ Figure 3

DALI

As the requirement for digitally-controlled track evolved, DALI was the obvious solution as it enabled the use of 64 individually-dimmed circuits rather than three externally-dimmed circuits. The first implementations of this effectively re-tasked the second and third live conductors, as shown in *Figure 2*.

The circles marked 'D' provide the two conductors needed for DALI. Other systems also exist which have six conductors (plus earth), as shown in *Figure 3*.

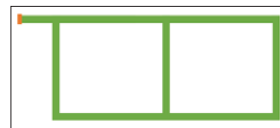
In this scenario, there are three live circuits plus the DALI conductors. I think this is a vast improvement as there is no way that one could end up with a potential compatibility issue between digital and non-digital products.

Track systems are designed to click together to make useful geometric shapes, such as the plan diagram in *Figure 4*. The orange rectangle represents the point at which power and data enter the track.

That's no problem for the power, but let's look at the data topology: the blue and orange represent the route of the two DALI conductors in *Figure 5*.

The engineer in me feels rather ill looking at a network with loops. But the DALI protocol is slow and uses a very robust data transmission mechanism and it works. So, by and large, DALI track lighting works.

Wayne Howell is the CEO of Artistic Licence, the lighting controls company that he founded in 1988. Wayne invented Art-Net and is actively involved in the ESTA technical standards programme.



↑ Figure 4



↑ Figure 5

DMX TRACKS

Earlier, I mentioned that I'd seen numerous customers having difficulty with digital track systems, but they were not DALI; they were DMX512. There are a number of companies offering DMX512 lighting tracks, and many of these businesses purport to offer track systems designed for DMX512, but I have my doubts.

DMX512 uses three conductors: common, data minus and data plus. For the avoidance of any confusion, all three matter. However, in my research, I phoned numerous suppliers of digital lighting tracks that supported DMX512 and asked how many DMX512 conductors existed in their track? Without exception, the answer was two (and if anyone knows of a three-conductor track, please send me the link). I then asked what to do with the common connector. Answers ranged from: "it's a balanced signal so the common doesn't matter," to: "oh, you just connect that to earth". I think the phrase I'm looking for is 'dangerously naïve'!

THE REAL WORLD

The reality is that DMX512 lighting track and "designed for DMX512" lighting track is out in the market. As far as I can see, these products are, at best, designed for DALI and someone has assumed that DALI and DMX512 are similar so it will be fine either way. Let's take a look at the major pitfalls and how to make these products work reliably . . .

DMX512 requires twisted pair cable which is part of the mechanism by which the communication rejects noise. The data conductors in a lighting track are parallel and so theoretically fail this first test. Interestingly, this isn't really a problem - the data conductors are completely enclosed inside the earthed track and run very close to each other. I'm not suggesting that you could run DMX down 300m of lighting track (300m is the maximum allowed by the standard over good cable), but if you limit track to tens of metres, it is unlikely to be a problem. Topology or track layout is a major consideration and all of the things that will 'be ok' for DALI will break DMX512.

In *Figure 6* the blue and orange represent the DMX512 data plus and data minus conductors. The red circles show 'Y' splits which are disallowed by the DMX512 standard. The purple circles show closed loops in the DMX512 network, these are so illegal that the standard doesn't even mention them - it's just understood that you can't do that. So, how would you correctly drive that topology with DMX?

Figure 7 shows one solution. Each linear section of track is driven by an output from a DMX512 splitter. This avoids Y splits and loopback faults.

Connecting the DMX512 common to earth has the potential

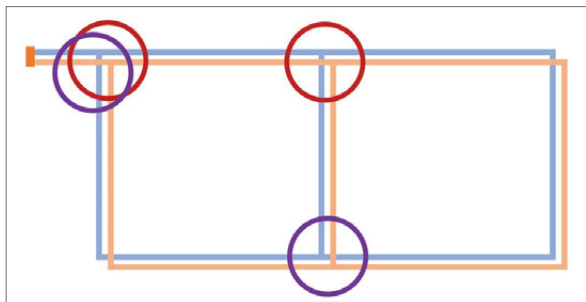


Figure 6

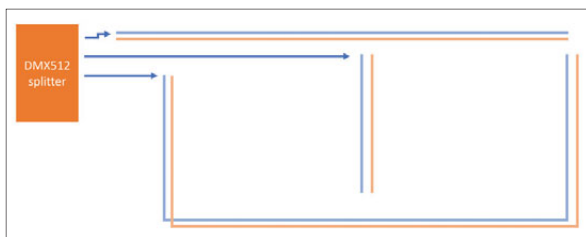


Figure 7

to cause significant problems. The DMX512 common should be referenced to mains earth at the controller, not the track. That said, if an isolated splitter is used to drive the track and the track is relatively short (say 20m) it should be fine. Rule of thumb: always put an isolated splitter between track and controller.

Meanwhile, if you are attempting to drive multiple tracks in different rooms, ensure that there is an isolated splitter in front of each track. That will avoid the problems caused by the mains earth in each room being connected together via the control system. Rule of thumb: isolate data in each room.

The track manufacturers who say you do not need to connect DMX512 common are misinformed (come and join a PlugFest event and we'll show you why). The common connection keeps a variable called common mode voltage under control. Rule of thumb: isolate data in each room and connect the common output of the splitter to the track earth.

In addition, DMX512 requires a terminator at the end of the cable - everyone knows that, I've written it so many times in my columns. So where does it go in a track system? The reality is that transmitting DMX512 over a track is already breaking the rules. Terminators are all about matching impedance, but the track system already broke that! So, there are no hard and fast rules, a lot of the time termination will not add any benefit. Rule of thumb: don't fret about termination in this environment.

I've also been asked whether RDM works over track lighting. I've not tried, but I suspect it only will if you are using relatively short lengths with no Y or T connections. Incidentally, my comment about termination above is only for DMX512. With RDM, you absolutely must have a termination. Rule of thumb: RDM on a track system is unlikely to be reliable unless the manufacturer has specifically designed it in.

SUMMARY

If you are using digital track then DALI is the safe bet as it's remarkably tolerant of weird track topology. If you need to use DMX512 track, keep to short linear sections and put an isolated splitter in front of each section. ☺



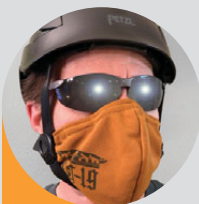
People & Products Connecting the World



Watch at:
www.linkusa-inc.com/techtalk

Rome - Italy
www.linkitaly.com
+39 06 227251

Middleton, WI, USA
www.linkusa-inc.com
+1 855-433-LINK



technology focus

Restarting the Industry, pt. 2 | By Richard Cadena

"It was a bit like solving a Rubik's cube, because when you change the focus of one light, you often have to compensate with another . . ."



At first glance, it may seem a bit odd for an entertainment lighting crew to handle the lighting of a sporting event like the NBA Restart, but it was a unique situation that required an unconventional approach, at least from the standpoint of conventional basketball court lighting. Because the basketball games would be held in three different venues on the campus of ESPN Wide World of Sports (EWWS) complex in Disney World, none of which were designed for televising professional basketball, they had to be adapted for the purpose. It turns out that entertainment lighting equipment, crews, and practices were all pretty well-suited for it . . .

COLOUR, BALLYHOOS, AND MORE

We installed what looks like a concert lighting rig - LED fixtures and automated lights rigged on modular truss - in each of the venues, although they are being used in three different ways. The primary purpose was to uniformly light the basketball courts for the game and to throw in some colour and movement for the national anthem and ballyhoos during the player introductions, timeouts and half time. Rob Baxter designed the lighting systems for all three venues drawing on his nearly 30 years of experience with the NBA, as well as designing the custom court truss lighting systems for both the LA Lakers at the Staples Center and the Brooklyn Nets at the Barclays Center.

The three EWWS venues include what is referred to as the Arena, the Field House, and the VISA Athletic Center. The trim heights in all were limited by the existing rigging and/or ceiling height, which is less than optimum. In addition, the weight-bearing capacity in VISA was insufficient for the 160 fixtures in the original plan, which meant the rig had to be reduced to 140.

In the Field House, Baxter chose to use his standard 'NBA All-Star Game' rig, which has 408 ETC Source 4WRD PARs with LED light engines on folding truss, because the trim height and weight bearing capacity could accommodate them. But in the Arena and VISA facilities, he designed GT truss systems using Martin MAC Quantum Wash LED fixtures, as he had used previously when lighting games for the NBA in India and for the NBA D-League Showcase. He knew the fixtures were small, lightweight, and bright enough for the purpose, and given the previous successes with the NILA and ETC LED rigs, the NBA had confidence in his choices. And since the Quantum Wash fixtures are automated, they could be focused remotely whilst their variable colour temperature is a bonus.

LIGHTING FOR TV

The NBA has a specification for lighting the court that spells out the requirements for illuminance (145 fc), uniformity (1.35:1), and metering height (3ft). It says: "Illumination in the arena bowl must be designed primarily for TV broadcasting, while minimizing glare for the players and spectators. The light on the court must be bright and uniform with minimal player shadows."

Illuminance specs include horizontal, main and reverse camera angles,

For Richard Cadena, the road to authoring books and magazine articles ran through High End Systems and Martin, took a left turn at designer, tech, and electrician, and is still under construction.



Rob Baxter (left) and Kevin Dobstaff getting their game faces on for tech rehearsals

and baseline camera. Baxter's is always a four-point lighting approach, which, studies say, makes it easier for athletes to see the ball. Surprisingly, basketball courts are not often lit this way. Football and soccer fields are commonly lit with four groups of lighting and each group covers the entire field of play, but in the case of the Quantum-based systems, we had up to 47 individual areas to light and blend to create uniform coverage using four lights per area.

It can be challenging to take hundreds of fixtures and blend them to create a uniform wash across the entire 94ft x 50ft court. Each fixture has a different throw distance, and therefore a different zoom setting and intensity. It may look perfectly uniformly lit, but the light meter ultimately tells the tale, and the presence of TV cameras and monitors means there's little room for imperfection.

CAMERAS EVERYWHERE

As we're lighting for the camera, the main question is, where are the cameras? The short answer is that almost any direction you look, there's a camera. In front of the court facing the players' benches is the main camera platform, and there are more than three dozen cameras from two different broadcast networks - ESPN and TNT Sports. There's also a reverse angle camera on the opposite side of the court, plus two slash cameras on the front corners shooting diagonally; a rail cam that is remotely guided up and down the court from goal to goal; and four robotic cameras on each of the two basketball goals. There are also a couple of handheld cameras, not to mention

the stationary interview cameras peppered around the facilities, foul line PTZ robotic cameras, and several Fletcher robo cams in various locations. Whilst we were focusing the system, many of these camera angles had to be taken into account, but the main cameras and the slash ones were the biggest concerns.



↑ Inside the OB truck where the video crew switched cameras - notice that some of the camera angles show more reflections on the floor than others

When Carlton Myers, VP of Live Production and Entertainment for the NBA, walked the court during focus, in addition to illuminance and uniformity, his main concern was minimizing the glare in the players' eyes. Any lights behind the basket and in the direct line of sight of key shooting points on the court sometimes create a blinding glare that handicaps the shooter. So, we had to identify the most common shooting areas, like the low post, the three-point wing and corner shots, and either dim or re-focus those lights to be less blinding. It was a bit like solving a Rubik's cube, because when you change the focus of one light, you often have to compensate with another.

Baxter (LD), Rick Pettit (associate LD), Dave Feldman and me as lighting directors spent a day or two roughing in the focus and then came back to balance the intensities. It's a time-consuming process, and to make matters worse, when we came back to balance the lighting in the Arena, the intensities were all over the place . . .

It didn't take long to figure out that there was an issue with a setting in the Quantum fixtures - you can choose between constant fan speed and variable intensity, or constant intensity and variable fan speed. They were set to the former so that the LED emitter didn't overheat. The fixtures have pretty strict operating parameters and heat can shorten their life considerably, so the manufacturer has to build in safeguards. Ultimately, it was an easy fix to change the setting.

Once that was taken care of, it became apparent that any change in the intensity or zoom would also change the colour temperature, so in a sense, we were chasing our tails, and quickly learned that adjusting the colour temperature is the last tweak to make and it's not as simple as matching the CTO value from one fixture in all the fixtures. That's because as the LEDs age, they behave differently. So, you might have the same CTO settings in any two fixtures, but the light meter reads very different colour temperatures, which means every single fixture had to be measured and adjusted individually, which takes a tremendous amount of time.

MIRROR, MIRROR ON THE FLOOR

All this was taking place during a pandemic inside a bubble of isolation from the rest of the world, so, there was that layer to deal with as well. It didn't really have much of an effect on the whole affair up until the point that many of us were scheduled to go into quarantine off site for seven days prior to the arrival of the players and the final push to iron out any technical details before going into game mode. It just so happened that the quarantine period coincided with the broadcast team's plans



↑ Creating a ballyhoo during a programming session inside of the Field House arena. The in-house entertainment lighting package supplemented the court lighting systems

to set up and turn on their cameras to get a preliminary look through the lens. Someone from the lighting team needed to be there, and I was elected. That meant that I would be moved from the 'green' team to the 'yellow' team since I would not be quarantined.

On the appointed day, I went to the OB trucks, notebook in hand, to look and listen. As soon as I saw the monitor, it was apparent that the biggest issue was the glaring reflections in the polished hardwood floor. It's a physics problem. When you have cameras on one side and lights on the other, the angle of reflection is critical, and in this case, there were many instances where the angle of reflection matched the camera angle, resulting in a big hot spot on the floor. That's something we don't ordinarily encounter because a stage floor is usually black or carpeted, not shiny wood that reflects like a mirror. The lower the ceiling and trim height, the worse the problem was. And we would have to fix it. Of the three venues, the VISA Arena had the most glare.

For the next few days, I was working overnight with the yellow team so that, once the green lighting team was out of quarantine, we could take turns working on the courts - green by day, yellow by night. The first task I took on was to fix the reflections at VISA. The best way to go was also the most radical - I refocused the lights in such a way that they crisscrossed the floor, maintaining a four-point approach, but with much longer and flatter throw angles to avoid focussing into the main and slash cameras as much as possible.

When I finished, I went back to the hotel, but I couldn't sleep. I was preoccupied with how radically the focus changed, and I was anticipating an excoriating phone call. Instead, when I checked in the next day, I heard from Baxter that the change was very well received. While there was still some glare from the side angles, it was much better for the main and slash cameras. I felt like I dodged a bullet!

In the end, all the time we spent with the programmers, including NBA's Henry Parks, Tinez Martinez, and Seth Weldon, as well as Disney programmers Kenny Haines, Ashley Jenner, Byron Chess, and Ed Pottorff, reading a light meter, walking the court, adjusting the intensity, the colour temperature, and the green/magenta balance paid off. It was a lot of work, but when you go to the OB truck to talk to the video crew, you kind of hold your breath waiting for their feedback. These people have a lot of experience and a critical eye. When they're satisfied with your work, it's a great feeling. And when you see it on TV, it's even better. ☺

For Part One of Restarting the industry, see LSi September 2020

ON TEST

Claypaky Xtylos

Mike Wood reviews Claypaky's laser-based beam moving head luminaire . . .



ABOUT THE EXPERT

MIKE WOOD

A technical, design and intellectual property consultant offering services to the entertainment technology industry.

✉ mike@mikewoodconsulting.com

Nine years ago, in February 2011, I reviewed a product in this column that was to become an icon of its time and that introduced the world to mass usage of very narrow beam aerial effect projectors that weren't lasers. That product, of course, was the Claypaky Sharpy. Today, I'm looking at Claypaky's newest entry into that same market: the Xtylos. Ironically enough, this time it uses lasers as the light source, LED lasers. So, is this an LED lighting product or a laser product? It perhaps isn't clear and the difficulty in classification is pointed up by the way this light is treated in different countries around the world.

In Europe, Claypaky's home turf, the Xtylos is treated as a very bright light in Risk Group 3 and as a Class 1 laser. There are no special regulations or precautions for its use over and above any light that is in Risk Group 3. That is, hazard distances are defined but it is up to the user to ensure that it's operated correctly and isn't shone directly into eyes for a length of time where it might cause damage. In fact, the blink and aversion response of viewers would normally be sufficient to make the light safe to use in entertainment situations - you wouldn't want to shine this directly at the audience from a short throw, but that's true of many lights. Although the internal light source in the Xtylos is a Class 3B laser, that light passes through beam expanders and colour homogenisers before it exits the fixture, so the light coming out is no longer so tightly-collimated and is much less hazardous than the native lasers.

The US authorities, however, see it differently. Although the standards and definitions for both laser classifications and risk groups are the same as Europe's, they don't give full dispensation with the variance for the Class 1 RG3 classification and the beam expanders, and instead require that it be treated as an intermediate style of product. Not the full laser regulations, but not free use either. The US does allow free use of products using powerful lasers where that light cannot escape, such as those used in DVD or Blu-ray players, however, if the light is emitted in any form, then it's regulated. So it's a tricky one. Is the Xtylos using a Class 3B laser source? Yes. Does light exit the unit? Yes. Then, according to the US regulations, it must be treated as if it

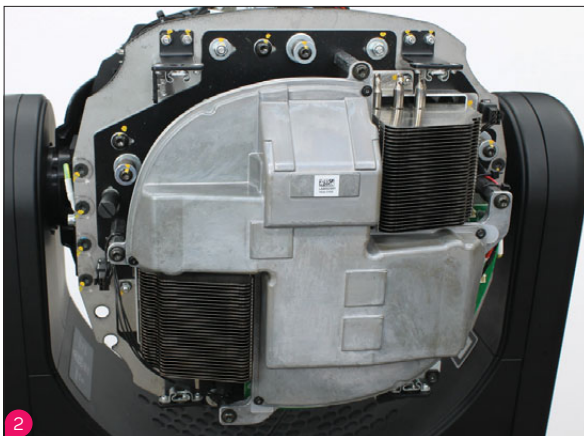


- ← Claypaky's Xtylos
- ➡ Light engine
- ③ Light engine exit aperture
- ④ Fixed gobo

"The primary colours of the Xtylos are going to be just about the highest saturation reds, greens, and blues that you can get from any light . . ."

were a laser, and the use of the fixture in the US is regulated and a variance issued by the FDA is required. Depending on where you are, or where you might tour with the Xtylos, you need to be aware of these important differences.

In Europe you are free to use the Claypaky Xtylos just like any other RG3 light, whereas in the US, you will need to have trained staff and apply for an FDA variance to be able to purchase, rent, or use the product. Further, a variance will be needed for every show it's used on. I live in the US, so, because I was interested in the process involved, I took the training course and applied for the FDA variance. It's clearly a bit of a chore having to do this, but I can report that it's all very simple and shouldn't be a barrier. Will it put some people off from using the Xtylos? Yes, of course, but for the large venues where the Xtylos is likely to be used, and the companies likely to be involved, it shouldn't be a concern. This is not a light you will be using in a small nightclub!



Claypaky US has curated an online process where the training is given, and you can apply for the variance. There is no cost to the user for either the training, which takes just over an hour to complete, or the variance. Once a person in a company has completed this training, Claypaky is then able to train other employees in their organisation. One more slight caveat - the variance applies to a company and their full-time employees only, not to contracted or part-time workers.

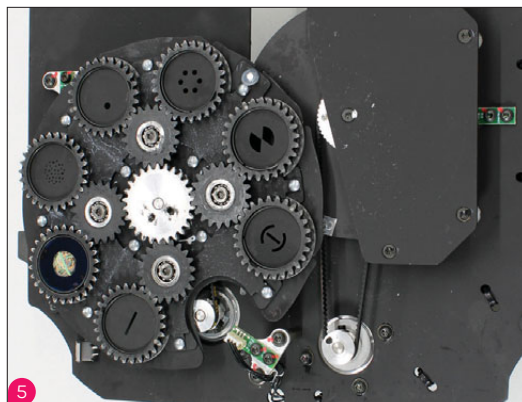
As we did with that Sharpy review 11 years ago, I've tried to do my usual measurements, but you always need to bear in mind that this is a tight beam unit and not a light for illuminating people or scenery, so the requirements are very different. Colour rendering, for example, is irrelevant as, to a great extent, is lumen output. All that matters is how well the beam shows up in the air and the effects it can produce.

All tests were run on a nominal 115V 60Hz supply; however, the Xtylos is rated to run on voltages from 100-240V 50/60Hz.

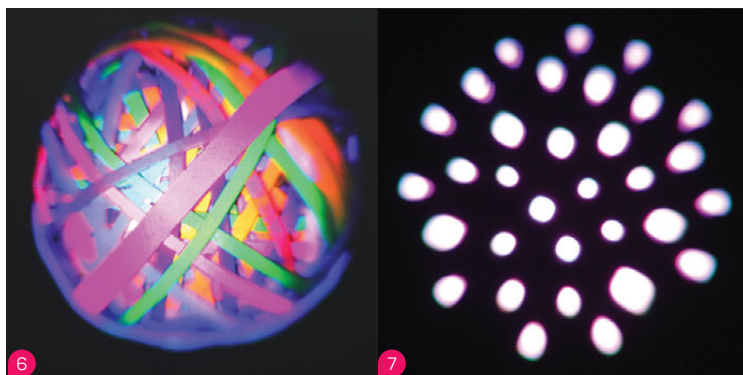
LIGHT SOURCE

Xtylos uses three semi-conductor lasers, one each in red, green, and blue, with a rated lifespan of 10,000 hours. These are enclosed in a custom sealed light module made by Claypaky's parent company, Osram. This module aligns and combines the three beams into a single beam which in turn passes through a homogeniser tube (I'm inferring this is a hexagonal light pipe or tube from the native beam shape) and finally through a micro





- 5 Rotating gobo
- 6 Gobo projection
- 7 Gobo focus
- 8 Prism wheel
- 9 Prism arm



lens array on the end of the exit tube. *Figure 2* shows the sealed light engine at the rear of the Xtylos. The semi-conductor lasers are housed in this die-cast enclosure with sets of heat pipes leading out into fan cooled heat sinks fins. As well as the need for safety, I'm sure there is some very critical alignment of the components within that enclosure and I completely understand why this should not be opened by the user. *Figure 3* shows the exit aperture of the light engine as it enters the main body of the luminaire - the cylindrical tube contains a homogenising light pipe or light tube with a beam expander lens at the end. Finally, the rectangular exit window at the top is capped with a glass micro lens array or engineered holographic lens. The light exiting this aperture is a very tight light source, but no longer a coherent, fully collimated beam. Note - sometimes our old enemy etendue can be our friend. A laser beam is extremely narrow but does have some slight beam divergence; the use of beam expanders to enlarge the beam diameter can actually also decrease the beam divergence.

GOBO WHEEL

First in line after the light engine are the gobo wheels. The Xtylos has two wheels, first is a fixed gobo wheel fabricated as a single-piece wheel with 11 patterns which primarily consist of a range of different-sized apertures to provide the image for the tightest beams. As with the Sharpy, the smallest apertures on this wheel are tiny, down to around 1mm in diameter. *Figure 4* shows a section of the fixed gobo wheel with the three smallest apertures visible; I included my pinky in the photograph to give some idea of scale.

This lightweight wheel moves very quickly with snappy change times.

GOBO WHEEL

Gobo change time (adjacent apertures)	< 0.1 sec
Gobo change time - max (Gobo 0 - 6)	0.4 sec
Maximum wheel spin speed	1.4 sec/rev = 43 rpm
Minimum wheel spin speed	27 sec/rev = 2.2 rpm

The way the optics of the Xtylos work to produce tight beams (more on this later) means that it's the very centre of the beam where best focus is achieved and where moist light is concentrated. Thus, all the patterns on this fixed wheel are very sharp and bright. These are really the heart of what makes the Xtylos an aerial beam projector.

Mounted back to back with the fixed wheel is a rotating gobo wheel with seven user-changeable patterns. *Figure 5* shows the arrangement. This is all very normal for an automated spot. Interestingly though, the images on the rotating gobo wheel are much larger than those on the fixed wheel and extend further out from the sweet spot in the middle of the beam. To deal with this, when a gobo from the rotating wheel is selected (and if the fixed wheel is in nominally open position), the fixed wheel automatically moves to gobo 11, which has a much larger aperture so as to let light through to the larger rotating wheel images. Effectively, the fixed wheel has two open positions - one for itself, and a second, larger, one for when the rotating wheel is in use.

**CLAYPAKY XTYLOS
TECH SPEC****FEATURES**

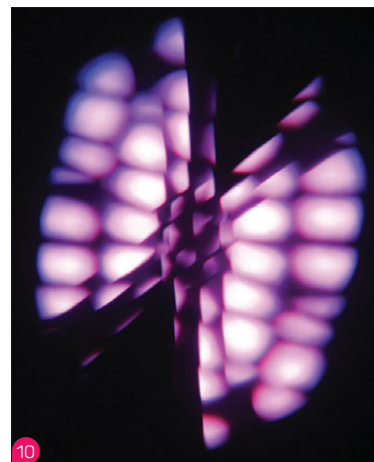
- ▶ Dimensions (H x W x D): 603 x 391 x 294mm
- ▶ Weight: 24kg
- ▶ Power: 100-240V, 50/60Hz
- ▶ Light source: Laser engine rated at 10,000hrs
- ▶ Colour system: RGB, linear CTO
- ▶ Aperture: 1°-7°, up to 0.5°
- ▶ Dimming: 0-100%, 24-bit
- ▶ Effects: 12 fixed / 7 rotating gobos, frost filter, wheel with 3 prisms + 16-facet prism
- ▶ Pan/tilt: 2.46 / 1.68
- ▶ Inputs: DMX512, Art-Net
- ▶ Data connection: XLR 5 I/O

ROTATING GOBO SPEEDS

Gobo change speed (adjacent)	0.2 sec
Gobo change speed (worst case)	0.4 sec
Maximum gobo spin speed	0.0625 sec/rev = 960 rpm
Minimum gobo spin speed	2566 sec/rev = 0.23 rpm

The Xtylos rotating gobo wheel has an extremely fast gobo spin, faster than anything else I've measured. This provides laser tunnel like effects from the patterns, in particular the gobo with an off-centre aperture.

Although the standard gobo load is all monochrome and simple linear art, the user can use grey scale images and coloured glass gobos in the rotating wheel. You can see a sample coloured gobo supplied by Inlight Gobos on the wheel in *Figure 5* while *Figure 6* shows what this looks like when projected. Again, as with the Sharpy before it and many other similar units from other manufacturers, focus quality on the larger gobos was of good quality in the centre but with quite a big fall off from centre to edge; *Figure 7* shows this in more detail using a monochrome dot pattern. The Xtylos optics are optimised for small, tight beams and anything inside the centre third of the image, so small images within that centre



portion are sharp. It's useful that you can use larger gobos like this, but it isn't the primary strength of the Xtylos.

PRISMS

The second optical module contains two sets of effect prisms and a frost filter. *Figure 8* shows the first set of four effects, three prisms and a frost, which are mounted in a wheel. The three standard prisms on this wheel are a six-facet circular, a linear barrel, and a six-facet linear. They all give good separation of individual beams. Any of these can be overlaid with the second, rotatable, 16-facet

James Eade

Expertise in electrical systems

- Sought after training from the author of the IET guidebook on event power, including basic theory, BS 7909 compliance and the industry recognised and popular Creative Skillset Certificate in Temporary Power Systems.
- Power quality analysis
- Thermography surveys – non-intrusive preventative maintenance
- Energy monitoring and potential saving measurements
- Permanent and temporary electrical installation designs and testing
- Company safety audits and performance improvements
- Corporate electrical safety policies and procedures

www.eade.uk.com

the resource for all things event power related



Staging & Structures

Outdoor Structures

Ready to support your Winter Projects

IPS provide Layher, LiteDeck and Truss based solutions installed by our experienced team.

Projection Towers

Control Positions

PA Towers

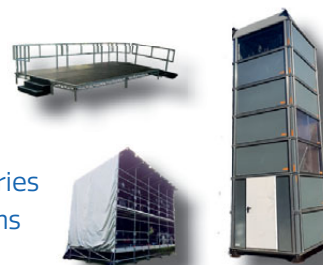
LED Screen Supports

Cable & Signage Gantries

Performance Platforms

Access Platforms

Plus a full range of Outdoor Roof Structures



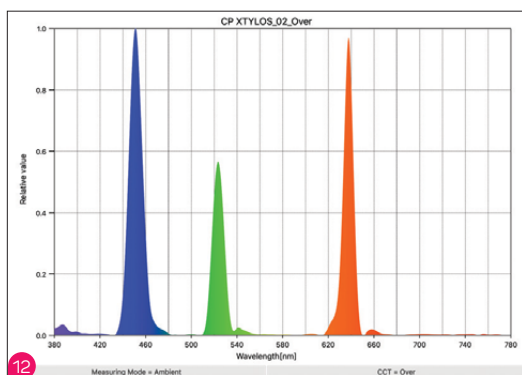
Full H&S documentation, Structural Reports and Wind Action Plans & Remote Wind Speed Monitoring available.

Call us Now for a Quotation
01908 657950

ips.co.uk



- 11 Focus lens
- 12 Spectral distribution
- 13 Dimmer curve
- 14 Output at minimum beam size



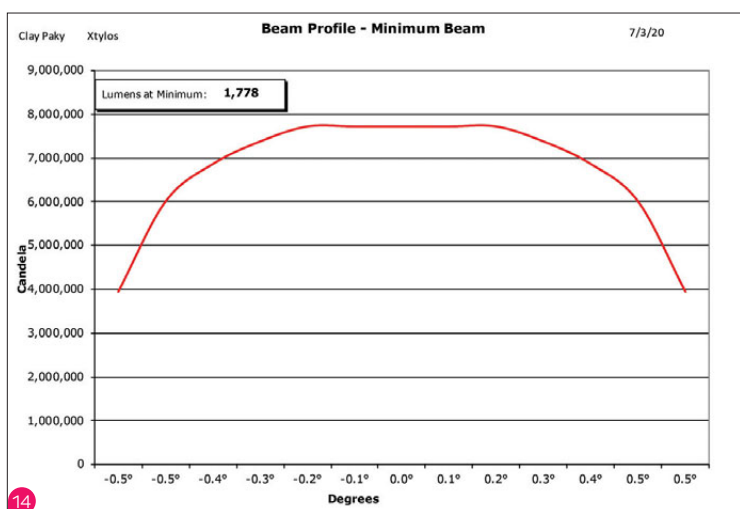
prism, (two concentric rings of eight facets each) mounted on the other side of the module as shown in *Figure 9*. I measured the prism insertion/removal time for either set at around 0.5 seconds and, once in place, any prism can be rotated at a range of speeds up to from 17rpm. The effects when the two prisms are combined along with a suitable gobo pattern can be quite interesting. *Figure 10* shows an example.

LENSES

The final optical elements in the Xtylos are the projection lenses. There is a single movable lens that provides focus control and a final fixed output lens; these can be seen in *Figure 11*. The focus lens is large and can be moved from one end of its range to the other in about 3.4 seconds. The optics are much simpler than a typical automated spotlight. Again, the goal is very bright tight beams, and everything is done to maximise that.

COLOUR MIXING

Colour	Red	Green	Blue	Cyan	Magenta	Yellow	White
Output	27%	45%	7.9%	77%	36%	72%	100%



COLOUR, DIMMING AND STROBE

I've combined these three typically separate features, as in additive fixtures such as the Xtylos they all really boil down to the same thing - control of the LEDs or semiconductor lasers. The Xtylos is a simple RGB additive colour mixing unit - not what you would use for lighting faces but all you need for aerial beams and projection. Why is this? It's the same reason that a video screen or a movie projector only needs RGB to produce any hue within its range. You aren't concerned about how that light bounces off coloured objects and how it interacts with and thus renders their colours. All you care about is projecting on a white screen, or straight into the eye.

On the plus side, what the narrow bandwidth of the laser sources gives us is very high colour saturation. Because of this, the primary colours of the Xtylos are going to be just about the highest saturation reds, greens and blues that you can get from any light, and much higher than the original Sharp.

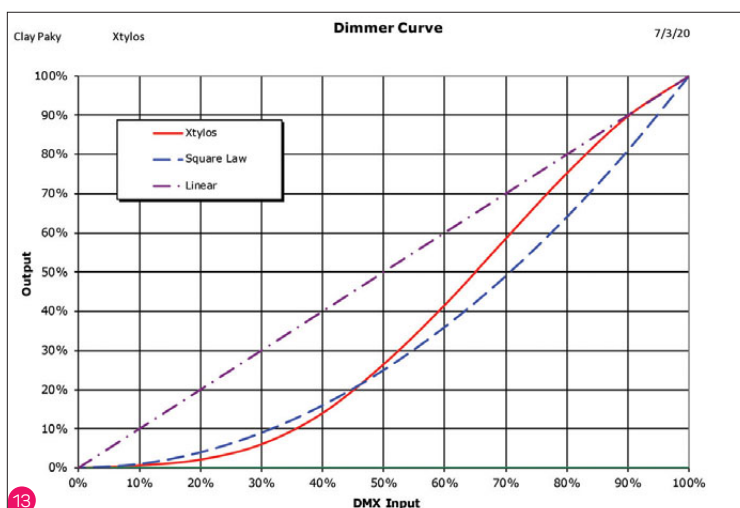


Figure 12 shows the measured spectral distribution and the extremely narrow peaks from the laser diodes. In reality, the peaks are even narrower than shown here. Looking at the Osram datasheets for the laser diodes the bandwidth is more like 2-4nm. The spectrometer I used, a Sekonic C7000, has an 11nm wide bandwidth sensor, so the narrowest peaks it can show are 11nm (more likely 22nm) wide.

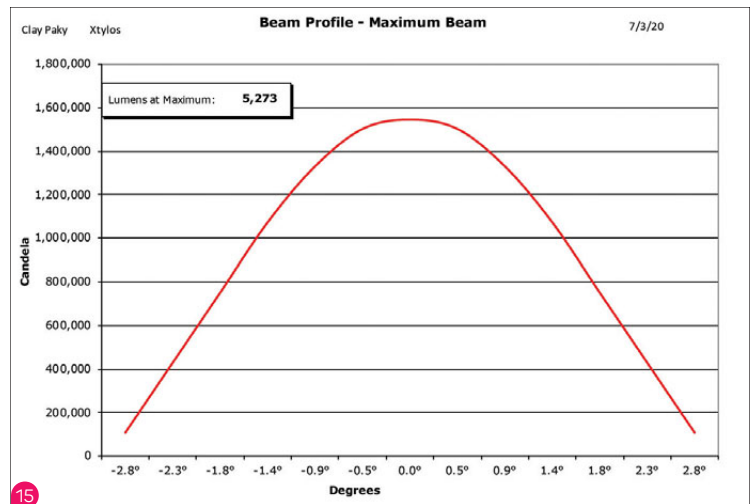
The output of each of the three colours and their simple additive mixes breaks down as shown in the Colour Mixing table above. That looks a bit odd doesn't it? How can blue at 7.9% plus green at 45% add up to cyan at 77%? Well, they don't. This I'm afraid is more a function of the poor response of light meters to the extremely narrow wavelengths emitted by laser LEDs. I own about six light meters, I tried them all, and they each gave completely different results for the blue emitter by a factor of nearly 10:1! Not only do these meters have problems with the very narrow bandwidths of the lasers

(light meters are designed for broad band white light) but also the definition of lumens is tied to human eye response and is poorly defined at the blue end. A very small movement in wavelength of a narrow band emitter can make a huge, disproportionate (and, frankly, wrong) difference to the output seen on the meter that doesn't reflect what the eye actually sees. With that in mind, take the figures in the table for the blue with a large pinch of salt. Instead, trust your eyes and/or the video camera you are using. That's all that matters.

I ended up going with values from my Sekonic spectrometer-based meter as it pretty much agreed with the Minolta. However, they both suffer from our poor definition of lumens at the blue end of the spectrum. It's not the fault of the meter, it's our definition that is to blame. Blue is much brighter to our eye than the meter shows.

Dimming and strobing were as expected. Smooth dimming that follows a curve similar to a square law when using the default settings. *Figure 13* shows that curve. Strobe is adjustable up to 25Hz and includes the usual options of strobe type and random effects.

As is often the case with LED-based units (laser LEDs behave the same), output dropped with temperature as the unit warmed up. I measured a 14% drop over 15 minutes when running at full power.



15 Output at maximum beam size

The Xtylos offers a wide range of user-adjustable PWM frequencies, with the possibility to go up to 40kHz or more. Actually, the Xtylos offers two different means of dimming. The overall maximum brightness, used in the safety zones, is set by reducing the drive current. The user dimming is done with PWM.

OUTPUT

As I mentioned at the beginning of this review, measuring the output of a beam unit like the Xtylos is

plasa



National Event Lifting Training (NELT)

A standardised training programme for production technicians in the event and entertainment industries. Technicians from the Royal Albert Hall, PSI, Whitelight, PSAV/Hawthorn have already completed NELT, here is what they say...

**COVID-19
Compliant
Centres
now open**

"The course content and quality of the training was absolutely fantastic"
"What I liked about the course was learning about safe systems of work"

To find out more and reserve your place today visit www.plasa.org/nelt



16



17



16 Menu

17 Connectors

18 Yoke arms

tricky. It was tricky back when I measured Sharpy, and it hasn't got any easier. On the face of it, the Sharpy had a higher lumen output than Xtylos, but it's clear from looking at the units that the Xtylos has hugely brighter beams than Sharpy ever did. It's all down to that beam size and how much power you can get into that small aperture. We know that the tiny laser pointer we use to annoy the cat can produce an impressive beam in a hazy atmosphere, and it's only a few mW. Same applies here.

The Xtylos has a much smaller beam than Sharpy and concentrates a lot of energy into that small area. That's what we see rather than the total light in a diffused beam. In the case of the Xtylos your light meter isn't much use. What matters is what your eye, or the camera, sees. It's also likely that different cameras with different sensors will see the Xtylos in different ways. It's important to test with the cameras you intend to use.

With both gobo wheels set on the open hole, I measured the output at 1.1° angle with intensity at 4m of around 485,000 lux (That's 45,000fc at 13ft). Perhaps around 2,000lm, but who cares? The open hole actually clips us to the bright centre of the beam as can be seen in the beam plot in *Figure 14*.

With the fixed gobo wheel set to gobo 11 (which is the open hole used when the rotating gobos wheel is used) the beam increased to about 5.5° with a lumen output around 5,300lm and had an output distribution more as you might expect when you aren't restricted to the beam centre. *Figure 15* shows that curve.

Finally, with the very smallest gobo aperture selected on the fixed wheel the beam angle dropped down to a tiny, almost parallel, 0.17°, but even though only a portion of the original beam is allowed to pass through, there's still a lot of energy there. It would be easy to damage scenery or fabrics if you had too short a throw - at 5m, I was easily melting plastics - so care is essential. Don't just turn this on without checking where it's pointing first! This is a fixture for large venues and long throws.

As with the Sharpy before it, it's interesting using the Xtylos focus control at these narrow angles. The beam has an external crossover point where the beam necks in and spreads out again. By carefully adjusting the focus



BE WISE

WHEN YOU ADVERTISE



ABC. See it. Believe it. Trust it.



www.abc.org.uk



**THE INDUSTRY'S
FAVOURITE MAGAZINE**

Everyone wants to get what they pay for. LSi is independently verified by ABC so our advertisers get the exposure they've been promised.

To advertise call +44 (0)1323 524120

www.lsionline.com

control you can visibly move that crossover back and forth along the beam.

PAN AND TILT

The Xtylos has full pan and tilt ranges of 540° and 250°, respectively. I measured pan speed over the full 540° at 2.7 seconds and 1.5 seconds for 180°. In tilt, the figures were 2.3 seconds for the 250° and 1.7 seconds for 180. Hysteresis or repeatability was measured at 0.08° for both pan and tilt, which is about 0.3" at a 20' throw (14mm at 10m).

NOISE

The Xtylos isn't a silent light. The cooling fans for the laser emitters provide a steady background noise, with that very high-speed gobo spin adding to it.

SOUND LEVELS

	Standard Mode
Ambient	<35 dBA at 1m
Stationary	52.7 dBA at 1m
Homing/Initialization	58.1 dBA at 1m
Pan	53.2 dBA at 1m
Tilt	54.0 dBA at 1m
Prism	53.4 dBA at 1m
Gobo select	53.0 dBA at 1m
Gobo spin	55.2 dBA at 1m
Focus	52.8 dBA at 1m

HOMING/INITIALISATION TIME

The Claypaky Xtylos took 59 seconds to complete a full initialisation from first powering up, and 45 seconds to perform a system reset while running. The unit was well-behaved on reset, it faded the output to black, performed the reset, then faded it back in again.

POWER, ELECTRONICS AND CONTROL

In operation on a nominal 115V 60Hz supply the Xtylos consumed 2.45A when stationary but with emitters at full power. The power consumption was 287W at a power factor of 0.99. Quiescent load was around 1.24A, 146W.

As seen in *Figure 16*, the Xtylos has a dot matrix LCD screen, buttons, and menu system to allow setting all the usual parameters and options. This can be accessed using an internal rechargeable battery for power when the unit is being prepared for use.

The connector panel (*Figure 17*) provides five-pin DMX512 XLRs as well as power in and through via Powercon and Ethernet via an Ethercon.

CONSTRUCTION AND SERVICEABILITY

Construction follows the current standard, a rigid aluminium chassis backbone and optical modules with data connectors that can be slid in and out for service, whilst the laser engine is sealed and shouldn't be touched by the user. The yoke arms and motor control are also very familiar as shown in *Figure 18*. The novelty in the Xtylos is not in these features, nor in the types of effect it produces - it's in the light source that it uses to create those effects.

SAFETY

There are a whole new set of parameters to be aware of when setting up and using the Xtylos. This is particularly relevant in the US where the use of these features is mandatory, although the features are available to everyone to use, mandatory or not. The Xtylos has a system called 'Smart Mode' that allows you to program safe zones where the light will automatically operate at reduced or zero power. For example, you might set zones where the light would be shining directly at near-by audience or band members to be always off,

areas where the audience can be scanned at a distance to a reduced power level, and overhead areas where there are no people at all to full power.

This is all done through dedicated control channels from the desk and is relatively straightforward, at least, once you've got your head around it. As DMX itself is not a reliable transmission protocol for safety related functions, these safety zones are stored within the Xtylos itself in permanent memory and, once set, no external combination of DMX pan and tilt values can override them. In practice, as a programmer, these would be the first things you set up when using Xtylos.

Once you've done it you can forget about them as the lights themselves will prevent you from doing anything you shouldn't. The concepts of safety zones and hazard distances won't be unusual to those of you with experience of operating lasers, but controlling them in a light through DMX is likely new to everyone. One final safety related point, if you want to use Xtylos outside in the US then you also need to check with and inform the FAA as the beams could be a hazard to aircraft.

CONCLUSION

That's about all I can measure with the Claypaky Xtylos. Is it bright? Yes, it is. Does it produce well-defined, laser-like beams? Yes, it does. If you are trying to get Sharpy-like effects in very large venues or stadium shows, then the Xtylos will likely do it for you. This is a light, like all beam projectors, where the way you use the unit, the set-up, positioning, and the use of haze or atmosphere are all as important as the light itself. Is the Claypaky Xtylos for you? If anything I've written here seems interesting, then I encourage you to get a demonstration and see for yourself. 📺

➡ www.claypaky.it

ADVERTISERS INDEX

Absen	51	Harlequin	35	Link USA	71
Adamson Systems	IBC	Martin by Harman	IFC	Nexo	43
Alfa Systems	15	Highlite	27	PLASA	69/79
Astera	6	Indu-Electric	45	Robe	33
Ayrton	9	IPS	77	ROE Visual	23
Backup	61	James Eade	77	Staging Concepts	15
ChainMaster	5	JBL Professional by Harman	OBC	Vari-Lite & Strand	17
CLF Lighting	53	JTSE	67	WeMakeEvents	59/63
ETC	13/29	L-Acoustics	3	Whirlwind	25



in profile

Julie Harper talks to rock and roll show and lighting designer **Bryan Hartley** . . .

"I like to stay with one tour at a time, make the design, go on the road, develop the design, programme it. For me, the pleasure is running the lights to the music - I like the feel of a live show and audience . . ."



Rock and roll lighting and production designer Bryan Hartley has an enviable client list stretching back 35 years which reads like a who's who of rock royalty: Kiss, Mötley Crüe, Judas Priest, Nine Inch Nails, Aerosmith, Dream Theatre, Lenny Kravitz, Meat Loaf, Slayer, Megadeth, Anthrax. . . the list goes on and on. He has been LD and show designer for the Trans-Siberian Orchestra (TSO) since 2000, working closely with the legendary Paul O'Neill, and continues to take the band's double-header, 10-week tours to the east and west coast of the US each winter, maintaining the band's position as one of the top ten ticket-selling bands of the millennium. So what began his stellar career path?

"Music! I was guitarist with my high school band, High Voltage, and had my own PA and lights. We went on the road for two-three years from the age of 17 and when the band broke up I wondered what to do. Then I got a call from a friend in local band, Nantucket, who needed a lighting guy with lights. I accepted, and never went back! Through Nantucket I got to know Joan Jett & the Blackhearts who gave me an early break by hiring me as their lighting guy - not bad for a second job!

"This was the foundation for everything because at Leber-Krebs I met Joan's tour manager, Elliot Salzman, and through him got to know Paul O'Neill back in 1985 when he was with Savatage - 15 years before he founded TSO."

Hartley stayed with Joan Jett for 10 years, working with her on four studio albums, tuning guitars, drums, acting as driver and generally learning the trade. "I started working for other bands and, in 1993, began working with Kiss before they made their big comeback in 1996 with the original line-up and full make-up. Their first comeback show sold out its 45,000 tickets in 40 minutes and thought I would be replaced with one of the

hotshot LDs from Bon Jovi or Scorpions, but they kept me on and I stayed another 12 years. It was so cool to be working with the band I grew up listening to!"

Five years were spent lighting Mötley Crüe ("It was awesome to work with them - I love the drive of their music!") and three and a half years with Aerosmith ("I'd been trying for 20 years to work with them!") followed by a plethora of other bands. "I'm a one-show man as much as possible, working with one band each year plus TSO. I like to stay with one tour at a time, make the design, go on the road, develop the design, programme it. For me, the pleasure is running the lights to the music - I like the feel of a live show and audience!"

The underlying current throughout Hartley's career has been his connection to TSO, a band famous for its elaborate stage shows and the incredible production values of its 'rock theatre' performances, as Paul O'Neill termed them.

"Paul had an electric energy and was so into the production side of the show - with him it was less about money and more about creativity. He wanted the design to be about the show more than the musicians and would come up to me and say, 'Bryan, you're going to love this song, I totally wrote it for your lights!' He wanted to add more and more each year with a different show design for every tour. We started out small with one truck and a couple of buses, and now have about 20 trucks."

The advent of media servers proved a game-changer in Hartley's evolution to show designer. "With the video controlled through the lighting console, suddenly the LD got to pick the content and video on screen. I fell right into it - it seemed right to be controlling the video, lasers, pyro etc, as well as lighting which in turn evolved into whole production design and now I'm responsible for all the staging and visual design. It's no

surprise that most PMs come from the lighting world."

Hartley works with a team of pyro, laser and video designers to realise his vision for each stage concept. He produces a new show design each year with a new set of visuals to accompany the same songs from *The Christmas Trilogy* in what has now become a Christmas tradition. "I'm driven by new technology and what I can do to make it look different. I want to hear the audience say 'Wow! This is the best yet!'"

Hartley cites his early influences as Jim Chapman and Robert Roth, who were 'very big when I was starting out and designed for everyone! I used to read about them while working with my band and local bands and was inspired. They were a focal point for me at the start and led me in the right direction just from observing what they did."

In 1999, during a 3D video shoot for Kiss filmed for television at the Dodger Stadium, the projection screen was causing some difficulty so the manager hired a film LD to work with Hartley on the lights. "I was taken aback - but decided to take the positive and learn what I could. The LD's name was Roy Bennett! I learnt more from that guy in that short space of time - he taught me all about the ending of a song, which sounds basic but there is a true art to it. Roy Bennett is the epitome of a production designer - he has a knack for the whole creativity of putting an entire show together. I'm so thankful that I got to do that with him."

So what would define Bryan Hartley's style? "I'd say the connection between the lights and the music to make them one thing, especially with TSO. I like to create something that I know to be my input into the music that combines to make something really special. Running the lighting desk is like having another instrument for me. I like to write my own song to match the band's song." ✕



CS7

CS7p

CS10

CS10n

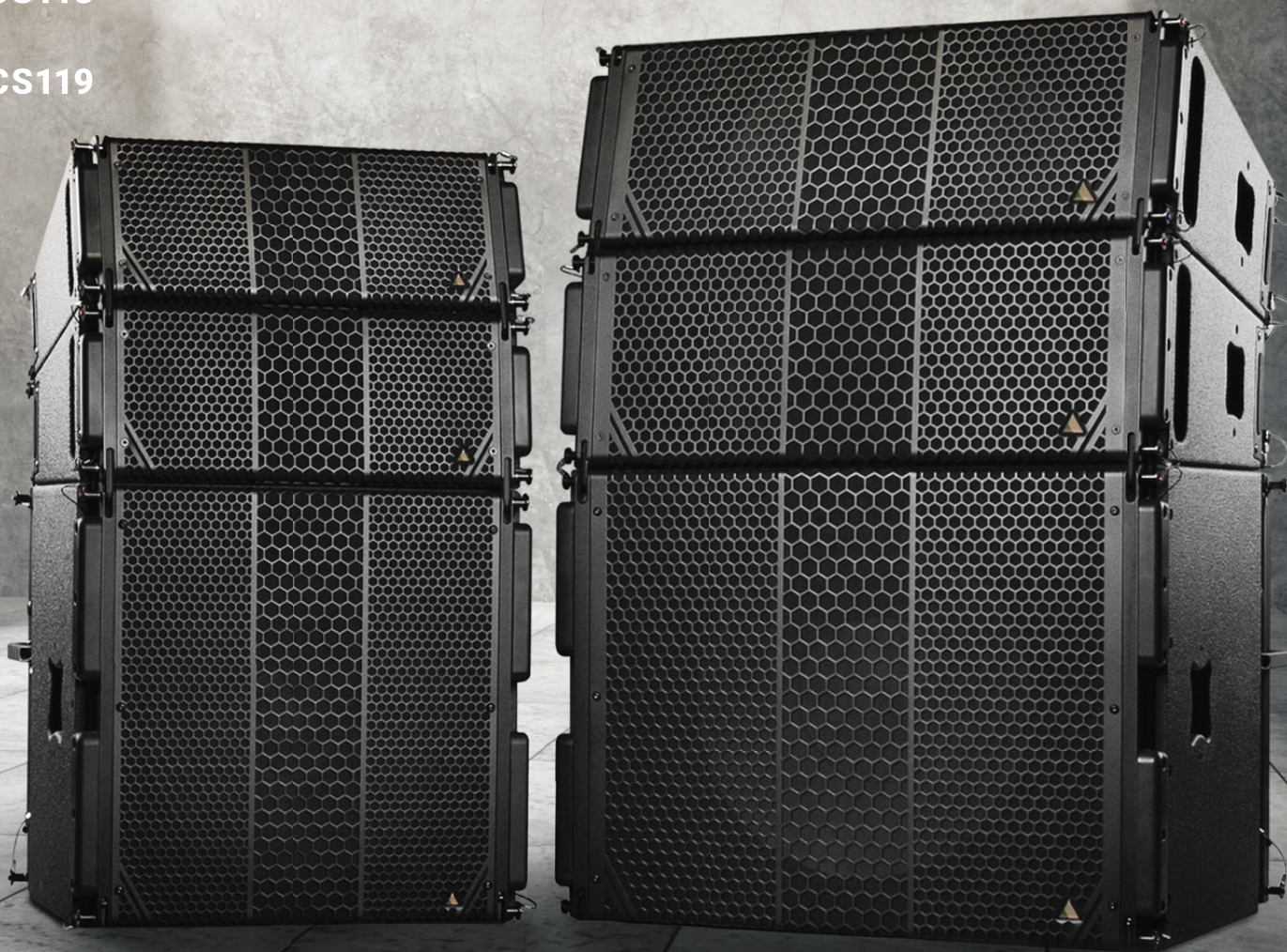
CS10p

CS118

CS119

WELCOME TO CS-SERIES

THE REBIRTH OF POWER



Adamson has earned a reputation for sound systems that provide unparalleled performance, coverage, and vocal intelligibility. The all new CS-Series is a powered, intelligent loudspeaker platform with on-board Class D amplification and DSP, plus Milan-ready AVB connectivity.

This is Adamson's legendary sound, evolved for the networked future of professional audio.

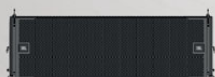
EXPLORE CS-SERIES AT POWER.ADAMSONSYSTEMS.COM



WE LISTENED, NOW IT'S YOUR TURN

- ✓ Compatible Rigging System with all VTX-A Series Products
- ✓ New JBL Transducers for Best Sound Quality and Output
- ✓ Multiple Horizontal Coverage Options (90°|110°|120°)
- ✓ Best-in-Class Rigging System for Fast and Safe Deployment
- ✓ Compact, Truck-Friendly Dimensions
- ✓ Full-Range of Innovative Accessories
- ✓ Complete Solution Including Software and Amplification
- ✓ Small-Format Application Subwoofer
- ✓ Improved Linearity and Wider Dynamic Range
- ✓ Full Series Compatible Rigging (8" and 12" arrays)
- ✓ Reduced System Amplifier Requirements

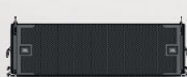
VTX: A-SERIES



A12



A12W



A8



B18

[JBLpro.com](https://www.jblpro.com)

