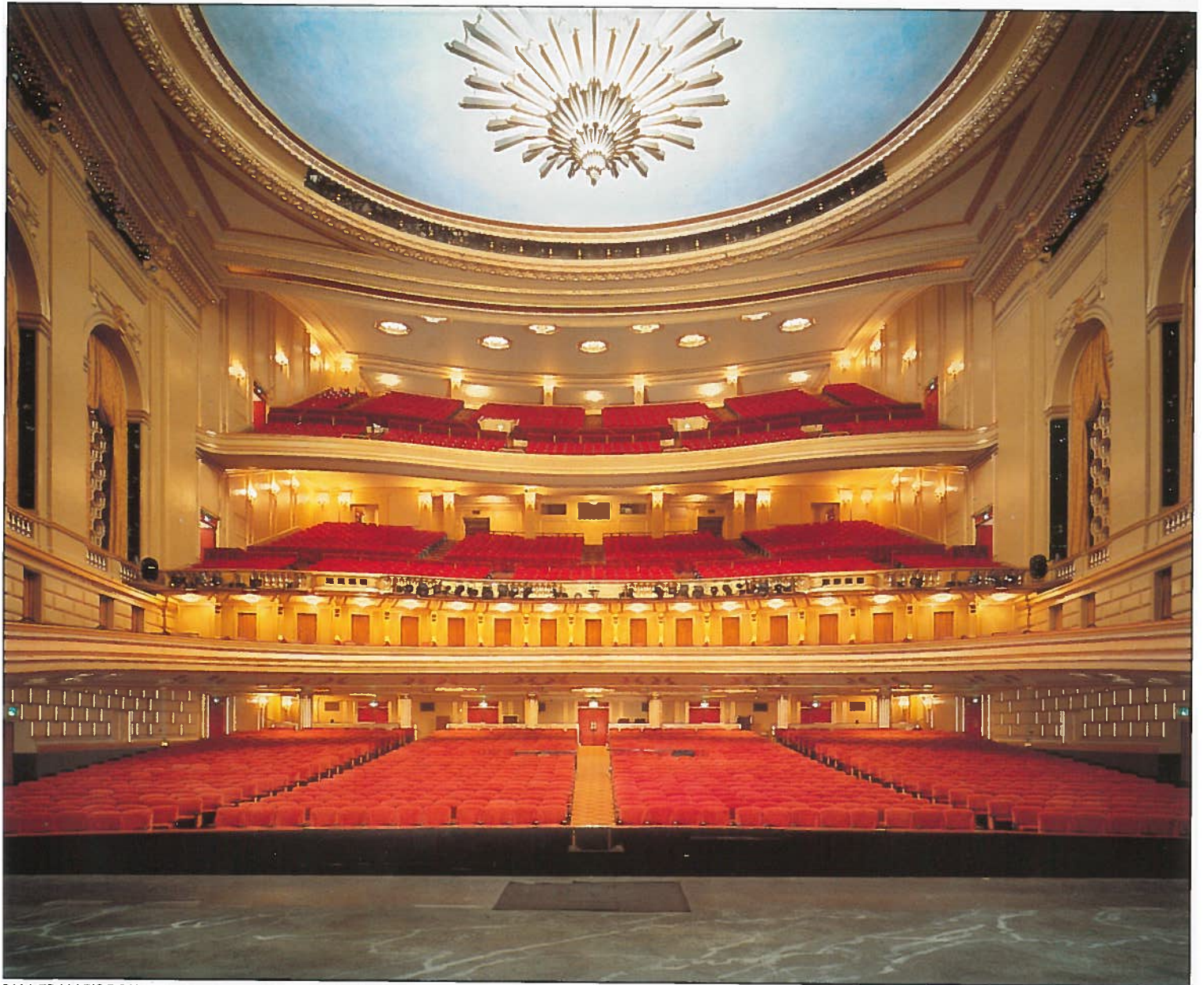


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- Technology Takes to the Skies: Red Bull Air Show, Austria
- Leaving Las Vegas: Full Report on LDI 97
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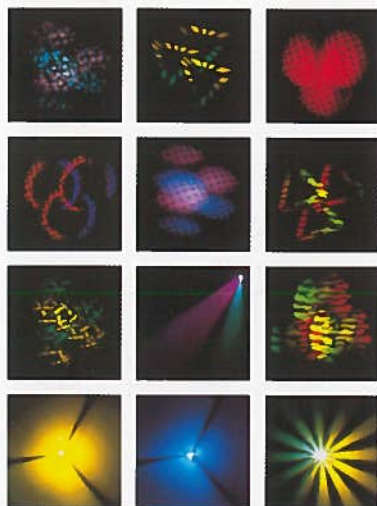


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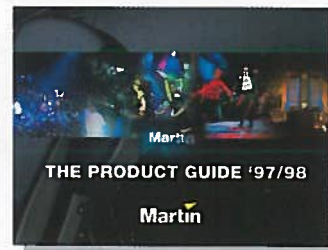
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NOVEMBER 1997

VOLUME 12, ISSUE 11

6 News in L+SI

15 pages of the latest industry news

35 Red Tales In The Sunset

Tom Donnellan's mammoth lighting project for the Red Bull Air Show by Tony Gottelier

39 On Tour

Steve Moles on tour with Oasis and Robbie Williams

43 LDI Las Vegas

The L+SI team report from the Sands Expo Center

49 Second Take

John Watt in party mood

51 Sound Warfare



Steve Moles talks with designer Rick Clarke about his approach to the sound system for the seminal musical West Side Story

55 No Comment

L+SI associate editor Tony Gottelier reveals his highlights from LDI in Las Vegas

57 Barbie's Facelift

15 years after it first opened, the Barbican Theatre has returned to the technical drawing board. Rob Halliday covers the lighting, Ruth Rossington the sound

62 Afar in the Stalls

Ian Herbert contemplates the fickle nature of success

63 Regeneration

San Francisco's War Memorial Opera House has been given a new lease of life - Lee Baldock reports

65 Sound of New York

Jim Evans covers the halls of the AES show in New York

68 Recruitment

70 PLASA Technical Books

76 Directory

81 International Directory

82 In Profile

Steve Moles talks to production manager Dougie Souness

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PLASA Positive



L+SI's Jane Cockburn, Nicola Evenden and Sheila Bartholomew watch as some of the first pages come together at the new printers.

PLASA will enter 1998 in positive mood - and for a number of reasons. Membership of the Association is currently at its highest ever level, with 434 members in total, both UK and internationally; the PLASA Show, having enjoyed another success in 97, will celebrate its 21st anniversary in September 98 and Light & Sound Shanghai, which PLASA is presenting in conjunction with P&O Events, will make its first appearance in April.

Meanwhile, the 12 staff of the PLASA head office will make a long-anticipated move to new, modern offices in Eastbourne, whilst PLASA's magazines (L+SI and sister publication S+CSI) have finally completed the transfer to new printers. The Publishing division, which also produces the Industry Yearbook and the PLASA Show catalogue, in addition to the Association's newsletters and guidance notes, will now have the benefit of new up-to-date production systems and all publications will now be four colour.

The Association is also looking at new possibilities for use of resources to build on the range of membership services in ways that will provide the most benefit to members, both large and small.

Harman Audio Joins Arbiter Stable

The Harman Pro Group has announced the sale of the distribution division, formally known as Harman Audio, to Arbiter Group Plc. The business, which distributes several well-known professional brands in the UK market, will retain all its current staff and will continue to operate from its premises in Borehamwood.

Commenting on the move, Philip Hart, president of the Harman Pro Group told L+SI: "I am delighted to see our distribution business transfer to such capable hands. Harman has enjoyed a long relationship with the Arbiter Group who already distribute DigiTech, DOD and dbx in the UK. We are certain that under Arbiter's stewardship we shall achieve continued growth for JBL, AKG and C Audio as well as for Steinberg which has been one of the most successful non Harman lines at Harman Audio."

SOS Release SPL

Just prior to going to print, news was received that SOS Publications have decided to discontinue publication of SPL. The magazine, still in its infancy, was launched by the Group in June this year. Mark Cunningham, the editor of SPL, is currently seeking finance to relaunch the magazine in the New Year. He told L+SI: "Whilst it is sad to part company with the SOS team, as the person who created the product, I consider it my duty to continue its development under the auspices of a new organisation. To this end, we are currently in negotiation with several individuals."

NJD Take-Over



Jan (left) and Mark Benyon (second, left) with Kevin and Heather Hopcroft.

Almost 30 years to the day of NJD's start, on Friday 31st October 1997, a take-over of the company took place at their head office in Sandiacre, Nottingham.

Entrepreneur businessman Mark Benyon, well known in the industry for being the leading force behind Electrovision, purchased the controlling shares in NJD on behalf of the Benyon Family Trust. Kevin Hopcroft, who retains a large portion of the shares in NJD, will remain as managing director, whilst Kenyon's brother Jan will take over as financial director (representing the trust). Brian Binns has resigned his post as technical director, but will remain associated to the company as technical consultant.

Following the take-over and a large capital investment, a three year growth plan will see the company expand all of its operations, both at home and abroad, coupled with diversification into even more OEM manufacturing and the lucrative commercial electronics and advertising projection market.

Kevin Hopcroft told L+SI: "It's the best thing that could have happened. At last we have the strength to make that major step that will allow NJD to become a leading force in the market."

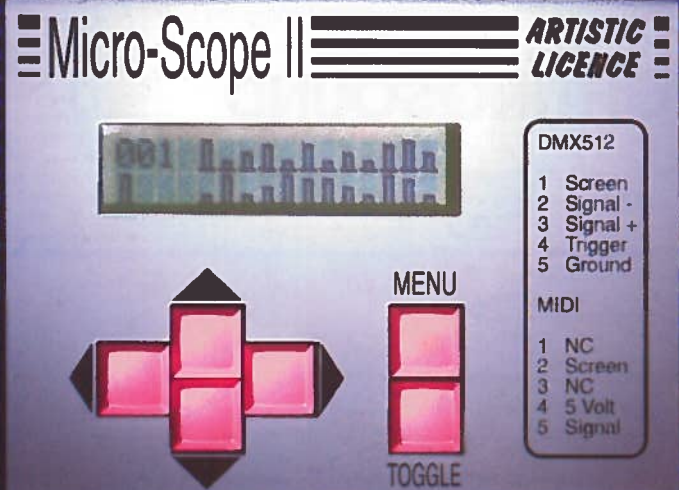
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EAW Launch KF900 Series at Whitinsville HQ

Eastern Acoustic Works (EAW) has launched its KF900 Series under the banner 'Raising the Performance Benchmark in Large-Scale Sound Reinforcement', with EAW President Ken Berger describing it as "a quantum leap in technology for both touring sound and large-scale installation".

The launch took place at EAW's Whitinsville HQ in Massachusetts, just prior to the New York AES Convention and was attended by pro audio installers, suppliers and dealers from around the world. According to the company, by integrating a specialised, multi-patented loudspeaker design with the power of dedicated 32-bit digital signal processing, they have created a completely new standard for large-scale sound reinforcement loudspeaker performance. The key to KF900 performance is a new technology developed by EAW, called Phased PointSource Technology (PPST). At its essence, PPST leverages the ever-increasing power of digital signal processing to create a unified source sound impulse at all points within the coverage area.

The new series comprises the MX9000 digital processing package, as well as individual low-frequency, mid-frequency, and high-frequency loudspeakers, with five models complete to date. EAW's senior design engineer David Gunness commented: "A KF900 Series array is a series of columns, with each column providing coverage of a 30 degree horizontal 'wedge' of audience area. The maximum sound pressure levels to the farthest listening position determines the number of modules in each column. PPST processing tailors the vertical beam profile of the entire column to achieve uniform sound levels and frequency response over the audience segment being served."

The processing is calculated by modeling and optimization software that predicts performance



based on acoustical measurements of the speaker's array elements. Prediction accuracy has been verified in the field under controlled conditions."

And EAW President Ken Berger was more than a little bullish about his company's newly unveiled technology: "This is the most important day in the history of EAW," enthused Berger to the assembled pros. "In many ways what you will hear and see is entirely new - a radical departure from traditional methods

of designing loudspeaker systems. This project brings together the latest developments in driver design, horn loading, system measurement and digital signal processing to create a loudspeaker array system."

For the actual demonstration, EAW rigged up an array in the field to the rear of their factory and delegates/guests were treated to musical selections on CD, including James Taylor, plus a short live set from Bruce Marshall. The sound quality at varying distances was indeed impressive. Considerable crosswinds cannot have helped, but there were definite nods of approval from the great and good of the installation and reinforcement sectors.

Carefully planned demos are one thing, but what about testing/research in genuine situations - i.e. in venues with audiences? "The KF900 has been refined for real world applications through an aggressive process conducted over several months in 1997 on the Promise Keepers tour," explained David Gunness. "Held in stadiums throughout the US, this tour provided us with vital performance data that has resulted in a loudspeaker series proven in a variety of live applications for tens of thousands of people at each venue."

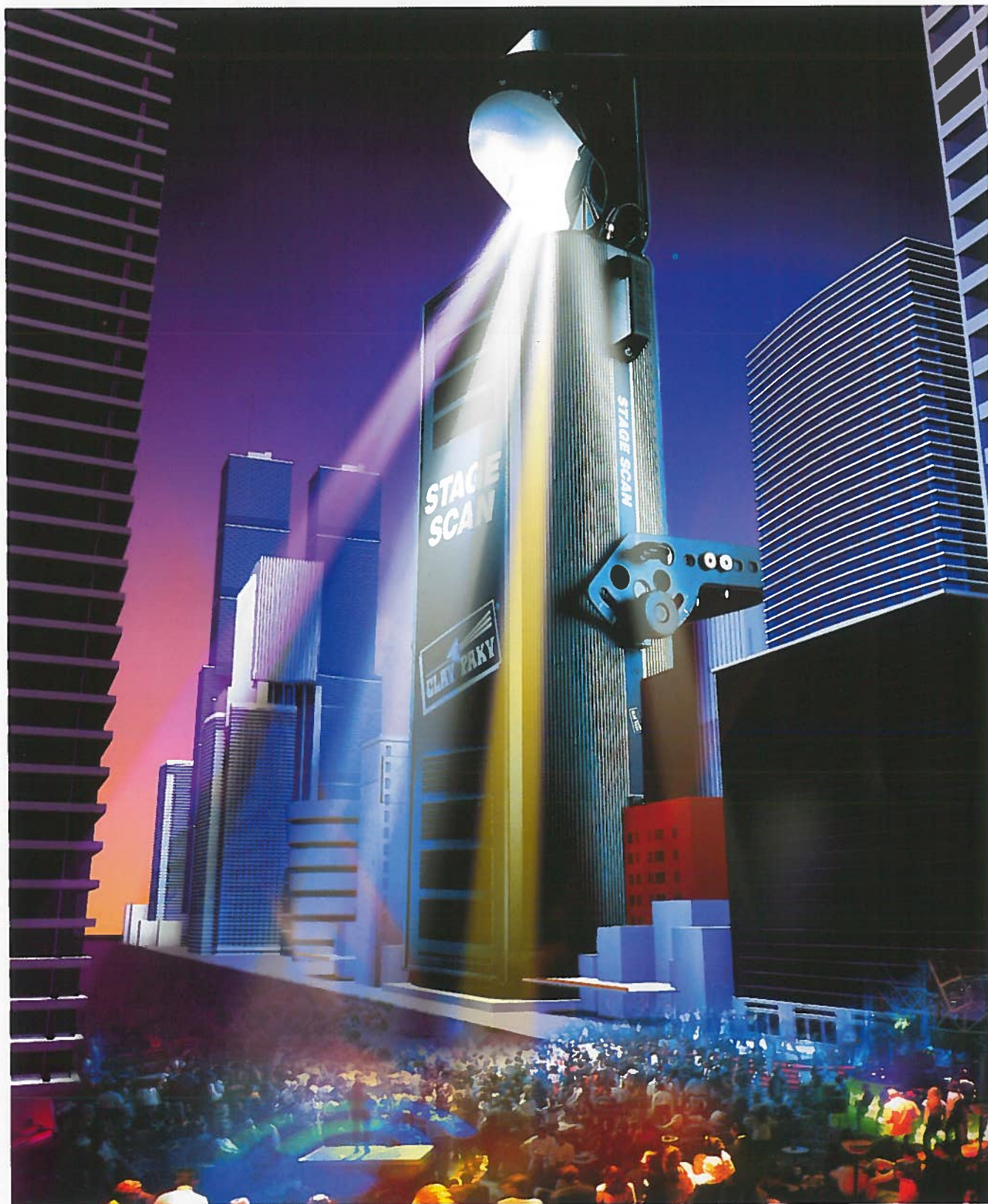
Jim Evans

Joe - The Monster Musical

Joe - The Musical, one of the largest and most technically advanced touring musical productions of its kind ever produced, is scheduled to begin touring around Europe following its opening at the Carre Theatre in Amsterdam, Holland. The production, which features a large amount of hydraulic staging, supplied by Delstar Engineering Ltd of England, also features a massive lighting system which utilises over 2,000 DMX channels.

All of the lighting equipment for the show was supplied by leading Dutch production company Flashlight from their base in Utrecht to a design by Reinier Tweebecke, and consisted of High End Systems Cyberlights, Studio Colors, Trackspots and Dataflash, along with more than 200 Par 64s, 168 colour scrollers, DHA Light Curtains, a large number of Fresnel and PC lanterns, and also featured a Wybron Autopilot system. To control this large amount of equipment, Flashlight used a Flying Pig Systems Wholehog II with programmer Jeroen Jans at the helm. Full cast rehearsals lasted for one month, during which time Jans also programmed the Wholehog II in preparation for local operators. When running, the show is partly automated with the Wholehog II being triggered manually and by both SMPTE time-code and MIDI show control at various times, producing some amazing results.

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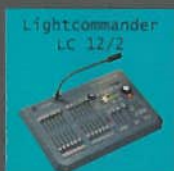
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LETTERS

Dear Editor

RE: No Comment (October 97)

Tony Gottelier writes '... the engineers are not the right people to be taking decisions of this kind.' Now, there might be some uncertainty about which 'decisions' Tony means, but I assume he means the decision to deviate from a standard. Well, whether it's that sort of decision, or the decisions about the contents and terms of standards, I wonder who is more qualified than engineers to make those decisions? Marketing people? The European Commission? Journalists? It seems to me that marketing people are just those who would pragmatically decide to deviate without being aware of, or particularly concerned about, all the consequences; the European Commission would produce (if experience is a guide) 20 pages of Euro-english, capable of 50 different interpretations, and as for journalists...

Now, when we dispassionately analyse the present situation, we find a (mercifully short) chain of historical responsibility. Obviously, the crisis has been precipitated by a decision to use one contact of the standard connector for a purpose contrary to that specified in the standard, and it is a crisis rather than just a drama, because the novel use can, it is suggested, actually damage equipment that conforms strictly to the standard. A non-standard use that did not actually have the potential to cause damage would be less culpable. However, the concept of powering small

peripherals (and not so small, these days, with low-power chips) through the necessary umbilicus from the central unit is very attractive, since it greatly simplifies electrical safety issues in design and eliminates a proliferation of mains leads and/or wall-warts in practical use. It is, of course, also cheaper, which is not a minor issue, nor an unworthy one. Unfortunately, when the DMX standard was conceived, this point was not taken into account: this is a failure of precognitive appreciation that is, perhaps, marginally excusable. It's not the only case: the EBU proposed a data output connector for home RDS radio receivers, with seven contacts, all allocated. My proposal to add an eighth contact (i.e. use of an 8-contact DIN instead of a 7-contact) for powering peripherals from the receiver was treated as dangerously revolutionary, if not anathema!

Incidentally, I suppose the reference to 'DIN sockets' in one of the Letters in the October issue is a typographical error, and that the standard XLR-5 connectors are actually used.

If, as seems likely, there is a real need for a Functional Extra-Low Voltage (FELV) d.c. power supply for DMX peripherals to be available on a connector, then consideration should be given to adopting a new, probably at least 7-contact, connector. The 7th contact would allow a separate 'power return' conductor, keeping power severely away from signal circuits. Critical decisions should be made by engineers who comprehend ALL the issues involved.

John Woodgate - consultant

PLASA Shanghai

More than 100 international exhibitors are expected to showcase the latest in entertainment technology to one of the world's biggest growth markets, at PLASA's Light & Sound Shanghai exhibition next April. Light & Sound Shanghai will be a true trade mission, incorporating business dinners and visits to factories, venues and other places of interest, giving exhibitors the opportunity to familiarise themselves with the Chinese market. The event will provide a professional platform aimed at 4,000 buyers and operators of professional equipment, for companies keen to export to China, as well as for those already operating in the market.

PLASA chairman Paul Adams commented: "PLASA is very keen to support this initiative and thereby help international companies to develop their business in China. We are also pleased that the DTI, through PLASA, will be supporting the event through their Sector Challenge initiative." To date, 41 companies have signed up to exhibit, including leading names in the industry such as Pulsar, Clay Paky, Celestion, Avolites, ADB, Penn Fabrications, Martin Audio, Next Two, Coemar, ETC, Columbus McKinnon and Osram.

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Avesco Acquires JVR

Avesco has announced that it has agreed to acquire Jongenelen Holdings BV, the parent company of Jongenelen Video Roosendaal BV (JVR), a Dutch company providing a range of giant screen rental, video presentation and television production services. JVR has been involved in giant screen rental since 1986 and owns two Sony JumboTron screens, to which it has recently added a 40sq.m Mitsubishi Diamond Vision.

David Nicholson, chief executive of Avesco, told L+S: "The establishment of a European base, from which to expand our services in Europe, has, for some time, been an important part of our strategy. The acquisition of JVR will enable us to build this base around a company which already offers considerable synergy with our Screenco and Creative Technology businesses in the UK, as well as our AVTS business in the USA."

Ellis Wins Dance 2/ KAM Promotion

John Ellis, a DJ from Shirley in the West Midlands, has won Lamba plc's PLASA challenge . . . and with it a recording contract with Dance 2 Records.

Lamba had invited DJs across the UK to enter a competition over the first three days of the PLASA show, and hundreds of DJs turned up with DAT tapes bearing original compositions designed to show off their mixing skills. The adjudication process provided the sponsors, Dance 2 Records, with a tough challenge of their own, but in the final analysis it was John Ellis's track that they decided to press for a pre-Christmas release.

Rigging/Safety Courses

Safe Working Ltd will be running their next training courses in London in the first week of December. The Rigging Course takes place on Tuesday 2nd and Wednesday 3rd December at Wembley Arena and the Ropework and Safety Course takes place on Thursday 4th and Friday 5th December at Three Mills Island Studios.

For further details contact Oz Marsh at Safe Working Ltd, telephone (0802) 769 218.

Brightman at RAH



Paul Timmins, Colin Boland and Simon Barron at the RAH.

Sarah Brightman's recent shows at the Royal Albert Hall consist of a vibrant mixture of operatic, pop and musical favourites. FOH sound engineer is Colin Boland, an accomplished orchestral sound mixer whilst on monitors is Paul Timmins, who is doubling as systems engineer. With the experienced Roger Searle production managing and Capital Sound Hire flying a similar Martin Wavefront configuration to that which they fielded for the Ocean Colour Scene show at the RAH earlier in the year, all the sound company had to contend with was operating around the requirements of the Fleetwood Mobile (the show was being recorded) and the restrictions placed on them by the camera crews, which prevented them from ground-stacking their bass.

Boland was running 60 channels of Yamaha PM4000 (eight stereo and 44 inputs, with a Midas XL16 stretch, fully loaded), while the stage mix was performed from a 24-channel Allen & Heath GL3000 with 16 inputs. Proving the W8 has the throw of the old F2 system, the 24-box (six-wide, four-deep) cluster also delivers the detail. Up in the air were six of the W8S hybrid subs, while a further four W8Cs and two W8Ss operated as sidefills. As the choir stalls had also been sold, the audience behind the stage were treated to further sound reinforcement from active Martin Wavefront 2s (two for the stalls and a pair for front fills), driven off a matrix on the PM4000.

Helvar Growth

The Helvar Group has announced significant growth in its UK ballasts and lighting electronics business, which is reflected in a projected local turnover for the Group's business in the UK in excess of £16 million. This strong position in the UK has grown from a combination of demand for Helvar electronic ballasts and the acquisitions by Helvar of Electrosonic Ltd in 1990 and Celco Ltd in 1991.

Comings and Goings at Strand Lighting

Strand Lighting have completed a move across West London - vacating their Isleworth premises in favour of a more suitable location in Heston. The new facility, which incorporates a service workshop area and a full demonstration showroom, will be operational by Christmas. This is now occupied by all the Isleworth-based personnel, including North European Trading Division staff (sales, service and support), as well as central marketing, R&D software support and European general management.

The move coincides with a restructuring of the management team. As a member of the Strand Group Board, with responsibility for all three of Strand Lighting's European Trading Division and Projects Department, Georges Kiener now takes up the position of general manager (Europe). He brings with him experience in European sales and marketing, having held senior positions with L'Oreal and Harley Davidson. Ian Roberts has joined as commercial manager of the South European Trading Company. Roberts has been based in Rome for the last seven years, having worked previously for Timex Italia spa and Reeves spa. These announcements coincide with the departure of Ian Haddon from the company.

Strand can now be located at North Hyde House, North Hyde Wharf, Hayes Road, Heston, Middlesex UB2 5NL, telephone 0181-560 3171 fax 0181-568 2103.

Sonance UK

Sonance, a California-based manufacturer of custom installation loudspeakers, has set up a distribution arm in the UK. The company manufactures an extensive range of dedicated in-wall and in-ceiling loudspeakers, together with accessories for audio and AV applications. Sonance offer an extensive range of speakers, all of which are weather-proof and feature, as standard, pivoting tweeters and a bar bracket system for easy installation. The top of the range models include DIP (dual in-line package) switches which can be manipulated to fine-tune the sound to the particular nuances of a room.

Sonance UK can be contacted in Bury St Edmunds on (01284) 701101.

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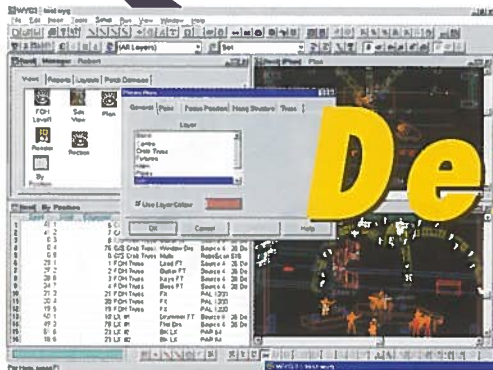
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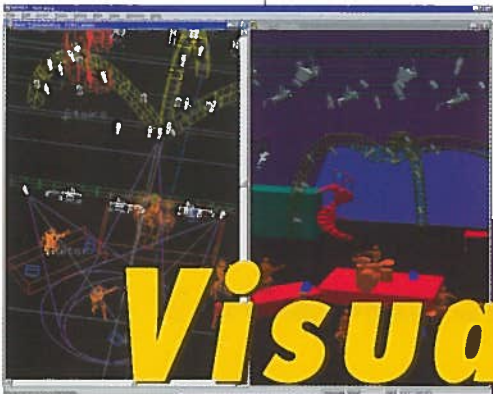
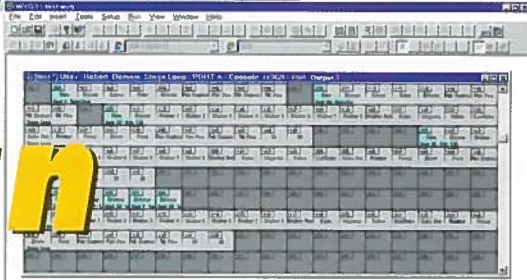
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Audio-Technica and Electrotec



Marc Lee Shannon (left), Kenneth Reichel (second left) and Michael Edwards (right) of Audio-Technica US Inc with Electrotec Production's Pierre D'Astugues (centre) and Ted Leamy.

At the recent AES Show in New York, Audio-Technica and Electrotec Productions announced the formation of 'a strategic alliance' which will "help create the next generation of products for the live sound market." The joint announcement was made by Electrotec's Pierre D'Astugues and Audio-Technica's Joel Singer during a lavish reception at the NY Hilton to mark 25 years of Audio-Technica US and 35 years of the Audio-Technica Corp.

"We see Audio-Technica as a very progressive company with expertise and understanding in the live sound market that is quite unique," stated D'Astugues. "Over the years, they've come out with many important products specifically aimed at the professional touring market." Electrotec is currently using a wide selection of Audio-Technica microphones for artists such as Queensryche, The Artist Formerly Known as Prince and Rush.

"We initially became involved with Electrotec because of their many tours that use our products," commented Joel Singer. "We then held discussions with Electrotec's chief systems engineer, Ted Leamy, and his staff to evaluate other existing A-T product. The evaluation went so well that Electrotec wanted to expand our relationship."

Jim Evans

Product highlights from AES are covered on page 65.

Trifibre Creates Triflite

Trifibre Containers International Ltd, manufacturers of custom-built flightcases, polypropylene cases and padded bags and covers have opened a new division. Trading under the name of Triflite Cases, the division, which will supply professional quality flightcases to sound, lighting and AV/conference production companies, operates from Cwmbran in South Wales and is headed by John Bradshaw, formerly of Autopia.

The new division can be reached on (01633) 869142.

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LIW 97

The organisers of Leisure Industry Week, which took place at the NEC in Birmingham early last month, have reported another record-breaking show, claiming an audited gross audience of over 23,000. Taking two halls of the NEC, the show featured an entertainment section where a number of companies including Allen & Heath, AEI Rediffusion Music, Tannoy, JBL, Steeldeck, Set Lighting and Sound and The Music Company were exhibiting. A special feature area, Club Chameleon, was put together by Lightmasters UK, ProQuip and Celestion, and sponsored by Disco Mirror magazine.

Also at the show were Sennheiser UK, whose main emphasis was placed on the DAS Audio range of loudspeakers which they distribute in the UK. Electrosonic had their video display equipment on a very welcoming stand (pictured above) designed in conjunction with specialist interior contractors, Lycett and Platt Interiors. GMS Recordings were showing the XDRA music management system, which can run one or two six-disc CD-ROM drives, each providing up to 50 hours of music. A high speed modem provides remote access and control. A supplier and installer of lighting and sound equipment, GeeBee Entertainment Services were promoting their range



The Electrosonic Bar during Leisure Industry Week at the NEC.

of services, including those offered by their new specialist company, AB Audio Visual.

However, amid a generally cautious, uncertain response from many exhibitors to the success of the show, Mad Lighting were probably the most enthusiastic of those that I encountered, having found new areas of the leisure industry interested in their product. Next year, the emphasis on LIW will shift slightly, with what had become nine separate shows gaining cohesion by regrouping as three broad sectors - Parks and Attractions, Fitness, Health and Sport and Leisure Hospitality, while spanning the liquid borders of these territories will be the lighting and sound manufacturers, suppliers and installers.

Lee Baldock

CP Appoint Hohner

CP Cases have appointed M Hohner Limited as its sole distributor for the professional music industry. The collaboration followed talks at the MIA show earlier this year where both companies were exhibiting. Hohner is distributing CP Cases' EMS 400 and 500 series, as well as a selection of 19" racking accessories via its 1500 music retailers nationally.

Incidentally, CP Cases have received a ringing endorsement from none other than technical consultant Alexander Bhinder, better known as The Doc, who has worked with such musical greats as Chris de Burgh, Bad Company, Chris Rea and Def Leppard. Apparently, he nearly declined to work with group Mixed Feelings until they agreed to upgrade their flight-casing to CP's EMS Series.

Moving Light Add Mac

The Moving Light Company has recently taken delivery of its first Mac 500s and Mac 600s. First shown at this year's PLASA show, the Moving Light Company took delivery of 24 MAC 500s from Martin Professional which have already been out on a number of commercial shows including a film shoot for Stanley Kubrick's new film, a fashion show during London's Fashion Week and a concert performance in Buckingham Palace for ABSA.

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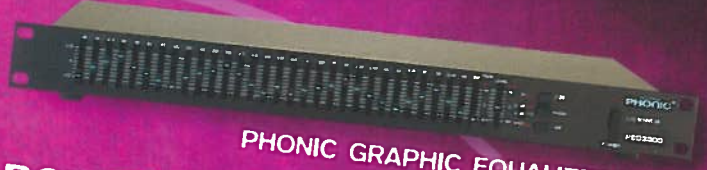


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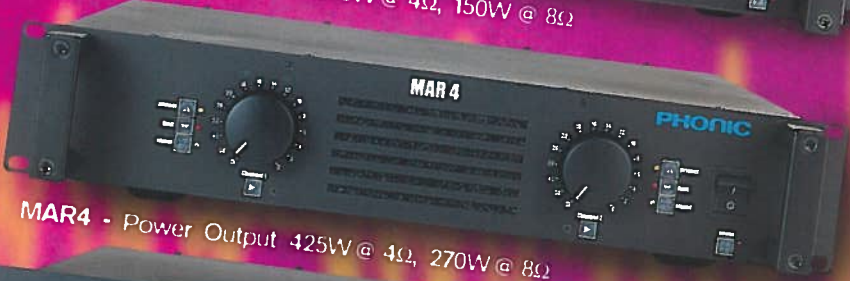


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Sabre Take Omni Compact for a Ryde

Sabre International of Reading were so determined to get the best out of the new RCF ART system they were installing at the newly launched Xena nightclub at The Livingstone sports and leisure centre in Ryde, Isle of Wight, that they tuned it with the new BSS FDS-355 Omnidrive Compact management system.

Installer Dave Hawkes has been fitting the full FDS-388 Omnidrive to Sabre's PA systems for the past four years, but had never before used the Compact version . . . until purchasing through Batmink. The system in the club, which opened mid-October, is run in two-way stereo mode, crossing over at 100Hz. Sabre have used mainly passive ART 300 enclosures from RCF in order to accommodate the company's separate 1018 sub-woofers. The system, which does include a pair of ART 300 active enclosures, is driven by a combination of Crown Vz 3600s, a PT2 and two MA 2401s.

The venue, which holds just over 700, operates by day as a restaurant/tea room, converting into the completely incongruous, hard-edged Xena dance club on Fridays and Saturdays. The lighting has been supplied by Martin Professional.

Sabre won the audio contract thanks to their work with Reading University Students Union, who did a function at the Livingstone with Sabre's hire kit. In fact the venue had been hiring in equipment over the previous two years before deciding it was time to buy.

Zero 88 Silver Anniversary Challenge



During this year's PLASA Show, Zero 88 were hosts to 115 guests for a successful Go Kart Grand Prix Challenge held at the Daytona Raceway in London to celebrate their 25th anniversary. 17 teams representing 14 countries took part in the evening of racing, and after an initial battle, the Belgium team, captained by Didier Courbe of DCD Scenic Projects, took the lead and stormed home to win the race by several laps. Pictured above are the victorious Belgian team (centre) with runners-up Denmark (left) and Germany (right).

Our apologies to Isabel Rolet of Mobil-Tech who we mistakenly claimed worked for RVE in our photo captions as part of our October review of the PLASA Show.

ESS Build Venue for Midland 97

Midland Bank are promoting a series of concerts on the South Bank of the Thames, adjacent to Battersea Power Station, which will run for 16 nights from 4th to 21st December. In an ambitious project, the venue will be the world's largest temporary structure. Edwin Shirley Stages are building the 6,000 capacity venue, which will be 96m long, 45m wide and 30m high.

ESS have assembled a design team comprising tensile structure specialists FTL Happold, Landrell Fabric Engineering, set designer Paul Staples and Dan Fish, director of design at Design in Tension Ltd. Based on the fundamental building block of the ESS Tower System, the structure will be made up of modular 12m by 45m sections. Midland 97 'The event on the bank' was officially launched in September amidst some hubris. Contrary to the Midland Bank press release at the time, the structure is not large enough to contain enough tubes of Smarties to reach to the Sun and back!

Steve Moles

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on the 4U range or by means of over ten interchangeable panels on the back of the 2U range. All Rackpak units are designed to accept analogue control as standard with the option of an easily fitted PMX/DMX input kit to provide digital compatibility when required. Many Rackpaks are available as status (ST) versions that feature additional operator visual feedback and test controls. With all these facilities it is clear, when you are looking for a range of power packs with more options, you have just found them!

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Student Power

Third year students studying on the B.A. (Hons) Lighting Design and Directing courses at Rose Bruford College have recently devised and performed two product launches, a Top of the Pops concert and a Son et Lumiere. Under the guidance of project tutors Dorian Kelly and Joe Lewis, the students have explored the genre through case studies, and in seminar sessions developed ideas up to fully devised, scripted and staged performances.

As well as providing an opportunity for students to work in these fields, the exercise provides a focus for their study in use of high tech equipment. Nigel Morgan, the course leader told L+S: "We are dependent on the goodwill of the industry to mount projects such as this, as we cannot keep up with the ever-growing range of new equipment on the market. Many companies have loaned equipment for the projects: DHA - Digital Light Curtains; Light Factor - High End Studio Colors and Dataflash; Martin - Mac 600s, PAL 1220s and 400s; Pulsar - Clay Paky Golden Scan HPEs; Vari*Lite - VL5s. Avolites and Celco loaned a Pearl and a Ventura desk respectively, as well as opening their doors to the students for desk training. With Rose Bruford's own luminaire stock, ARRI Impulse desk and the Sirius 250 (recently secured on long-term loan from Zero 88), the students have a broad palette from which to select.

"While this level of support is clearly costly for the companies concerned, they see the benefit of our students learning their products in a



Colin Whittaker of Celco (centre right) with Rose Bruford lighting students.

controlled and practical environment. This enlightened approach is to be applauded. As a result of this the students not only had a brilliant time working with the latest kit, but produced inventive, considered work of a very high standard."

The Barn Theatre, more used to Shakespeare and Ibsen than Human League and Prodigy, was transformed for the season. The Top of the Pops concert featured songs from the seventies, eighties and nineties, with a Pans People(!) and Master of Ceremonies to make the evening go with a swing.

Main photo: Oystein Heitmann

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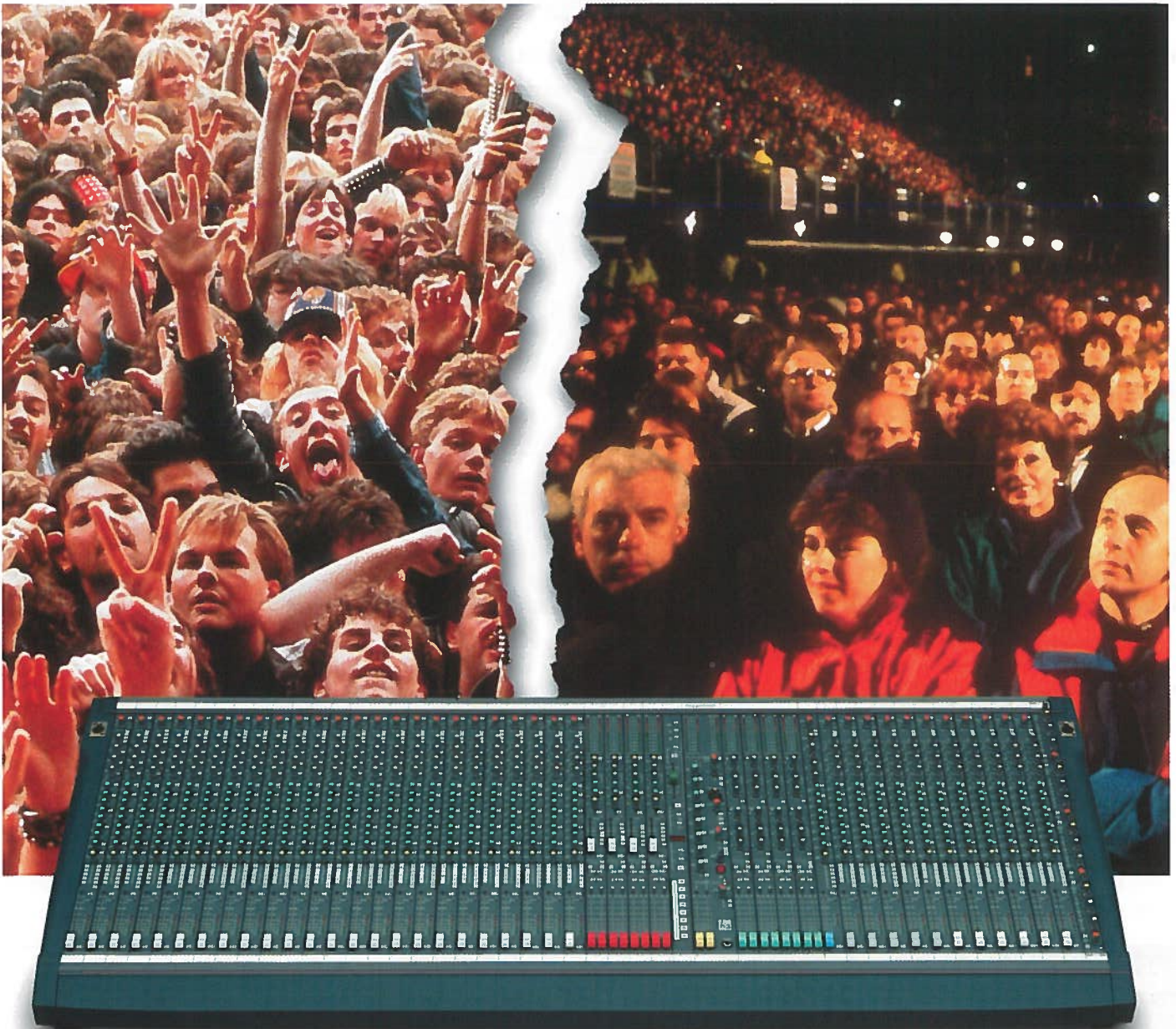
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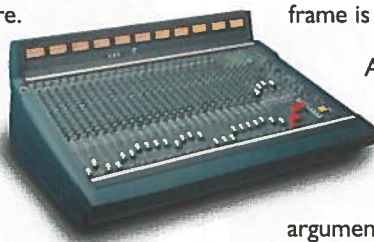
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Vertigo Rigging Embark on most Ambitious Project to Date in London



London Fashion Week was the backdrop for one of Vertigo Rigging's most ambitious and galvanising projects to date. They were called upon to rig a sculpture designed by Thomas Hetherwick which was to run the length of the Knightsbridge face of the Harvey Nichols store in London.

Vertigo first became associated with the project two months in advance of the event. This involved numerous visits to the studios to watch the sculpture, made of polystyrene and wood veneer, evolve. Vertigo's Ken Mehmed was in charge of rigging. He had to wrestle with a myriad of

restrictive parameters on site, including a glut of council restrictions, the glass canopy over the main doorway above which the largest piece of sculpture 'floated', the fact that there was no roof access from the newly-leaded top of the store, no cranes or towers could be stationed permanently on the pavement due to parking restrictions and there were severe noise constraints. Additionally, none of the individual pieces of the sculpture had been lifted or suspended beforehand, so each centre of gravity had to be ascertained on the pavement as it was hung.

Mehmed devised a manoeuvrable, tower-based rigging system which had just its feet on the pavement. All rigging had to take place at night and was undertaken during seven overnight stints by Mehmed and Dave Brierly from Vertigo, who were working with a team of four sculptors.

The sculpture, which stayed in place for six weeks, was suspended from a complex network of virtually invisible 3mm steel wire ropes attached to anchor points around the building. The stunning effect looked as if it was floating in thin air!

EAW Kit Stolen

The theft of equipment worth more than £3,000 was discovered following Classical Fantasia at Kirkstall Abbey on 20th September 1997.

Event organisers, Leeds City Council, discovered the theft of the EAW MX8000 electronic processor the day after the concert and believe it may be offered to other members of the music industry. The device was last seen during the sound-check at the Kirkstall Abbey site on the afternoon of Saturday 20 September 1997.

If any individual or business is offered an item of this type, the Council would ask them to be particularly aware and look for the serial number 5939006. Anybody with further information should contact Leeds City Council Leisure Services Department on 0113-247 8197.

Hungary First

Peter Paricska and his company Production 2000 have purchased the first Flying Pig Systems Wholehog II lighting console to be sold to Hungary. Paricska's purchase of the Wholehog II followed repeated requests for the console in contract riders from artists visiting the country. Within days of delivery, the Wholehog II was in use at a festival in Budapest, before moving on to a television production where it was in control of High End Systems Cyberlights and Intellabeams and Martin Professional PAL fixtures.

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- beam angle 8°/12°/16°
- dimmer iris 0-100 %
- beam iris
- shutter blackout/strobe effect
- DMX512/12 channels
- weight 36 kg



Washlight

- movement
pan 340°/tilt 270°
- optics
elliptical reflector
- dichroic YMC colour mixing
- motorized focus
- beam angle 9°-36°
- dimmer 0-100 %



halogen version:

- lamp GKV 600 W (230/115 V)
- electronic dimmer
- DMX512/7 channels
- weight 18 kg

high power daylight version:

- lamp HMP575 (400/575/700 W)
- hot restrike
- mechanical dimmer
- infinitely variable daylight to tungsten conversion
- DMX512/10 channels
- weight 22 kg

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Delta Sound Boosts Citroën Xsara Launch



A spectacular presentation, incorporating all the best elements of corporate production values, saw the new Citroën Xsara given an explosive launch to UK dealers at the Telford International Centre this month. Contracted by overall production company Moore Events, Kingston-based Delta Sound Inc, who specialise in this type of work, have now provided sound reinforcement for three annual Citroën car launches, although this was the first time they had worked in the large Telford exhibition hall.

According to Delta Sound Inc director, Paul Keating, the rationale behind Citroën's move from Birmingham was to gain venue exclusivity. Certainly the Centre was redolent with the familiar Citroën twin-chevron logo as the Delta crew moved in four days ahead to set up control stations in the purpose-designed scaff towers within the empty shell, rigging their EAW KF850 clusters to some of the 160 fixing points supplied by Unusual Rigging.

"We were asked to provide two elements of sound reinforcement in the main auditorium," stated Keating, "one for the fashion show catwalk and the other for the car reveal stage."

The two stages were set at either end of the vast banqueting hall, each featuring clusters of KF850s, with a central podium, on which the new Xsara was mounted, under a main box truss system. Further EAW JF200 and JF300 enclosures, distributed across this truss, were used for vocal delays. The sound system in this auditorium was set up using a Klark Teknik DN410 parametric equaliser and the audio, sourced from one of 15 new Denon 1050 minidisc players newly acquired by Delta Sound, was mixed through a Soundcraft Vienna. The performers and speakers used Trantec S5000 UHF synthesised radio mics in either handheld or lapel versions.

In the morning, the action had taken place in the theatre, where the Xsara was unveiled to dealers for the first time. Here the sound, set up and overseen by the experienced Simon Honeywill, was tuned digitally, using the BSS FPC-900 Varicurve Remote and 10 FCS-920 slaves, with the newly acquired Yamaha PM3500 controlling the Varicurves for different EQ statuses on the VTs (each having its own setting). Delta mixed the sound from the PM3500 throughout the presentation, which incorporated three main reveals. There were 10 discreet speaker positions which were used for special effects and the main sound system was configured as Left, Centre, Right, with additional FX positions.

The overall show technology was mixed using SAW - a 24 stereo input hard disk system, owned by Delta Sound, which handled all the reveals and video sequences. In addition, Delta brought on site their extensive FX library, allowing them to introduce some different sounds during rehearsals.

Fresnels PCs Zoomspots Condensers Followspots
Cycs Floods Fresnels PCs Zoomspots Condensers
Followspots Cycs Floods Fresnel PCs Zoomspots
Condensers Followspots Condensers
Cycs Floods Fresnels PCs Zoomspots Condensers
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Unravelling Ariadne

Gerriets Great Britain Limited has supplied a silk front cloth for Scottish Opera's *Ariadne*. This special joint production of *Ariadne*, by Scottish Opera and The Nottingham Playhouse Theatre, was produced to celebrate the 50th year of The Edinburgh International Festival, where the opera was shown as a centrepiece. The front drapes for the play have been made of blue silk which are ruched to make festoon-like folds, similar to those seen in classic cinemas. Following its success at The Edinburgh International Festival, the set has now gone into storage but will be resurrected in the spring by Scottish Opera, when they will perform the extended version of the opera, and then later on in 1998 the Nottingham Playhouse Theatre will take the set to perform the extended version of the play.



CP at the Desert Inn

CP Sound's recent installation work includes a complete technical make-over and modernisation of the Desert Inn fun bar and disco at the Carlton Oasis Hotel in Spijkeniss, The Netherlands. CP's brief was to acoustically reinvent the sound and update the lighting in the Desert Inn so it was appropriate for late 20th Century club goers - all on the tightest of budgets.

As a result, the company had to re-rig and re-wire the system and re-build the amp rack, adding three RSE amps to the original three Citronic PPX amps. They modified the system to drive four CP Sound CP118 bass cabinets on two RSE PFX 800CC and two PPX 900s and the top end retained the Bose 802 cabinets on the original PPX 1200, while being enhanced with the addition of further 802s. The Bose 802s covering the dance podium and the new DJ monitor are both driven by the RSE PFX800CC. The system is controlled via a Formula Sound AVC 2 limiter through a Samson dual 31 band graphic to equalise the sound.

Re-lighting the dingy Desert Inn again called on CP's skills. As with sound, the brief involved working with the existing gear, as well as adding new. The original installation included four Mark 1 Trackspots, generics and some superannated disco effects which were revitalised. To bring further colour and pizzazz to the proceedings, CP added four MADscans, a TAS Syncro and a Pulsar Masterpiece console for control, which Ed Manwaring programmed. CP also installed a further 25m of trussing to house the additions.

Chicago Comes to London

White Light has been awarded the contract for supplying both the lighting equipment and lighting control system for the hit show *Chicago* at The Adelphi Theatre. The majority of the rig is made up of over 300 ETC Source Fours, whilst other elements of the rig are the UK debut of the Wybron ColorRam 4 scroller for the Source Four and ETC Obsession 2 console. The Obsession 2 was premiered at the recent PLASA show and the production of *Chicago* will see the first use of the console in Europe. Lighting designer Ken Billington has also specified another three of the Robert Juliat Aramis 2500kW HMI units as followspots.

Chicago is just one of many shows that White Light has supplied for the West End in the last few weeks. Other shows include *Hurly Burly*, *The Bible*, *HRH*, *Maddie*, *Letter of Resignation*, *Delicate Balance*, *Cinderella* and *Elektra*.

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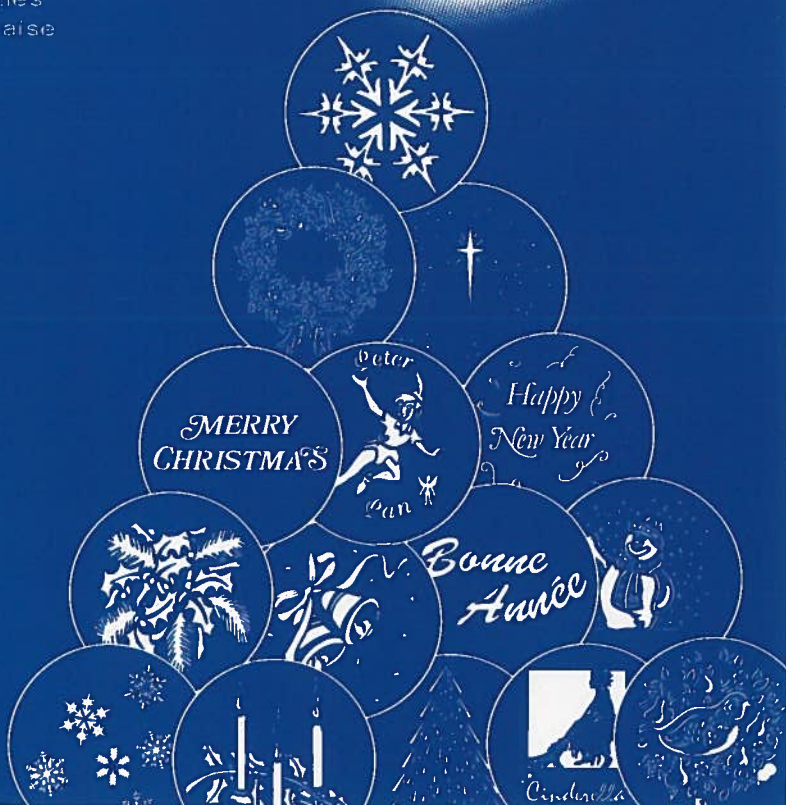
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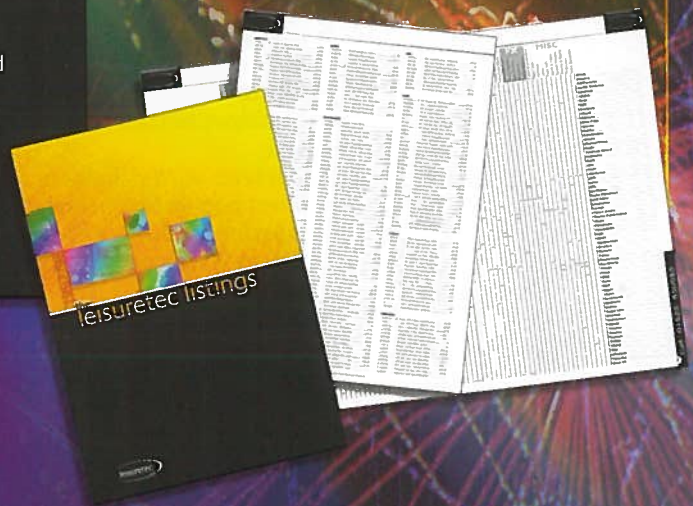
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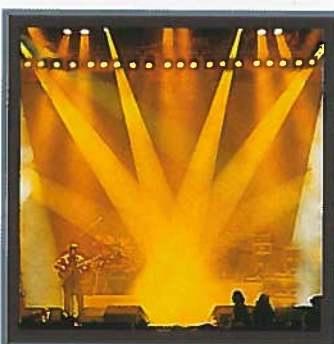


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People Exchange

Electronic Theatre Controls has added **Peter Ed** to its international team, to develop market opportunities. Ed is well known to many people in the entertainment lighting industry and brings with him over 20 years experience in practically every aspect of his profession. Having worked all over Europe, North America and Asia, and with experience in various market sectors including the cruise and leisure industries, his most recent projects include Royal Caribbean's Vision class cruise ships, Disney Magic and Disney Wonder and the Great Adventure theme Park in Brazil.

Industry veteran **José Joao** has joined the English office of AC Lighting Ltd. Joao brings with him a wealth of knowledge and more than 15 years' experience within the entertainment lighting industry. Recruited to assist with the company's ongoing expansion, his knowledge of languages will enable the company to build a stronger profile in the Spanish and Portuguese speaking markets around the world. Joao previously worked for both Strand Lighting and Siemens. AC Lighting have also added **Kirsteen Vaughan** to their marketing department. She will take on the role of graphic designer.

Harry von den Stemmen, formerly managing director of High End Systems' European office which recently closed, has joined Martin Professional as business development manager. Von den Stemmen is familiar with Martin products

from his time spent as sales manager with what is now Martin GmbH in Germany, after which he became sales manager of Strand GmbH, expanding his knowledge of the TV and theatre markets.

Marquee Audio have appointed **Andy Bowden** as their new service manager. Previously at Harman Audio, he will now be responsible for a department of four service technicians.

Trantec Systems have appointed **Steve Bickford** to the newly created post of manager of the Pro Audio Division. Bickford has wide experience of the pro audio market and joins after six years with beyerdynamic. Part of Bickford's role will be to gain end-user feedback that will assist in formulating future product development.

A number of new appointments have recently been made in the Helvar Group. **Mark Wombwell** has been appointed managing director of Helvar Ltd and will take up his appointment on January 1st, 1998. **Kelvin Lay** is now head of Helvar Group's international division, and **Jukka Poutanen** is general manager of Helvar Group's UK-based lighting control division. All three report to Philip Aminoff, chief executive.



José Joao.



Andy Bowden.



Steve Bickford.

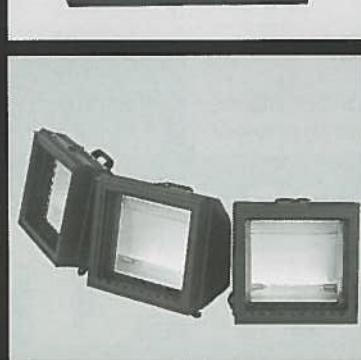
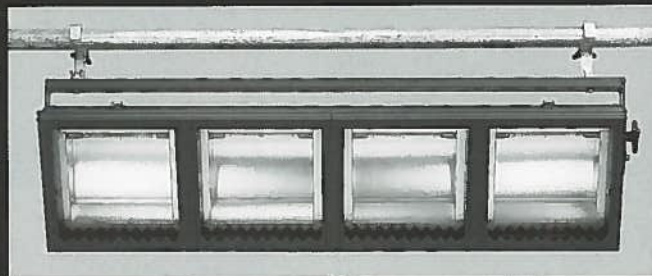
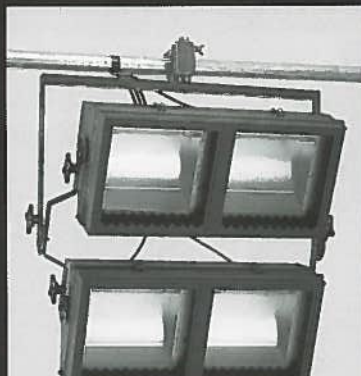
Damian Delaney has joined Altman Stage Lighting Inc in a sales management position. Delaney, formerly vice-president of film and video sales at Bash Lighting, will be worldwide film and video sales manager for Altman's Pro line products, studio grade television, motion picture and still photography tungsten and HMI lighting instruments and systems.

Hampshire-based studio equipment retailer The M Corporation have recently appointed **Gareth Henderson** to join their Ringwood sales team. Henderson, who has been involved in MIDI programming for the past 13 years, owns his own project studio based around a Logic Audio/Pro Tools package and is also a gigging musician.

Peter Owen has joined Greystone Industries as a member of Shuttlesound's sales team. Previously with Parceline, he will undertake branch visits to major MI multiples and will have direct responsibility for other UK customers.

James Thomas Engineering have reorganised their sales office to cope with increasing demand. **Andrew Walters**, who has been with the company for five years, will take responsibility for co-ordinating UK sales, whilst **Patrick Lockwood** will now be responsible for export sales. **Charlotte Simons** will continue to assist the sales office staff.

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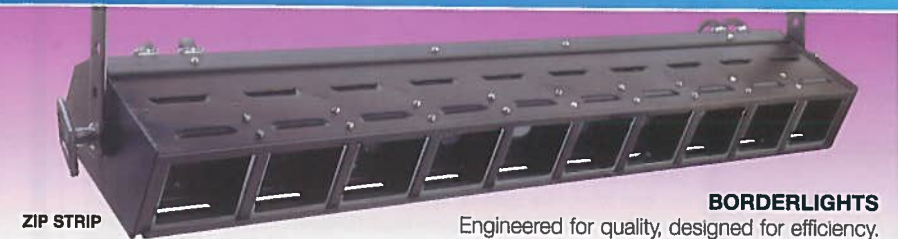
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Avolites Heads to the Valleys



Neil Marcus (left) and Ian Evans (right), with the Diamond III. Below, the Welsh Referendum results broadcast.

The Welsh College of Music and Drama took delivery of a brand new Avolites Diamond III console, plus 120 ways of dimming, as part of a massive technical revamp being undertaken by local rental company Stage Electrics, designed to take the college's lighting and sound installations into the 21st century.



Their venue, The Bute Theatre, hosts a wide range of productions including theatre, installation art, raves and discos, some of which are in conjunction with the Students Union. Once delivered, the new Diamond III was put to the test during the recent live televised coverage of the Welsh Referendum results, broadcast from the college. The lighting was designed by John Eynon for the BBC using the College's lighting rig plus a few additions, whilst the board was operated by senior lecturer Neil Marcus and theatre electrician Ian Evans, along with students Matt Rogerson and Robin Fisher.

The college had software written specifically for their Diamond III by Avolites to enable full theatrical style playback. Initially it will be controlling an assortment of generic lights with moving lights to be added shortly.

ProQuip Name Change

ProQuip Rentals Limited is changing its name to ProQuip Gearhouse. Over the last year, ProQuip Rentals has expanded into sales and design within many markets not traditionally associated with AV equipment rentals. In view of this, during the last eight months, the Rentals part of the company name has been replaced with 'part of the Gearhouse Group PLC'. October 1997 sees the name change to ProQuip Gearhouse as both an emphasis and reflection of the company's role within Gearhouse's network.

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Harkness Hall Supply Hereford Arts Centre

Harkness Hall have been awarded a contract by John Sisk (Midlands) to supply and install theatre stage equipment in Hereford's new Arts Centre. The contract provides for counterweights, a full complement of stage and auditoria curtains, track and masking, hand-operated hemp sets, and a steel-framed orchestra pit rostra.

Working closely with theatre consultants, Technical Planning International of Surrey, Harkness Hall will install an unusual counterweight system. To offer greater creative flexibility to producers and set designers, the seven single purchase sets will incorporate a pivoting head pulley allowing the flying bar freedom of movement to carry scenery flats and effects up and down stage.

In all, some 600sq.m of material will go into the Arts Centre's extensive curtain, masking and cyclorama system, which will operate either through hemp sets, of which there are 30, or Harkness Hall T400 tracks.

A striking feature of the system is to be a high level 40m track run encircling the auditorium and carrying a number of acoustic velour curtains.

The company has also supplied 29 Easi-Rect folding frame projection screen systems to the newly opened International Convention Centre in Durban, South Africa via main AV/sound contractors Electrosonic SA.

Trantec Invest in Technology



Overwhelmed by orders following the launch of their award-winning S3000 and S4000 synthesised radio mic systems, Trantec have been forced to invest in a second surface-mount machine. "It has cost us well in excess of £100,000 but with the large amount of orders we have received for the new products it has been necessary to reduce delivery times," Chris Gilbert told L+S. "The arrival of a second surface-mount machine will greatly increase our production capabilities."

LT Projects at Thurrock

LT Projects has just completed a lighting and sound installation at the well-known Lakeside shopping centre at Thurrock. In the central atrium, which previously featured a fountain, a fully equipped stage, complete with lighting and sound facilities, has been installed. The stage area has been designed to accommodate a variety of applications including car launches, TV shows, concerts, product launches and even a market research unit. Lakeside is owned by Capitol Shopping Centres who contracted Carlton Beck to undertake the project. They, in turn, sought the specialist expertise of LT Projects.

The team, headed by project manager Ray Dolby, utilised the existing lighting stock of Clay Paky Golden Scan 1 moving lights and CCT Helos profile lanterns into the lighting scheme. Facility panels were also incorporated on three levels, allowing the operation of lighting controllers and in addition, the lighting and sound equipment was interfaced with the shopping centre's own control system to allow remote isolation of the lighting and sound sequences.

C Audio Move Into Bosnia

C Audio have delivered a major order for SRX and GB amplifiers to Bosnia, their export agents PAXT Ltd report. The order, which included 17 SRX 3801s, came from the Bosnian Government and was placed through Allied Music in Germany, who specialise in sales to that region. The amps have been commissioned by the Ministry of Culture and will feature in a touring sound rig.

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This is the story of a theatre which does not contain any lighting or sound system. This atypical state of affairs is the policy of the newly opened Shakespeare's Globe. The theatre exists to study Shakespeare in performance and a key component of Shakespeare's time, hence the low tech.

The story of this Globe is a story of struggle for recognition and acceptance of the concept, and then for the funding, and at its heart was the man whose concept it was, Sam Wanamaker. His vision was inspired by seeing a 'globe' at the Chicago World Trade Fair and when the actor came to London 20 years later he was disappointed that scant recognition had been given to the site of the original and he vowed to reconstruct a living theatre as close as possible to the original. Theo Crosby of Pentagram designed the building and sadly neither lived to see it open.

The current site covers one acre and contains, besides the Globe itself, three floors of catering, a hospitality block, two floors of offices and dressing rooms, and the shell of an indoor theatre based on designs by Inigo Jones. This theatre will be completed later, as will the museum which occupies the whole basement. A small museum temporarily located in the indoor theatre will have attracted around 250,000 visitors by the end of this year. The building was funded partially by donation and by a National Lottery grant, but more funds are needed if it is to be completed.

For the actors, the acoustics of the Globe represent a real challenge, being slightly more reverberant than expected and the intrusion of the passing plane or helicopter doesn't help, though Shakespeare's theatre wasn't very quiet either. The needs of authenticity, however, mean that any acoustic adjustments have to be carefully thought through.

Despite its policy, the Globe site does contain some sophisticated support systems. There is a pneumatic tube system for the transmission of cash, and security devices include motion detectors, door alarms, panic buttons and CCTV.



Photo - John Tremper

Communications include a voice and data network, mobile phones, walkie-talkies and a conventional SM voice and video relay and paging system linked to the stage from where cue lights and headsets can be controlled.

Today, there is a growing cult of young supporters and people are stimulated by its architecture. Certainly many critics forecast the Globe would be either Disneyland Shakespeare or Museum Theatre. Those who have been will know that it creates a vibrant and unique atmosphere like no other theatre space.

Adjacent to the Globe is the 'smallest house in London', the building where Sir Christopher Wren lived whilst his cathedral was being constructed across the river, and as many readers will know, the cathedral contains a dedication to its creator 'if you seek his

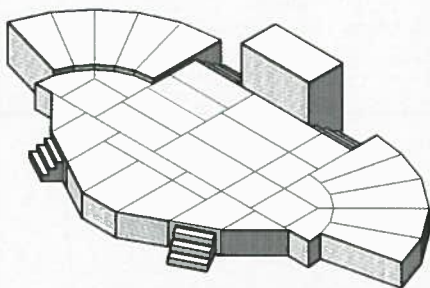


Photo - Richard Kalina

monument look around you'. For those who have worked alongside Sam Wanamaker, the Globe will always be his monument.

Graham Walne

Alistage



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RED TALES IN THE SUNSET

Tom Donnellan's Mammoth Lighting Project for the Red Bull Air Show by Tony Gottelier

If an Air Show seems a singularly unlikely venue to find a lighting designer and his crew during an Autumn weekend in Austria, try this one on for size.

Fast rewind to the small Austrian town of Wiener-Neustadt, 60 kilometres south of Vienna, and the site of the massive factory complex which produced the infamous Messerschmitt 109 during World War Two. Towards the end of the battle for Europe, as the allied air forces fought their way to within range, the town suffered its inevitable and dreadful fate - 50,000 high explosive and incendiary bombs rained on Wiener-Neustadt in four days, more than one each for every member of the population. Only 18 buildings were left partially standing after the conflagration.

However, Wiener-Neustadt has retained its proud tradition of aviation, and today there is a civil airfield and a military airfield within the environs, so the skies are once again literally humming from dawn to dusk. Amongst the surviving buildings is Aircraft Hanger No 1, which during the last weekend of September was commandeered by a motley band of lighting partisans under the command of lighting designer Tom Donnellan and his trusty sidekick, the ever quick-witted and fast of wit, Graeme Pusey, another ex-pat. The reason - the Red Bull Air Show, a celebration of extraordinary and pioneering feats of skill in the skies. Donnellan is as well known for the monumental scale of many of his lighting projects, such as the Rotterdam harbour gig a few years ago and in Salzburg Cathedral Square more recently, as for his theatre and architectural lighting. "Actually, I had been more or less preoccupied with architectural lighting recently," Donnellan mused, "but in all my years of dealing with people outside my own world and involving theatre in docks, bridges, mountains, quarries, iron foundries, cathedrals, slaughter houses, you name it - briefing and de-briefing 30-odd helicopter pilots was a unique experience."

Based near Bilbao in Northern Spain, where he and his wife, a successful actress, have converted and are busy extending a delightful hacienda, Donnellan is also currently retained by Betrix Consolascio Architekten of Erlenbach in Switzerland to design lighting for their buildings. According to Tom Donnellan, this was to be the first time that theatre has been made using fixed and non-fixed wing aircraft, a 72m road crane, fire trucks, aircraft fuel tankers, and a stage measuring 25 cubic kilometres. And I can believe that! Good job they had some wheels to get from one lighting position to the next. Pusey commandeered the truck of course, leaving Donnellan with a little electric golf cart. Thus, Pusey couldn't hear the impending arrival of the LD which was to prove extremely useful.

To the 72m crane, Donnellan had attached



A Jet Ranger helicopter flew with the door removed from which poked a 4kW searchlight and below a 12kW generator.

four Golden Scan 3s to the top and four to the bottom. In the cabin, a WholeHog desk, an operator and two guys to control the cables during rotations of 720°. A ground Hercules C130 from the Belgian Air Force was loaded with 24 Aeros and a 40kW generator. (The commanding officer of this aircraft was adamant in not permitting the use of Donnellan's planned big smoke, with its giant 2.5m diameter turbine in the cargo hold of his plane. A shame, but I can quite see his point!)

A motley collection of a 1947 four-wheel drive fire truck and two ancient yellow fuel tankers were fitted with floods, fluorides and attendant generators. The tankers, having no engines, were towed by the fire truck - a convoy of three vehicles, the second tanker had a cable link on the rigid tow bar and took power from the first.

The human face of the show was provided via a 1964 4WD 16 tonne Volvo side tipper (with a 3.5kW generator in the cab running three CP60s to light three dancers), and a 1963 4WD OAF with Palfinger jib, a geny in the cab, two APRs, a 1kW flood and four metres of 58W 848 IP54 fluorides built on an aluminium ladder section strapped to the bulkhead of the tipper. There was an old blue tractor covered with pyro that flew from the crane, whilst a Tetrahedron, with 14 metre sides, was picked up and flown to about 48m by the crane and then lowered when required.

This structure had a six-sided walkway around the leading edge upon which actors or

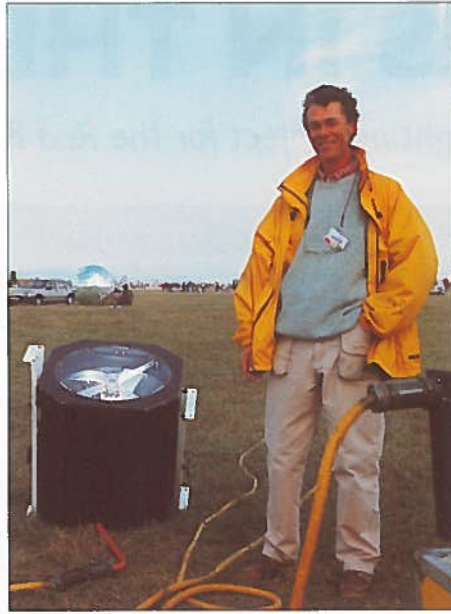
dancers were to perform, safely tied off to a centre ring with an independent line to the crane hook. Some performers were also flown below, some on rigid drops, others on bungy ropes. The lighting and power, on a similar theme, were integral to the structure.

All these systems were controlled by the drivers and a team of skilled safety officers that worked on the show, the latter being a group of mountaineers, ski instructors and even one rather large blonde police officer. (Pusey and Donnellan could only manage to call this hunk Kermit, his name being too much of a mouthful for a Brit).

On the ground, there was a 30m public safety zone, although Donnellan was able to advance this a little, to 38m. On the 58m line sat the crane, five video towers and most of the ground action. On the 68m line, there were two positions, each with a 6kW Pani Gold with moving water effect and 6kW HMI fresnel with dowser and two operators. Upstage, 260m from the public and 750m apart from one another, there were two elevated positions holding two 7kW xenon Space Cannons, two operators, a 35kW Aggreko and, as with all these odd positions and structures, an orange fuzz light to warn all aircraft to keep off the grass!

"Then there was my pride and joy," Donnellan told me as he described his two Rovers. "Now these are what I call moving lights!" Take a six metre container and fill it with a 60 KVA generator and special exhaust pipe and don't forget to leave the doors open. On the top build a scaff and truss structure that will hold, with a mixture of clamps and a total of about 1,000 metres of straps, 15 Clay Paky Superscan Zooms, four 1kW floods and four 2kj strobes in the central area.

At the rear end, place a 12kW Pani Platinum with moving water effect and a mirror for orientation, another Wholehog II and its operator strapped into a very rudimentary follow-op seat, whilst at the front end, position an elevated platform with a floor and a padded handrail around, for a manually operated 7kW xenon Space Cannon. In fact, all the Space Cannons had their motors disconnected so that they could be used as followspots. "This worked really well," says Donnellan. And finally, "Crane all 6,000 kilos onto a truck and give it a funky driver and off we go." Marking positions was an interesting problem. The system had to be safe for landing parachutists, extremely bright and not overly visible to the public. It was necessary for the Rovers to get into their exact positions according to scanner and xenon programs all over the airfield, as well as stray Hercules C130s taxing between videoscreens and Pani positions. Small sticks poking 20cm out of the ground with two or more red LED, flashing bicycle lights fixed to them turned out to be the answer.



Jet Ranger with specially made mirror ball (left), LD Tom Donnellan (centre) and the tractor covered with pyro that flew from the crane (right).

But there's more. All of this was to be eclipsed by the flown lighting - literally flown, that is. A Jet Ranger civilian helicopter which was to fly with the door removed, from which poked a 4kW xenon searchlight and slung below at 6m, a 12kW generator - needless to say it is not permitted to fly with potentially explosive loads inside an aircraft. Another Jet Ranger flew a specially made 220cm mirror ball with mechanical prop rotation system. This was lowered to the ground during the show and swapped for another load - Donnellan's flying tree. "I have a rather over-the-top love of fluories so I built a tree of them 12 metres high with a base six metres in diameter. I thought it looked absolutely wonderful and sedate when flying 10 metres below a helicopter at altitudes that varied between 25 metres and 800 metres, thanks to the fine manoeuvres of the pilot."

In addition, HAAS helicopters provided four Bell OH58 and two Bell 212 Military helicopters for the choreography. Now enter Razorhead, my business partner Peter Wynne Willson's latest creation for WWG, several of which were concurrently making their debut on the current U2 Popmart tour.

Basically, you take a Xenotech Britelite 7kW xenon searchlight, and couple it, lamp-up to a giant half metre diameter patented periscopic head, add servo-motor drives, positional feedback control and dichroic colours and a shutter, and you have Razorhead. The significance of this is that xenons do not take

kindly to being thrown around on a yoke and a periscope, of course, gives a much greater beam excursion. Those who saw it at LDI on the Xenotech stand will know that it's a big mother!

Months of tests with helicopters, xenons and endless weight calculations with the indefatigable pilot, whose name of course was Max, hadn't prepared them for this. The idea was that the ever intrepid Wynne Willson, kitted out for the part in khaki flying overalls, would sit in the copter with trusty Avo Pearl on lap, while slung below was a 12kW geny, 7kW xenon magnetic ballast, 7kW Britelite head and lastly the Razorhead, all of 250cm high and 200cm square. Of course, all this kit required a frame which Graeme Pusey and co had fabricated from steel at the local yard. Aluminium would have proved a better choice!

They checked the system out on the crane, which worked, and then gave the thumbs up to go for broke and fly it. The chosen helicopter had a load limit of not more than 500 kilos, but after the first lift with no desk or operator, Max stepped down from the cockpit to announce, grimly, that the actual weight of the load was 600 kilos! With PWW aloft, plus the desk, you could add 100 kilos or more, depending on his state of hydration at the time.

It would not, however, have been in the spirit of those magnificent men and their flying machines to chicken out over a couple of hundred kilos, so our heroes Max and Peter,

(a.k.a. Biggles and Ginger), agreed to take the risk for the sake of the show. But first Max insisted that everything possible be jettisoned, seat backs, desk trim, fader knobs, Peter's ubiquitous Fishermans Friends, and even, mysteriously, all latching connectors.

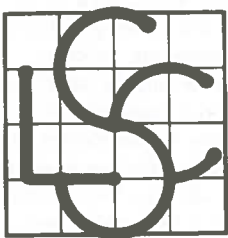
At the pilot's briefing, Wynne Willson first realised the efficacy of the authentic flying suit which he is convinced will guarantee him automatic and multiple entry to the 'mile high club'. However, this fantasy is quickly despatched, as it first began to dawn on him that flying at night in close formation and with unwieldy loads, in close proximity to an audience of 20,000, is a very serious business indeed. Too late to consult his business partner about the corporate insurance policy!

At 09.00 on show day the site began to buzz with strange aircraft past and present - a quartet of 1940s planes flew in from England: two Spitfires (all with notches) and two Mustangs - one with a few rising suns above the rows of black crosses. In the daylight show, the most dramatic action saw the Italian Tricolore formation team flying an order of magnitude closer to each other's wing tips than seems wise - down to 30cms! There followed a spine-tingling solo: a lone aircraft climbing vertically with engines screaming until the chilling note of the stall at the top, and the gasping still of the fall, tail first. Then an unstable spiral as gathering speed towards the ground, the pilot pulled out into a nose dive and, mercifully, successfully bump-started the engine before speeding away in a plume of coloured smoke.

Then the Harrier, truly a miracle of British technology and still the most amazing to watch, its rock steady hover totally awesome, especially at close range. By comparison, the roar of the twin fighter bomber which followed was sky-splitting, like the tearing of hell's very fabric.

This cirque de l'air was monitored by the crack BBC air video team, who could track the fastest jet or loopiest acrobatic biplane and display it simultaneously and impressively on giant Diamond Vision screens. The Beeb's state-of-the-art camera equipment had no trouble shooting a Boeing cruising at 35,000 feet, dropping the image onto the screens as if the plane were in direct sight.

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As night set in, the scene shifted to the part of the show which Tom Donnellan had devised and directed. Here is the picture as witnessed from the helicopter by Peter Wynne Willson, your reporter being a devout coward when it comes to such first hand stunts: "Showtime finds Max and I in a holding pattern, while a Greek God astride a wingless jet fighter, with his Goddess trapped inside, enters stage right. Military choppers punctuate the dialogue when the Goddess is hauled out, slowly 100 feet into the air by the crane, the 50 foot



Peter 'Ginger' Wynne Willson - latest member to join the exclusive Mile High Club - then again, maybe not!

length of the train of her toga unfurls behind her and streams out below. We have now joined the formation, although the overload in the tail is doing its best to dog our wag, nevertheless the 7k beam is scything dramatically through the air with a range of several miles.

"As the rig is below and at an attitude depending on our forward speed, the Razorhead in largely unsighted from the flight deck since so much of the beam control is in sweeping pan or tilt circles. Max does have wing mirrors at his feet, that give him a limited view, but unfortunately when I strike up the xenon for the next scene, the beam is directed straight at one of these mirrors and thus straight into the pilot's face. Temporarily blinded, as anyone who has had a blast from a 7k will verify, the irrepressible



Donnellan's earlier project in Salzburg Cathedral Square where Pani projectors were used to light the facade.

Max calmly closes his eyes while the optic violet regenerates.

"Now I am flying with a pilot with his eyes closed, not to mention at night and with an eccentric overload. Interesting! (The comms systems were standard Motorola 300s, but with the kind of headsets used for Formula 1 racing. Just as well with Harriers and Tornados flying only 80 metres away). As show RT is local, it is conducted in German, suddenly an English voice butts in - a commercial aircraft in difficulty is requesting landing facilities at Weiner-Neustadt. The traffic controller lists some of the obstacles to be encountered, a crane on the runway, not to mention smoke, flares and a huge, as yet, unexploded pyro of Semtex. Perhaps he should try elsewhere, he suggests."

On the ground at last, Wynne Willson reaches for Max's hand to shake it with relief and gratitude, only to find that it is frozen in a claw. Max is quick to explain that this rigidity has resulted from the repetitive strain of holding his finger 1mm from the red button on the joystick throughout the flight. It transpires that regulations required that if the chopper became unstable, he would be obliged to press the button which would dump the load! Bye, bye several thousand pounds of uninsured equipment, to say nothing of all WWC's Razorhead R&D. (There will definitely be a WWC board meeting before the next Donnellan gig!).

Both Donnellan and Wynne Willson were quick to heap praise on Graeme Pusey - "an extremely efficient organiser and a constant source of fun."

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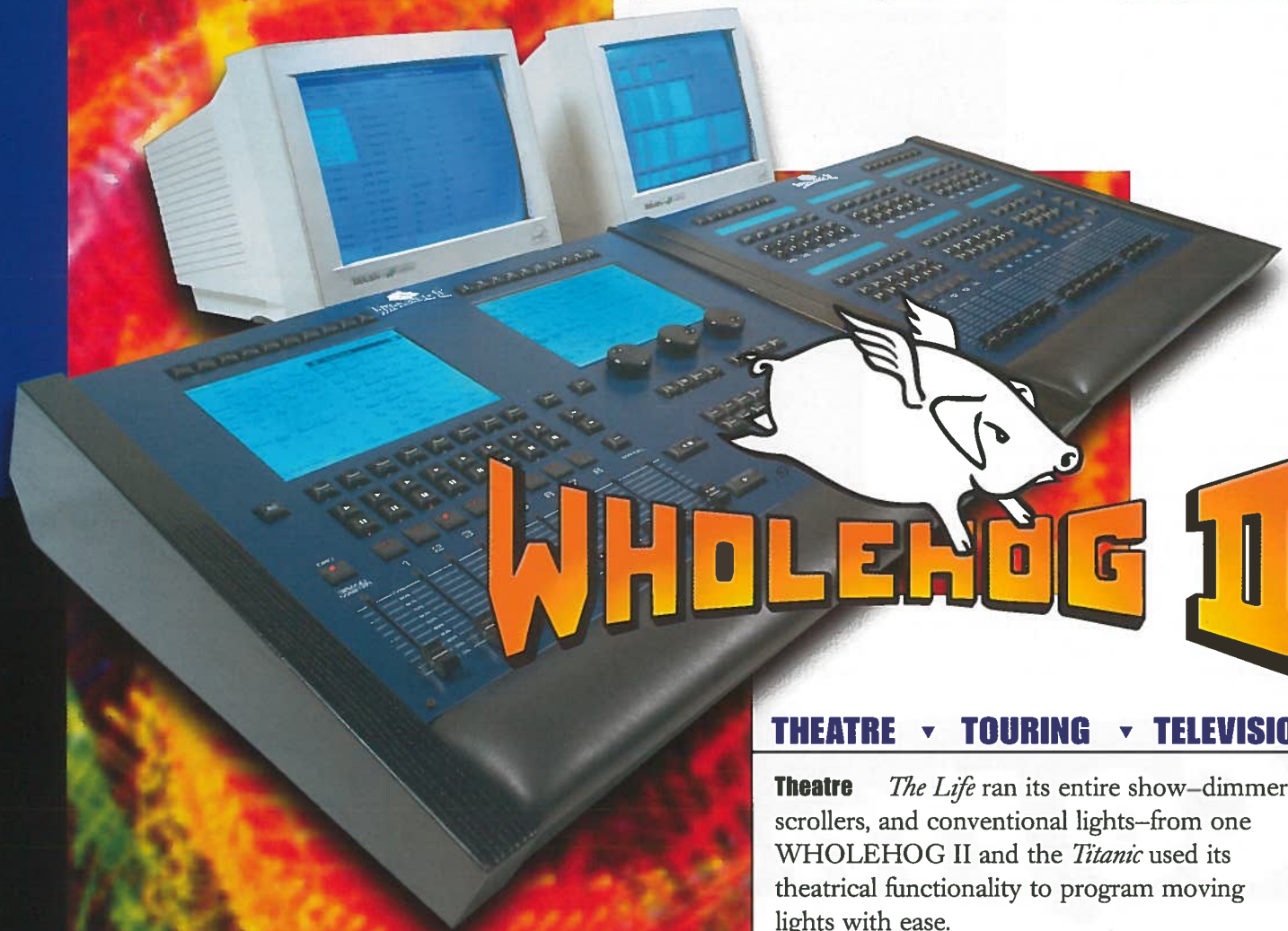


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ON TOUR

by STEVE MOLES

AND PRODUCTION NEWS

Oasis

Sheffield Arena

LD: Mikey Howard

SD: Hugh Richards

At the risk of never being invited to see Britain's most popular band again, I have to say that, frankly, I was bored. Which was frustrating, because it was apparent how much thought and effort had gone into the show. Perhaps I'm getting too old for it, but I've seen loads of the so-called new wave of UK guitar bands this past three years - many were lyrically unintelligible, but plenty were good fun to watch. Perhaps it was the cod belligerence of Liam Gallagher with his "mad for it" and "do you want some?" which I found patronising. "This one's for the fookin' Princess," he said, introducing *Live Forever*, "Not the fookin' Prince. Not the Prince-cess. Geddit?" Puerile nonsense. As politicians frequently have to remind themselves, 'the people' are smarter than we think, as Liam will no doubt discover.

The band performance is wooden: they appear ill at ease on stage and lack presence, though as sound engineer Hugh Richards pointed out: "Despite having played huge shows at Knebworth and Earls Court, this is actually the most spread out they've been on stage. With the drum-riser no longer in the middle, but set on high stage right, there's an element of separation that they were only just getting used to when we came out of rehearsals; plus they haven't really played together for almost a year."

The lack of presence was relieved when, after six or seven songs, Liam left for an interlude of two and his brother Noel took over. It's quite obvious this man has charisma, and his dry witty comments and easy way with his audience underline his talent as a songsmith and lyricist, immediately imposing a different demeanour on the performance. I think Richards identified the nub of the problem when he pointed out that last time out there was the unplugged interlude, giving the crowd and their ears time to relax and draw breath. Each of Gallagher's songs is well crafted and fresh (whatever the critics say about plagiarism, every r'n'r band since the fifties has plundered some other writer's work), but in live performance Oasis tend towards a Spector-ish wall of sound. The guitars fill every frequency in a sonic assault - 'unrelenting' is the word.

SOUND

For Richards, and his partner Garreth Williams on monitors, this is a cause célèbre. He reports a C-weighted 130dB at the vocal mics, "... and they're not the kind of band you're ever going to get to turn down. I try every so often, and perhaps for one song it's pulled down but then, by the end of the number, they're right back up at the same level. That's how they like it." Catching and projecting Liam's and Noel's vocals over that is no mean feat. Just to compete on level and to fill the



Oasis - giving the Woodentops a run for their money.

big arenas, Richards has one of the largest Flashlight systems I've seen out of Britannia Row in a while. Each side of stage is a cluster eight-wide and four-deep with a row of near-fills below. On the floor, 32 bass bins per side are stacked five high with a band of near-fills making the middle row, whilst a cluster eight-wide and three-deep hangs as a central delay (one row bass, two Flash).

It's a formidable array, but as Richards said: "With the guitars so loud, I'm using 414s. They're the only mic that can take it - it's difficult to get and keep the mix musical. Often at the start of the song you can hear the drums just as they should be, uncoloured by anything else, but then the guitars come in and they're lost. If you pull the guitars under the level of the drums, then they become so clear as to sound unnatural."

Richards has a Yamaha PM4000 FOH and racks full of compressors (*quelle surprise!*) but otherwise does very little in the way of treatment: "There is a little H3000 to thicken up Liam's vocal, but anything else added only tends to confuse things. Where I'm mixing from in the middle, the bass couples heavily and I have to strive to hear what's actually coming at me." True, it was, in many ways, a pleasure to step up onto the lighting riser, barely two feet above audience head height, and step out of that low and low-mid blast that was so carefully targeted at the punters. With such levels, Richards remarked how hard it was to maintain his own objectivity: "Sometimes I'm not sure if Noel's taking a lead break in there or not."

If it's any consolation Hugh, when you step up off the arena floor into the stands, it's the mix you wish you could hear.

LIGHTING

Mikey Howard just had four six-lamp bars of Pars and a strobe last time I saw him light Oasis, and bless him, he's still got them: "... just for stage wash between numbers." This is an LSD contract, but apart from a small collection of Molemag's, it's very much an automated light show. Howard operates an Avolites Diamond III, running all the conventionals, plus VL5 arcs and VL6s, while Dave Maxwell runs the Icons from a dedicated Icon Show Controller. As to Howard's set design, this is the reason the drummer now finds himself to the side: "Noel said he wanted more of a stage set," and that's exactly what Howard has done,

taking the album cover as his starting point. Thus the drummer is ensconced in the front end of a Rolls Royce of Keith Moon vintage, a clock face and bar dominate stage left, and a giant red telephone box holds the high ground centre stage. "Red, white and blue is what Noel has always asked for," and that directive is carried right through. Everything - Icons, wedges, floor covering - conforms.

The theatrical part of the set is built by Perry Whittacker Productions, the lighting rig - which is also very much part of the set - by Total Fabrications. Howard has specified the ribbed skeleton of a hemisphere, which Fab have built from custom A-type truss with an Expamet mesh applied to the surface. With the ribs continued, more or less right down to the stage, what Howard has contrived is a framework upon which to spread his lamps at every height. What he's particularly proud of is the final realisation from his initial sketches: "From the model Geoff Grainger made at LSD, through the computer walk-through Dave Perry made of the set, to what we pre-programmed in LSD's WYSIWYG suite, it all looks exactly as it did when modelled."

Howard uses the different lamp positions to effect. For example, running asymmetric matched colour chases of both Icons and VL5 arcs during *Some Might Say* was particularly striking, but the full-on nature of the performance leaves him little room to pull things down for a touch of intimacy. Even though the potential is there in the rig to paint a scene with perhaps just two or three Icons at head height and a light wash, the opportunity never arises. It must be very frustrating. There are some delicate touches though, most noticeably in the projection area. Howard has aluminised high-gain screens fitted like two orange segments to the trussing at the sides of centre stage. Made by the Hurley Screen Co, the screens are energetic enough to not only show bright gobo images, but also reflect dappling down onto the stage as a by-product and provide a general soft back-wash from any ambient light.

PSL also provide actual video projection for four numbers. A pair of Barco 9200s front-of-house are tightly focused onto a small circular screen coated with a special glass bead paint that gives a particularly intense reflection. Here credit is due to Chris Mounsor at PSL for sourcing both the paint and the Hurley Screens. The screen area is barely eight feet across, a concentrated image, so I'd be interested to see how less bright the image from two 9200s would be on a more conventional surface, but as a counter-point to the set it's nicely proportioned. Bright enough to be clearly seen, small enough to be never more than a part of the whole.

I think what I found dull was the lack of progression. The songs have moved on, the new album is great, Mikey Howard has certainly grown as an LD and whilst Hugh Richards wasn't mixing when I last saw them, I've known him for years and he takes this scale of show in his stride. The problem is that the band's performance was pretty much what I saw at Leeds Irish Centre in '94. This is '97, they're a well-established arena act. Like the album says, 'Be Here Now'.

Robbie Williams

Leeds Town & Country

LD: Liz Berry

SD: Dave Bracey

The refreshing influx of new talent that is the Britpop phenomenon has welcomed back a familiar UK entertainer, the Vaudevillian. Damon Albarn was one (though now his band has reverted to a less populist style), Jarvis Cocker another. Artists who, dare I say it, have a common touch and who, by definition, can perform a variety show, or more strictly, a variety of styles. Having witnessed Robbie Williams' performance at the Leeds T&C, there's no doubt in my mind that his name can be added to the list. The album 'Life Thru a Lens' has been warmly reviewed, his tour has had favourable notices in the national press. His show is, quite simply, a pleasant surprise. This is no sad reprise on Take That glory, like some I could mention.

I have nothing but respect for any individual who has the strength of character to put themselves through a rehab' programme. At 23, Williams has indulged as much as any pop-star without killing himself - so I wanted him to succeed. What we were presented with drew on all the same elements Oasis brought to bear - good lights and set, quality sound - but there's no denying that what their performance lacked, Robbie Williams' contained - and contained it in spades. This man wants to win - he's visibly hungry and he tries bloody hard. Maybe the Gallaghers could try a spell of rehab'?

LIGHTING

This is a pedigree production. Just about the entire caucus that is Depeche Mode or Brian Ferry's crew were there: tour manager is Andy Franks, and production manager is 'Wob' Roberts, whilst for Liz Berry, this is the first rock 'n' roll tour to have her name in the programme as LD. And not before time. Although she confessed a slight pang of urgency to get started when rehearsal fit-up began, there's no mistaking her self-assured touch. This is someone who's commanded huge Vari*Lite rigs for major TV shows and managed to ameliorate the talents of a mercurial, but demanding, LD like Jonathan Smeeton.

The tour opened at the HG Wells Suite in the 'Planets', a council-run entertainment centre in Woking. I mention this only because Berry did: "It's new, but a good gig. A bit small, ceiling slightly too low, stage a bit small, but plenty of power. The weight limits on the roof are good and the people who run it are great. Expect this to become a regular on the small tour circuit."

It was the prospect of visiting such venues that predicated Berry keeping her rig small and uncomplicated: two straight trusses, a backdrop feature and a bit of floor lighting. That said, it's a busy little package from CPL/Vari-Lite - 48 Pars plus four strings of ACLs, eight VL5s, six VL2Cs and that extra little something, four headless Cyberlights with VLM mirrors above. "Jason (Trueman) stripped the heads for me. Unfortunately, I find that the mirror movement becomes progressively more restricted in pan as you extend the tilt to its limit, which can be a real short-coming."

And there was no denying the flexibility of movement the Vari*Lite moving mirrors gave her. I've only ever seen VLMs used as a secondary



Robbie Williams - seen through a lens.

target device for other Vari*Lite before (why bother?). In this instance, their presence, coupled with the Cyber's fat beam output and the fact that Berry added Mirrorflex to one side for a soft-edged imperfect reflection, made for an altogether more usable lamp. The backdrop is a random hang of 6ft x 3ft panels of corrugated PVC supplied by Spotco. "The tour was originally going to be named after the album and see-through panels was the way we were headed," said Berry. "Then it changed to 'The Show Must Go On', and by coincidence some different panels, more reflective ones, became available. It's given the stage a mirrored look - slightly narcissistic, more reflective."

It's also very bright. The two types of panels hit one way provide a quite uniform and highly efficient reflection bathing the stage in strong back-light; hit less obliquely, the clear panels become more transparent and create a chequered effect. I've seen many shows at the T&C over the years - they're always a squeeze, but this one more than any other made the stage look wide, and was all the slicker for that.

SOUND

Both Berry and FOH engineer Dave Bracey commented that this is a very tight budget tour. Where Vari*Lite and CPL gave it away, Britannia

Row were a little more restrained. Considering the venues played, this probably wasn't such a bad decision on their part. The choice was between losing a crew member or swapping the desks for something less expensive.

Keeping the crewman was the more humanitarian option, but the desks were more than adequate and arguably the smaller footprint of both helped a little on what is a tour of the postage stamp stages of Britain. Bracey was able to extract the same monumental levels from his Brit Row Turbosound system that Richards did for Oasis, but with just five Flashlight and two Floodlight cabinets per side. Nevertheless, the largely female audience was still able to make its presence felt. I'm not quite sure which source it was that still had my ears whistling the following morning.

Bracey is using a 40-channel DDA Q2 (with Alan Bradshaw on monitors using a Soundcraft M12) plus a Yamaha O2R, "... mainly for effects. It's an easy desk to get around - I used one for the Pet Shop Boys earlier in the year, but I wouldn't like to mix a live band like this on it."

Effects-wise, it's nearly all about vocal treatment and thickening. The five-piece band provides lots of harmonies, even a wonderful parody of the Take That classic *Back for Good* which sounds as if Dave Grohl from the Foo Fighters was asked in on the re-write. Bracey uses a Lexicon 480 for Williams and backing vocals, with a PCM70 for vox delays and a touch of Eventide H3000 again for the backing vocals, plus a Roland SDE3000, AMS RS16 and an SPX900 "just for that extra weird stuff," all marshalled between numbers by a Yamaha MIDI changer. "The first two songs can be very full-on," he said, "but he has a strong enough voice to get it on top. As a result, I don't really know if I've got it right until the third song when it slows to a ballad."

And that's the truth of it. As I said at the beginning, Williams gives a variety show: there's Punk, Bon Jovi, Pulp, Foo Fighters, even a bit of Mick Jagger in there. If any criticism can be laid at Robbie Williams' feet then it's simply a question of identity - who is it he wants to be? Having climbed successfully out of Take That and the ashes of his own life, he can probably afford to take a bit of time to answer that. Just don't leave it too long.

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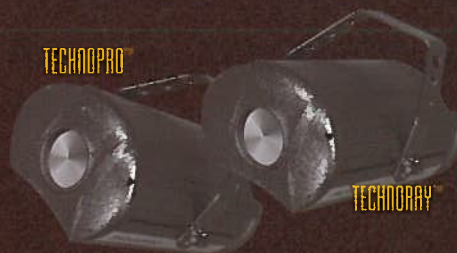
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LDI JACKPOT

The many attractions of Las Vegas were as nothing to the rare gems that the LSI team unearthed at LDI

This year LDI came upon us with barely enough time to turn around from the PLASA Show, all to enable the organisers to get a slot in Las Vegas. Thus, the European contingent arrived dazed and bedraggled both by the proximity and the inevitable jet lag. But it was worth it: LDI broke all records, with more visitors on the first day than for the whole show last time. Needless to say, they are booked back again in two years time.

Of course, Vegas has a lot going for it as an entertainment city: it is the USA's most popular tourist destination, though what that says about taste in hotel architecture doesn't bear thinking about. The Sands Expo Center served well as a venue, though signage was, if anything, worse than at PLASA, and there was an uncharacteristic air of calm about the entire proceeding.

As LDI celebrated its tenth birthday, and its parent magazine its 25th, the event threw new light on a number of new products and innovations not seen at the September Show in London. First up were a whole bunch of moving head projectors which are very much in vogue just now, and interestingly one of these came from the people who have done more to define the genre than anyone else. The **Vari-Lite VL7** uses the MSR700 lamp with a programmable 8:1 zoom lens where the field fall-off ratio is claimed to be 2:1, centre to edge, at any setting.

The full colour mixing system, which Vari-Lite call CVF for Continuously Variable Full-colour spectrum crossfading, is able to crossfade through pale shades to fully saturated hues. There are six bi-directional rotating gobos, and a 12-station wheel for which the colours or gobos are interchangeable. Overlaying of the images on these wheels enables morphing to take place over a speed range from one second to 10 minutes.

In their race to catch up in the 'move your body' front, **Clay Paky** (part of the **Group One** enclosure) delivered four different models first trailed in September, but not seen until now. Three are washlights, with lamps ranging from 300W HTI, to 1000W halogen and on to 1200W HMI. All have colour mixing (which CP persist in calling RGB rather than CMY), a new highly efficient frost filter, dimmer, shutter, strobe and high resolution tracking. The Stage Color 1000 adds two filters for oval shaped projections, interchangeable special effect filters, concentric two colour beams and UV. The 1200 has all of that plus hot re-strike, colour temperature converter, three additional frost filters and various other gizmos. Its most attractive feature, especially for hire companies, is the modularity with the spot



Members of the World-ETF - Florian Von Hofen (VPLT), Paul Vincent (ESTA), Matthew Griffiths (PLASA), Lori Rubinstein (ESTA) and Paul Adams (PLASA) - meet with Augusto Andraghetti and Maurizia Michel of APIAD at the recent LDI Show.

version or Stage Zoom 1200. With its two independent gobo wheels, four fixed position gobos and four rotating gobos, all of which are interchangeable, plus rotating prisms, iris, dimmer and shutter strobe, the Stage Zoom has 16 controllable attributes in all. The benefit of the modularity is that with one base unit you can use spot or wash configuration at will.

While **High End** and **Martin Professional** brought along their latest versions, fully reported in the PLASA Show issue, it was quite a surprise to find **Coemar** at LDI with a moving head luminaire which stunned us all. Primarily, unlike the earlier prototype originally revealed under the TAS banner, the Tourlite Spot 1200 is made from sleek carbon fibre, looking for all the world like the styling of a fast motorbike.

Consequently, and with the assistance of an electronic ballast, it weighs only 15 kilos, and is immensely strong. Furthermore, the manufacturer claims that it is 2.5 times brighter than its 575W competitors and, unless the eyes deceived, that may be a hard claim to dispute. The element of surprise was somewhat compounded by the fact that Coemar are at last finding success with their NAT TM luminaires, especially in the US, where they have started appearing on several headline tours courtesy of **Obies**. They introduced a much improved version of the 1200 NAT TM with greater light output and, most important, with a variable beam angle opening up to 24°.

High End Systems were maintaining their anticipated success with the Technobeam, launched in the States at LDI, and since PLASA have added an optional laser device to the head to assist in focusing. Typically, this has also been turned to advantage as an additional effect when

bounced off the mirror. Richard Belliveau has plans to beef up this feature in the near future.

A new product on show on the **Xenotech-Strong** stand was the Razor Head, a double axis moving searchlight, based on the moving head used in smaller form on Coemar's NAT fixture. This 7000W Britelite-based unit cuts, so to speak, an altogether more imposing figure, and includes a wide safety guard to prevent what could be called 'moving head injuries'. The Razor Head was noted by the award judges, who gave it an 'Honourable Mention' in the category of Architectural Lighting Product of the Year.

White Light also picked up an Honourable Mention in the Architectural category for their retro-fit discharge lamp unit (Honourable Discharge?) for the ETC Source Four luminaire. The 150W metal halide lamp and ballast unit boasts a lamp life of 9000 hours, or just over one year of continuous use, and will undoubtedly prove a popular option.

The Architectural Award proper, however, went to Boston company **Color Kinetics**, who gave us what could well be a glimpse of the future with their Chameleon series of full spectrum digital lighting. These lighting units use recent advances in LED technology to create a full colour mixing source in a very small and economical package. The units have no moving parts, are totally silent, boast an extremely long life (20,000 hours plus) and low power consumption, are light of weight, low of temperature and offer instant colour change of 16.7 million (count 'em) additive RGB colours. The matrix of red, green and blue LEDs provides an extremely even light and with further improvements in LED technology and fixture design, increasingly higher light outputs will undoubtedly be achieved in the future.

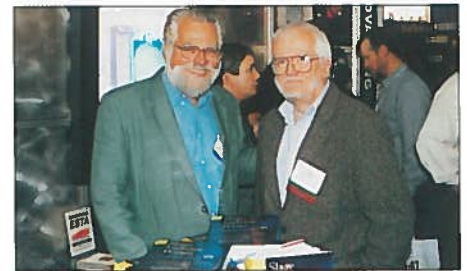
Italian lighting manufacturer **SGM Elettronica** were with their US distributor, Albuquerque-based **Image Lighting & Sound**. A new Russo-Italian venture was on show in the form of a 100W effects projector which employs an idea developed by the Soviet government. This passes light through a rotating colour wheel and then through a cylinder packed with fine optical fibres. The resulting effect is reminiscent of liquid projection effects, creating a seemingly crystalline, pixellated pattern of shifting colours. The effect was developed by the Soviet Union to calm the nerves of their Cosmonauts which, if recent events on the Mir are anything to go by, need soothing. The one negative factor is cost: to create the cylinder for the 100W unit requires 10 kilometres of optical fibre, and for the 1200W



Tom Littrell and Anne Valentino of Vari-Lite with the VL7.



The Xenotech-Strong team of David Morrell, Andrew Spielberg, Paul Rabinowitz, Andy Heisler, Steve Gillette and John Guthier.



David Hersey and Richard Pilbrow with copies of his new book - *Stage Lighting Design*.



Tony Shembish (left) and Shahid Anwar (right) of Avolites demonstrate the new Azure to Frank Clark of Westbury National.

unit, an incredible 80 kilometres of fibre is needed.

Hardware Xenon were showing their new generation of high power, large format projection systems. The Optical Light System projectors claim a greatly improved output and luminance distribution, giving even, hard-edged image production. All effects functions of the units - scrolling, slide changing, rotation, focus, pan, etc - are fully motorised and operated by PC using a bi-directional DMX 512 link, or using the box's internal memory with external synchronisation (DMX, MIDI, SMPTE, RS232). Hardware were also announcing a change in their US operation at LDI: as from the start of 1998, their US office will transfer westwards from New York to 919 Isabel Street, Unit A/B, Burbank, California 91506.

Avolites' latest lighting controller, the Azure 2000, was again attracting attention following its recent PLASA launch. The new design approach, radically different from the familiar Avo look, gives a sleek, touch-panel exterior to what is essentially the guts of a Pearl console, thereby reducing the cost of the unit which, as Steve Warren points out, is largely due to the much-loved faders and buttons of the more familiar desks. The rock 'n' rollers may never go for the idea, but this new departure for Avolites will continue at least to the extent of a similarly-styled Azure replay unit, coming soon.

MA Lighting were showing the Grand MA lighting console, which was previewed at PLASA this year, and should be in full production for PLASA 98. Aimed at large scale venues and live touring applications, the Grand MA is the result of MA's analysis of the time-consuming aspects of other lighting control desks on the market. It features three-colour LCD displays allowing group and pre-set operations, interactive output display and a choice of cue listing options, and has 2048 control channels for simultaneous control of conventionals, scrollers and moving lights.

ETC's new Obsession 2 console, currently making strong inroads into the UK market (see the review on the Barbican, starting page 57), was noted in the ESTA Dealer's Choice Awards, where it shared a tied place with Martin Professional's MAC 500 luminaire in the Equipment category. It was good to see Nigel Sadler settling in at ETC following the recent demise of UK distributor M&M and also good to learn that founder, Mike Goldberg, has moved on to White Light.



Maas Maaskant of Color Kinetics with examples of the Chameleon series.



Sonny Sonnenfield, Michael Griffith and Fred Foster of ETC with Bill Klages (second left).

Rosco were giving regular presentations on stand promoting their Horizon control software, one year on from its introduction at LDI last year, while their 'Spectrumgobos' custom glass gobo production service was highlighted in their 'Lighting with Gobos' presentation.

Leprecon were introducing the new LP1600 lighting controller, which comes complete with monitor and disk drive, and is aimed primarily at the rental market and theatrical applications. The console features 12 pages of memory and 12 chase effects, and wide mode operation with 24/48, 36/72 or 48/96 channel configurations. This desk joins its larger relative, the pro version LP3000, which was also on show, featuring 20 pages of memory, 18 simultaneous playbacks, moving light auto patch and custom colour palette. These desks are particularly targeted at the tough European lighting control market.

Stage Technologies' range of motion control systems have been finding favour in the cruise ship industry, with Disney Cruise Lines recently purchasing updated versions of the radio-controlled trolley system that was custom designed by Stage Technologies for use on the musical *Martin Guerre* in the West End (see L+SI August 1996).

DHA Lighting were at the show promoting the addition of 100 new gobo designs to the company's already extensive range, bringing the total number of designs now available to 800. The latest designs are from the Miltel range, which DHA have recently taken over.

Altman received an Honourable Mention from the award judges in the Entertainment Lighting Product category, for their focusing cyc light, a linkable cyc unit with a quick and easy tool-free hinging system and adjustable reflector.

UK manufacturer **Mad Lighting** were showing their range of highly popular MadScans, and revealed that we can expect to see a string of new product launches under the Mad banner during the coming year. Another UK manufacturer currently enjoying a wave of success is **Doughty Engineering** who were at the show fresh from the achievement of their Product Award at PLASA for the Overlocker clamp. They were sharing a large stand with the US distributor of both Doughty's product range and Prolyte's trussing. Signs of the success of the show were discernible here, with both Doughty and Prolyte shifting their product brochures by the thousands.



Scott Callis (left) and Paul Williams (right) of Mad Lighting, with visitor David Sullivan.



Fred Mikeska, Barbara Novak and Tim Schmieding of Leprecon.

Le Maitre have a strong involvement with the theme park industry in North America and therefore LDI serves as a showcase for a number of products that have sprung from the company's experience of offering custom solutions for themed environments. Chief among these, perhaps, is the Fluid Management System, currently used by Disney, which monitors fluid levels in all smoke devices in a particular area and automatically refills the individual tanks from a central reservoir when the levels fall below a designated point. The H300 hazer, a modified G300 smoke machine, was also on stand, placed atop a Le Maitre Zephyr fan, a wedge-shaped blower which raises the snout of the smoke machine in the direction of the airflow.

James Thomas Engineering had several new products on display, among them the 20.5" Supertruss, which has been designed especially to allow for fast and easy access to fixtures, a series of Par 36 spotbanks, a short-nosed Par 64 can and a weatherproof Par 56 fixture. Also on show from Thomas was the new, heavy duty Megatruss.

New from trussing specialist **Tomcat** was the 30" by 20.5" folding heavy duty box truss. This features a special hinge extrusion which allows a section to fold down to less than 6.5" in width. Also new was the Mark-3 tower with spigot connections. The base, headblocks and hinge block are also spigoted. Tomcat have also modified their Universal Mount Spot Chair, which can now accommodate a larger light.

Slick Systems have recently opened a new manufacturing base in Florida from which they will continue the development of their key truss systems, notably the recently-launched Nova Beam Truss range.

Now that Peter Johns has decamped to the US, LDI provided the perfect chance to catch up with the entire **Total Fabrications** team. Arena Deck is the company's latest innovation - a modular decking system, designed primarily for major touring concerts and large venues, it also integrates with TF's Outdoor Roof Tops to form a free-standing package. It was also a US airing for the company's new XO truss, covered in our PLASA review last month.

CITC's range of theatrical special effects, including last year's LDI award-winning Snobiz snow machine, were on display on an eye-catching stand. Continuing the snow theme, CITC have come up with a UV-sensitive snow mixture



Derrick Saunders, Jane Dorling and Andy Graves of Pulsar with some interesting reading!



Slick's team of Sandra Campos, Ian Hall, Richard McDonald, Cindi McDonald, Mike Wood, Linda Rigoulot and Sonia Wood.

for use with the Snobiz and Little Blizzard effects. For finer atmospheric effects, the Hi-Lo Digifogger is a water-based fogger incorporating a digital readout which accurately records the working temperature of the heating block, maintained at around 560°F. As fog fluids can become an irritant when overheated to around 700°F, this represents a valuable safety indicator.

AC Lighting were glowing, having picked up the Entertainment Product of the Year award for the new Windows 95 version of the acclaimed WYSIWYG software from Cast Lighting. WYSIWYG Version 3 has taken a new look at the software tools that lighting designers, programmers and rental companies need and a suite of three programs is now available depending on the desired application, the foremost being WYSICAD, which allows anybody to create and explore a lighting design in 3D or 2D, but retains the advantage of working with 2D symbols to create proper hanging plots. WYSIPAPER is a second stand-alone program that can be combined with WYSICAD allowing the user to print schedules, inventories, patches etc, as well as build custom reports. The final program is WYSIWYG itself, which allows the connection of DMX to any PC. AC also had the first showing of the new Rigger's Remote for the Wholehog.

So controversial just prior to LDI, DMX was once again high on the agenda, not only in the workshops and meetings which cloak the show, but also on the show floor where the growth in companies specialising in DMX products is on the increase. Take **XTBA**, for instance, the UK company who have built a name for themselves in all things DMX whose new Backtrack system was to be found on the stand of **Goddard Design Co.** Backtrack is a PC-based system which allows for real-time recording, playback and manipulation of DMX512 control data, directly to and from a PC. The spec sheet makes interesting reading and the bottom line is that an average two hour theatre show should pose no problems.

FPF, another UK company, had Showdesk 1.0 - a 512 channel DMX512 lighting control software package for PCs, alongside Geomimic - a 2D design package for viewing and rendering lighting information in real-time. The company also launched DMX512 receiver chips, a device which allows the receipt of up to 512 channels of DMX data and is intended for use within distributed incandescent and fluorescent lamps.



John James (centre) and Denis Bramhall (second left) with the Tomcat team.



Nick Sholem (left) and John Huddleston (right) with Glyn O'Donoghue of AC Lighting and Nick Archdale of Flying Pig Systems.

Alcorn McBride introduced the DMX Machine, a scripted lighting controller, which will complement the company's LightCue, a real-time DMX recorder. Incidentally, proof of the A-B pudding was to be found not far away on the Vegas Strip, where LightCue controls the lights on the Stratosphere Hotel and Casino, home of the Big Shot - a name familiar to aficionados of stomach-churning thrill rides.

Interactive Technologies have approached the issue of DMX from a new angle with the introduction of their RadioDMX wireless DMX transceivers. Not only will this airborne distribution of the DMX signal substantially reduce load-in times on productions by eliminating the need to run DMX cables, but it will also allow DMX transmission to go to new and interesting locations - turntables, vehicles or islands, for instance.

As the world of lighting control continues to evolve, **Amazing Controls** has designed a solution to streamline the process of how events can be staged and controlled. The DMXPort is a DMX-based cabling solution which consolidates multiple stage, hanging and side stage cabling into only one Ethernet cable.

Artistic Licence, dividing their time between the stands of **TMB** and **Crescit Software Inc**, arrived in the States with Grand Master Flash! This is a virtual lighting console which is set to challenge the realm of the 'Big Console' and supersedes AL's Grand-Master, working in conjunction with the DMX-Dongle, thereby turning PCs into lighting desks.

TMB, for their own part, had practically fenced off their stand making access nigh-on impossible, preferring to feed visitors into their well-stocked cafe bar - a welcome haven for weary journo's and a fitful place to chew the fat (and the pretzels) with Messrs Waters, Bissett and Stephenson.

It's been interesting to watch the rise and rise of **City Theatrical**. The man behind the company, Gary Fails, seems to possess the happy knack of collecting very interesting products around him. Witness his recent alliances with Herman Sorger's **Lighting Innovations** (the deal was struck at PLASA) and Stuart Gibbons' **Le Mark**. The former has been studiously developing its range of accessories for the Source Four, whilst the latter, amongst many other things, is the company behind Blacktak, which completed the double by picking up product awards at both PLASA and LDI



Douglas Debusschere, Ian Coles, Chris Cronin and Peter Johns of Total Fabrications.



Production Resource Group's Patrick Seeley (Harris), Kevin Baxley (Scenic), Larry Kellerman (PRG) and Roy Sears (PRG).

(ESTA Dealer's Choice Award). City also manufacture their own line of architectural products and accessories for the Source Four.

Bandit Lites are another company that seem to grow in stature with each passing year. They recently located to a new 95,000sq.ft HQ in Knoxville, complete with custom-built training facility, and have added a further string to their bow with the addition of an architectural design department. Richard Willis and the team are strong believers in educating the end-user and, with this in mind, are currently putting the finishing touches to their 1998 seminar schedule, which offers introductory courses to just about every major lighting manufacturer going.

A host of new products from **Strand Lighting** made their debut at LDI, including the latest software for the 500 series consoles and a new update to the LekoZoom spotlights. Other new-to-LDI offerings included the Bambino 500 compact studio light and the PALS series automated Pirouette. The new dichroic reflector versions of the LekoZoom spotlights come in two zoom ranges - 18-30 degrees and 25-50 degrees. The new operating software for the 500 series (version 2.1) now offers user selection of preset or tracking operation in set-up. End-users can now choose how they want to operate at any time, providing the level of control needed for any production.

Despite the setback of having product stolen from the stand at PLASA, **Elektralite** took their CP-100 to Vegas, alongside their new CP-5P pre-programmed controller - with lighting shows ready to run for selected fixture types.

Synrolite had the new SX3K (3000W) and SX7K (7000W) - the first flyable, moving, large-scale automated lighting fixtures with full DMX control of pan, tilt and focus. Using high temp proprietary gel with combined diffusion, the long-lasting scrolls provide excellent long throw capability, in addition to a full range of skylight effects. The 3000W lights were first developed for the Six Flags Theme Park in Georgia and will no doubt be much used by the company in their core markets - theme parks and big show spectaculars. The company is also involved with preparations for the 2000 Olympics in Sydney.

Irideon, the name behind the successful AR5 and AR500 architectural luminaires, have now consolidated their presence in the UK with the appointment of LT Projects, part of the **Lighting**



Gary Fails of City Theatrical with Stuart Gibbons of Le Mark and Blacktak.



Tom Folsom and Phil O'Donnell of Strand Lighting.

Technology Group, who were themselves promoting their new range of PAR-fume smoke machines disguised as miniature Par cans. Elsewhere in the hall, **The Effects Co's** new CO₂ jet system was to be found on the **Omnisistem** stand. This DMX-controlled two-axis moving head system is capable of releasing jets of CO₂ up to seven metres high.

Wybron, on a somewhat smaller stand than usual, have chosen to spend their money on other things this year, channelling their dollars into sponsorship of the attendant seminar programme and notably the backstage tour of Cirque du Soleil, hosted by LD Luc Lafortune.

The **Production Resource Group** continues its forward momentum, bolstered recently by the acquisition of **Bash Lighting**, a move we covered in these pages just three months ago. Bash now joins **Harris Production Services, Lighting Technologies, Cinema Services, Thoughtful Designs, Design Dynamics, Vanco** and **Scenic Technologies** within the group, which must surely count as one of the largest pooled resources in the industry. Scenic have spent the last six months developing their new Stage Command system, more graphic and icon-based in nature,



Charlie Malings of Morpheus with the new WetFader colour changer.

coincidentally running the Masquerade Show in the Sky at the Rio Hotel, one of the key conference hotels.

The irrepressible Charlie Malings of **Morpheus** was more than keen to steer attention to the company's new WetFader and SubFader - both additions to the ColorFader Series, both weather-resistant and both fully submersible. The company have already sold 60 to a venue in Vegas and will no doubt catch Disney's eye, if they haven't already done so. Morpheus also had two new moving lights in the form of the PWR Spot and PWR Soft, both 600W HTIs featuring their patented fading dichroic colour system.

Whilst others are engaged in a constant pursuit for the high tech holy grail, **Production Arts** seem content to consider all aspects of the technical continuum. Initially created for opera libretto translation, but surely destined to have wider application, the company launched Simultext - an electronic system that delivers text directly to each member of the audience, courtesy of individual computer screens that are mounted in custom-designed rails built along the back of each row of seats.

Of course trade shows are not just about



Jacqui La Fleur, Jimmy Page and Jack Calmes of Syncrolite.

product: a great deal of valuable networking goes on and for Associations such as **PLASA**, the chance to meet with members of other industry associations is invaluable. So it was that at LDI, the **World-ETF** (furnished with a lounge courtesy of ESS/Olesen, High End Systems, Strand, TMB and Tomcat), an amalgam of **PLASA, VPLT** and **ESTA** met to discuss the future with a view to inviting other associations to join the W-ETF.

With LDI following hard on the heels of **PLASA**, there was much commonality of product and there was a great deal on the show floor that has already been well covered in the pages of this magazine. So forgive us if we missed you. Vegas certainly provided an interesting backdrop to the show and, in some ways, it's hard to think of a more appropriate location because Vegas feeds off the high-tech business flowing through the convention facilities, but the \$50bn US gaming industry in turn subsidises much of the entertainment excess found in Las Vegas. Completing the circle, you might say.

Next year LDI heads off to Phoenix, seventh largest city in the States, and a return to a November slot, but thankfully not a slot-machine in sight.

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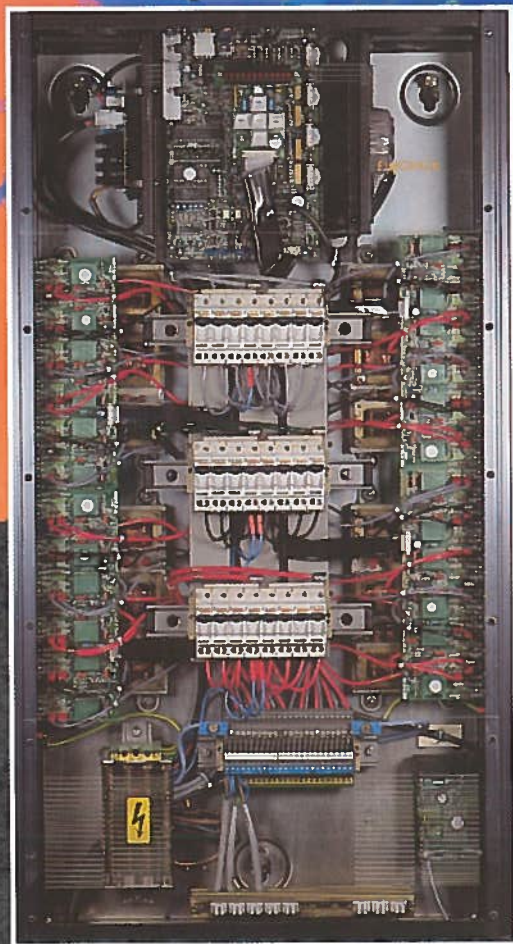
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Second Take . . . *John Watt's view from beside the camera*

Last month, I'm afraid I didn't manage to get round to coverage of the PLASA Show. New products were a little thin on the ground, but who would have thought a year or two ago that lamps below 1kW would be firmly on the agenda with ETC and CCT leading the way and Strand in hot pursuit. CCT have introduced an 800W version of their Freedom range which has snookered me as I haven't got a stencil with the right 'hole', not even the White Light one which covers most eventualities. Meanwhile, Doughty got an award for their Overlocker Clamp, but I would give them another for the 'Super Lightweight Coupler' which does much the same job as the standard theatre-type hook clamp but, and it's a big but, won't squash thin-walled trussing.

Parties and PLASA go hand in hand and I apply the old adage that I wouldn't want to go to the sort of party that would have someone like me as a guest. The type of invite received is a useful measure of one's social standing. You can certainly work out your position in the league tables as you head for the tube, while the glitterati climb into their stretched limos (they know who they are). With a wry smile I console myself - I bet they wouldn't even know which type of sauce to order with six chicken McNuggets (Barbeque is best. Who said there isn't any real practical advice in this column?) and that the fruit pie runs hotter than a baby 2k.

I recently lit a series of 'Give us a Clue' - an old format, but still great fun, which involves contestants miming titles of films and books. Little did I realise what a rich training this was to be for the next job. There I was in true freelance mode: second cup of tea in hand, post opened, no jobs, but a personal letter from Viking Direct, a postcard from Brian Pearce holidaying in Clacton (it's a bargain in November) and a card from Rainbow scrollers which gives me a complete set, when the phone rang.

Now it's unlikely that my editor will agree to run this story as a serial, so a few highlights will have to do, suffice to say that 12 hours later, a slightly bemused JW found himself in Budapest to help sort out a sick game show. The Buds are only just getting commercial TV; you may think they've suffered enough under Communism for 30 or 40 years and having to drive Trabant cars (only chief exec's have Ladas) but now it's game shows and 24 hour news.

Now there are a few things you should know dear reader if you follow in my footsteps (I seldom do series two) to deepest Hungary. First and foremost, they are all foreigners and only speak Hungarian (not a second language option at the school the judge sent me to). So you see why I was so relieved to have done Give us a Clue: 'tip it up a bit' or 'pan left' are easy enough but 'chinese doors' is

harder and 'can you hang four 2ks on bar 22 and twofer one and three and two and four' is all but impossible. The equipment looks conventional enough: Quartz Colour 10s, 5s, 2s and pups but nothing smaller. I had to swipe some shop window fittings from reception to light some twiddly bits. (I hope this is not getting too technical for you). The hoists are Japanese and controlled from a micro computer system - they work well, but have an odd aluminium track with special trolleys which makes it well nigh impossible to add extra gear.

"I'm not sure of the daily rate, but I enjoyed the negotiations with a charming lighting chief whose bottle of 44% proof Apricot Brandy bridged the language barrier pretty effectively (it also cleans old paint brushes and my dentures)"

I guess this isn't much of a problem when there's no hire industry (John Simpson please note) to rent equipment from. No DOP (nothing as common as a lighting director), has ever had the temerity to ask for four lamps on a bar . . . well, not till a couple of weeks ago anyway. Safety bonds don't cause the usual tangles as they don't have any! Tallscopes are unknown and they couldn't understand why I thought a Genie might be handy and I soon found out why.

A rickety wooden pair of steps nearly 20ft high was produced and the spark sat astride the top with a leg down a

couple of treads each side. By curling his toes around the rungs he could 'walk' the steps around the studio! Obvious when you think about it. To add one more to my list of 'never assumes', I had noted the set of Doms (Iris Fours) and so rested easy that at least a few basic colour changes could be delivered.

I should have smelt a rat from the strange looks the crew gave me whilst miming my way through "09 top left, 68 top right" etc (Rosco have an agent in Budapest) but the penny didn't drop and they couldn't think of a mime for 'you're a crazy Englishman'.

Only much later, when I asked for a blue cyc and got mud, did it dawn that all four cells were wired into one plug! Never assume. As the old saying goes, it simply makes an 'ass' out of 'u' and 'me'.

I was determined to have a batch of narrow angle profiles. It seemed these would prove impossible to track down until I suggested that the Opera House may well have something. Didn't they just: 10 immaculate nine degree Neithammers were delivered next morning. I'm not sure of the daily rate, but I enjoyed the negotiations with a charming lighting chief whose bottle of 44% proof Apricot Brandy bridged the language barrier pretty effectively (it also cleans old paint brushes and my dentures).

Once again travel has broadened my mind more than somewhat. The crews were more than keen, hard-working, knowledgeable and, if I'm not mistaken, were actually smiling behind those oversized walrus moustaches.




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SOUND WARFARE

Steve Moles talks with designer Rick Clarke about his approach to the sound system for the seminal musical *West Side Story*



West Side Story: Leonard Bernstein and Stephen Sondheim's best known collaboration which reflected the lives of rival gangs in fifties America.

Some would argue that *West Side Story* is William Shakespeare's most successful musical. A jest of course, but this tale of tragic love is just as relevant today as when the Bard first wrote *Romeo and Juliet*. As long as there are Bosnias and Belfasts to tell us of the stupidity of prejudice, the futility of fomentation and the potential tragedy of love, then Shakespeare's plot will endure.* The simple truth that Bernstein and Sondheim took this classic love story, and re-wrapped it in a modern idiom, is a lesson not lost on contemporary composers. Where *West Side Story* differs, is that it doesn't just rely on one great song to carry it (Lloyd-Webber take note) but careens along on a raft of excellently crafted tunes, full of narrative and emotion.

The audience at the Bristol Hippodrome are seemingly in agreement with this view: this is a 60 week tour around the UK and they, like many others, find the tunes as fresh and vibrant today as they were in 1957 when the show first opened. Will we see a revival of *Aspects* in 40 years time? I don't think so - not, at least, if there are productions like this around to remind us what constitutes a great musical.

In the context of a modern musical show

there appear to be three crucial elements to attaining audience satisfaction: the quality of the material - already alluded to - is one, and the quality of the performers is another, but there's a growing awareness of the need for excellent sound. Not just good, but experiential. ♦

In simple terms, awareness of what's possible in the theatre environment has been raised by the experience of modern cinema. Check out something like *Jurassic Park* in a Dolby Pro Logic sound environment and you experience the terrifying ordeal of being in the 4WD when T-Rex peeps in through the windows. You can hear him breathing down your neck. The visual image may be the dominant information source to the brain telling us why this might be a threatening situation, but it is clearly the positioning of the sound image that transports the viewer into three-dimensional awareness, the feeling of 'being there'.

It's possibly a passive awareness when it comes to audience expectations; an audience doesn't arrive at the theatre consciously expecting to be thrust into the action in quite so direct a fashion, but they do come with a subconscious expectation to be transported to

another place, as the cliché goes. What is likely though, is a post-show subjective comparative, something along the lines of "Hmmm. There was something missing there, it wasn't as exciting as it could have been."

This is a rather long and elaborate metaphor to introduce this piece on *West Side Story*, but it's fundamental to explaining what sound designer Rick Clark is attempting to do, and I don't mean putting dinosaurs in the audience. Clark is a sound designer with a lengthy pedigree: after graduating from Art & Design college he quickly got caught up in the music revolution and by 1970 was mixing front-of-house for Medicine Head through a bunch of WEM columns.

The following 27 years have seen him pass through an evolutionary experience within the audio field and, today, he is a much sought-after designer, particularly in theatre. No sooner did he complete the set-up in Bristol, than he was off to London to oversee the install for the West End's latest blockbuster *Chicago* (see L+SI September 97). But *West Side Story* has a special resonance for Clark: "It's one of the musicals I've always wanted to do," he said by way of introduction. "It's so dynamic and



House engineer, Matt Dando, in the sound control booth.



West Side Story's sound designer, Rick Clark.

exciting, yet it's rarely competitive with the voices."

Already you begin to see that here's a man who through experience is not only in tune with the technology, but also has an awareness of the art form. So what are the goals he set himself in approaching this show? "My concern was to keep the excitement in the music; to put the orchestra in the room and not keep them in the pit.

Thus, the system had to be large enough dynamically and also needed a richness in the bottom end." The system Clark has chosen comprises mainly d&b audiotechnik speakers with a bevy of JBL Control 1s for the most remote under-balcony delays. Orbital are the equipment suppliers, providing a complete audio system including desks, radio mics and, ever a thorny subject for audio companies, infra-red CCTV. (Orbital director Chris Hedlam did have a few well chosen words to say on this issue, unfortunately space does not allow room for his comments).

"I chose the d&b route for several reasons," continued Clark. "For the bottom end, the 1801s are extremely helpful in providing lows at high level. They are also extremely musical, and play proper notes. The more important aspect is the complete system approach of d&b - the fact that the controller is built into the amp - that the system has the dynamic range and yet is relatively quiet. It can go from total silence to very loud before it clips. There's nothing else I've found to date with these characteristics in a package this size."

Clark's system, dispersed around the proscenium and along the front rail of the pit totalled four 1801s (two flown at circle height), six 902s, 12 602s and eight E3s with over 30 Control 1s dotted about the auditorium. Standing in the centre of the stalls, with the system on and open, the low noise floor Clark alluded to was palpable, as he cheerily pointed out: "There's not a sound: some systems I've used in the past tend to one or two characteristics. When you drop down to just dialogue they can sound tinny or they can handle the low levels well, but be very noisy when high. But not this one."

Delivery and conformity is one thing, but it's the way Clark has harnessed this system that makes it so exciting. People have for some time been exploiting spatial possibilities using distributed systems and delay, but never in quite so bold a fashion as Clark. "I start from

*"It's one of the musicals
I've always wanted to do . . .
It's so dynamic and exciting,
yet it's rarely competitive
with the voices."*

my point of focus upstage centre and set my delays from there. I allow anything down-stage of that point to take precedence using the psycho-acoustical effect."

And he uses some fairly lengthy delays to achieve that effect. "By putting the image at the apex of an isosceles triangle and then setting the delays in this way, the audience member, wherever they sit, will always perceive the vocals as emanating from their actual physical source."

It's a slightly disconcerting effect: there's no denying it works and it's very easy to perceive from anywhere in the auditorium as I discovered during dress rehearsals. But it's a little odd to hear one of the many duets between the lead characters, Toni and Maria, reach you in the upper balcony, with such presence and immediacy. Audio-wise, you're always front row centre, perfectly placed to see and hear the action, but your eyes tell you differently.

However, this is very much a music and dance show - choreography is central to carrying the story - and significant events take place all over the stage as part of the narrative thread. Having our attention subtly focused on those spots by the help of the audio system certainly enhances the audience's sense of involvement. This is especially important to this show, thanks to some peculiar Broadway history. For obscure and slightly arcane reasons, the stage set is a copy of the original 1957 production. Presentationally, the show is diminished by a low-tech set of tired old trucks and fairly laughable New York motifs. Nevertheless, the performance is thrust into our laps by the audio, something that compensates well for the restrictions imposed by the set. Indeed, it would be interesting to see the show performed in the style of modern ballet, with no set at all. But I digress.

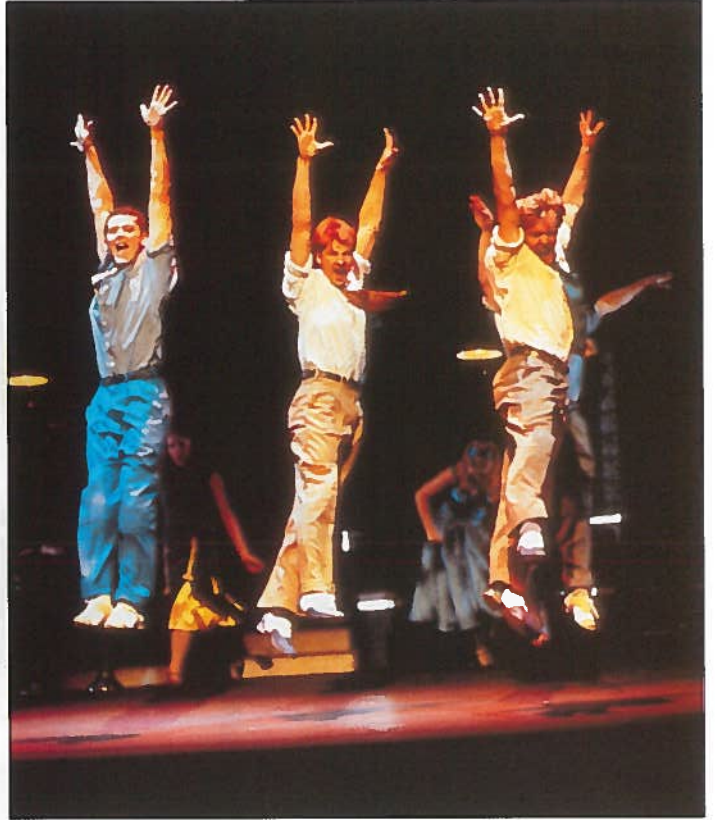
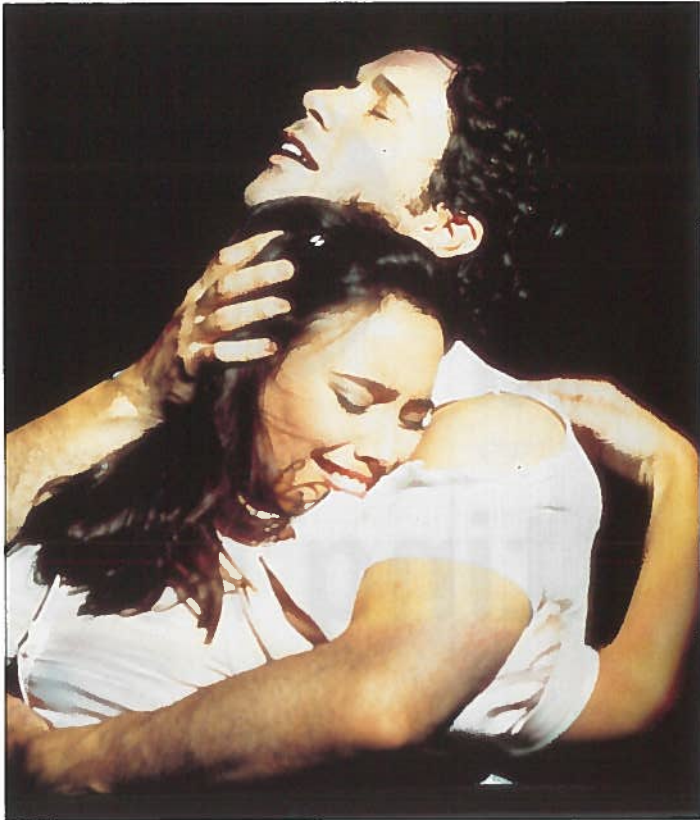
To set delays (XTA DP200s), Clark uses XTA's

Windows-based software run from a laptop with an RS485 radio link to allow him to rove the auditorium working many locations to set the seven mix zones of the system. It's not a perfect solution to roving; the radio link needs line of sight and is slow to transmit the necessary instruction to the XTA devices. In addition, Clark still has to trail a headphone feed around with him, but it comes in handy later. Once he's used the software to set the system he then dispenses with the 'phones' and repeats the operation, adjusting EQ and often intuitively adding the odd few milliseconds of delay to gain the effect he's striving for. (He also repeats the task a third time, clandestinely sneaking around during the opening performance at each venue, only to be revealed when he flips open his computer and is caught in the unearthly glow of the screen.)

Matt Dando is the house engineer for the tour, running the show from a 56-channel Langley Recall, with a brand new 24-channel DDA CS8 as a stretch. "The biggest thing he has to deal with at the Bristol Hippodrome is the fumes from the gas-light system and the popcorn machines," said a flippant, fit-up happy Clark. But, in reality, Dando has a fair bit to contend with: "I like the Recall," he notes, "it allows me to concentrate on the mix, plus the on-board dynamics are so useful."

It's got a good natural sound. And it's in the automated muting effects control that Dando has most to be thankful for. There is a 17-piece orchestra in the show, plus 23 radio mic systems (hence the DDA stretch) and a complex vocal score that, in spite of the profusion of radio systems, still calls for 30 pack changes to be made during the show.

Berkley Adams has the busy task of looking after the radio system - 16 channels of Trantec S5000 and eight of the new 3500s (one spare), and he has a couple of comments regarding their performance under such intense circumstances. "The 3500s are all plastic construction and have better sweat resistance than the S5000, though overall the 5000 is the more durable. The plastic gain knob on the 3500 can break off and does appear not to be fitted to the pot with consistency so the middle position on one is completely different to another. This can be a problem if a pack goes down and you have to do a swap in a hurry." These are mainly running maintenance niggles - though having to use scraps of cardboard for packing in the S5000s if you want to fit



batteries other than Energisers is not exactly high tech - but as Adams himself is quick to acknowledge: "Trantec have broken the price barrier with their radio systems - they do work and are generally reliable."

The microphones used by the actors are DP4060s from Danish Pro-Audio (supplied by Sound Network) which both Dando and Adams vouched good for capture in the less than perfect hairline position, and with good sweat resistance, especially so since they dry out quicker. In the orchestra, mics are largely Audio Technicas, like the Trantecs a growing presence in theatre which may be explained by a comment Clark made. "They are very cost-effective and, in essence, perform the same job as a Neumann microphone, but for less."

The final result of all this technology is a crisp, bright orchestra who seem to be able to

run along at a clip. Many of the songs they perform are at surprisingly high levels, yet they never mask the voices. As to the psycho-acoustical effect, well I don't know what Freud would have made of it, but I can say this - it was damn good fun and there was nothing anal involved in the pleasure of it.

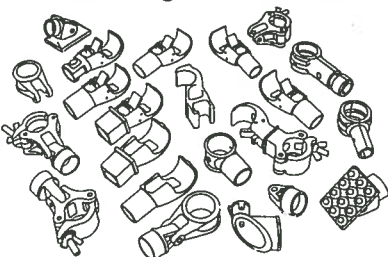
Lighting-wise, this is a much more modest affair, though no less technical. Despite the antiquated stage set alluded to earlier, there's nothing lacking on the lighting side. Whilst the bulk of the show is lit by such familiar workhorses as Strand Cantatas, Par 64s, four-cell Thomas battens and CCT Silhouettes, there are more contemporary items, including plenty of the ubiquitous ETC Source 4 sils, a clutch of Rainbow scrollers and even 14 High End Studio Colors. The whole system, including the Strand 520 desk, is supplied by White Light and their

sister company, The Moving Light Co. The lighting designer is Mark Henderson with Ted Allen operating. A lot of attention goes into covering the actors; it's invariably a busy stage and much of Allen's work is taken up in the subtlety of nuance, just a little tease here and there to lift the speaker. And the demands of atmosphere are well met by choice of colours, both the warm hearty scenes, and the more chilling denouement.

But this is ultimately a musical. We may have grown to expect the big high-tech extravaganza with lavish stage sets and gimmicky effects, but, in this instance, it's the performers and songs that shine. Maybe the quirk of the ancient stage set design is a good thing - this is all about performance and quality of content, and in Bristol at least, that's something greatly appreciated.

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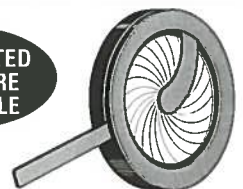
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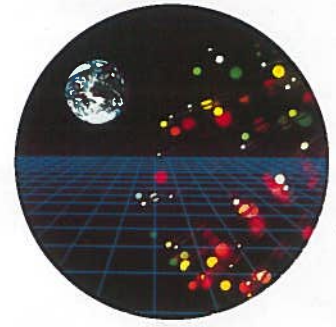


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The 'Return Of The Dinosaurs' would be the title of the movie of the Show which was LDI. Two legends of the business who I had thought had long since moved on to pastures new, made a welcome return to the public eye this year. The first was the man whose nickname, which he has adopted as his public moniker, when combined with the surname might tend to lead the uninformed to think less of the important contribution he made to the touring industry in a previous life, because of its cartoon connotation. Chip Monck, virtually single-handed, invented the foundation on which all modern touring has been based ever since. For his work with the Rolling Stones and others Chip is credited with having invented the first knock down and pre-loaded aluminium truss systems, and also with having the first Parcans made by Altman.

For Brian Croft and Marshal Bissett, to run into Chip again must have been like 'All Our Yesterdays'.

Another of my heroes to turn up at LDI in Las Vegas, or at least at the High End Systems' party, was the legendary Mr Neon, Rudy Stern. Author of 'Let there be Neon', a book full of the most astounding neon art which has been an inspiration for generations of neon artists, Stern turned out to be as serious of demeanour as his name might suggest he would be. Some wag obviously thought it would be appropriate to connect Stern with the city which has done more to bring neon to the public consciousness than any other single entity, aside from Rudy Stern's books that is. He is also the author of 'Contemporary Neon'.

On the subject of books, I was delighted to receive a personally ascribed copy of Richard Pilbrow's long-awaited volume which he kindly presented to me at LDI. If the weight of it is anything to go by, especially noticeable when hacking around the exhibits in the hostile environment of a trade show, this tome is a considerable expansion on his earlier work. I am unable to comment on the content just at the moment as the kind person who eventually offered to relieve me of its bulk for the return to the UK (we are always overloaded with literature), hasn't yet been able to part with it. However, I think we can all rely on the fact that Richard - another of my great heroes - will have produced a work of great value and interest.

Stage Lighting Design will be reviewed in the next issue of L+SI.

I also want to congratulate Bob Simpson, founder and chairman of Electrosonic, on his new book 'Videowalls - The book of the Big Electronic Image'. This is a fine book, replete with colour illustrations and helpful diagrams. For anybody who wants to catch up



on the science and its history, this is the book. How do these busy guys find the time to produce these tracts?

Back to the High End Systems party, which for us was the LDI social event of the year. Held in the function suite of the Hard Rock Hotel and Casino (yes, even they are into Slots), Lowell, Bob and Richard had the bright idea of asking their staff to form a band for the night. The result was 'Jammin at the Joint'. If proof were ever needed that our industry is the fall back for those with unfulfilled musical ambitions, this was it. These guys were really good, and I can't believe that they were given time off to rehearse either that's not in the corporate philosophy at all.

Furthermore, this must go down as one of the great High End parties, and remember they make a major effort at this every year. For the intimacy of the atmosphere and the bonding benefit, this one will be hard to beat.

The other great experience was *Cirque du Soleil's Mystère*, which we took in on the Sunday night after the show was over. Luc Lafortune, who had spent the entire day on his Wybron-sponsored LDI master class, was proudly on hand and looking none the worse for the effort which must have been considerable.

To watch this extraordinary show on such a magnificent stage and in such a volume of space, was truly magical. But with the grotesque masks and costumes, and the constant flying in and out, it became even more surreal as the inevitable tiredness and jet lag took its toll. As the shutter-speed slowed, so the shock of these weird beings, babbling in Dolphin, in ever more fantastic happenings, took on the shape of the stuff of dreams. But hey what reverie!


As you will have read in the LDI review, Coemar have recently launched a sleek looking moving head projector sheathed in carbon fibre which, in a rather quaint way, they chose to call *Touring Spot*. As its main appeal in the chosen market sector is low weight and high output, the maker's US distributors - The Obie Company - have apparently proposed that it should be re-named the *Light Light*. Being a cynic, it struck me immediately that *The Very Light* would have been the obvious choice had there not been a potential problem with the phonetic similarity with another well known brand of moving luminaires. Needless to say, the

suggestion caused an instant sense of humour failure in view of the litigious atmosphere which prevails.

I was most surprised when some of our party expressed disappointment at the Fremont Street extravaganza (pictured) I have to say that I thought that it was extraordinary, both as a concept, in its inception and in its execution.

To set the scene you have to imagine a situation where a fantastic new mega shopping centre in, say, Westminster has stolen away all the customers from Oxford Street. The traders, in an effort to fight back, decide that in the face of years of poor efforts over their Christmas illuminations, they will cover over the entire street and install millions of light bulbs, three to a cluster with a diffused cover, and that these will be close enough together so that from the street they register as RGB pixels. Then give each individual lamp control, and you have the potential, with a huge amount of patience and computing power, to turn the entire roof into a full-action, full-colour cartoon and to do a different show every hour. Just imagine what a crowd puller that would be!

And that is precisely what they have done in downtown Las Vegas, where the original casinos have been abandoned by their modern counterparts to create a new centre elsewhere in town. Every hour, a different show with accompanying and dynamic sound effects, brings the street to a virtual halt but, of course, it also brings punters there in the first place. Just as a taster Jet planes roar down the length of the street, or a herd of buffalo pursued by screaming Indians thunder by. Believe me it's worth seeing, just for the sake of your imagination.



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BARBIE'S FACELIFT

15 years after it first opened, the Barbican Theatre has returned to the technical drawing board. Rob Halliday covers the lighting, Ruth Rossington the sound

The Barbican Theatre and the Royal Shakespeare Company have been inextricably linked for a long time. Longer, even, than the theatre has been open: the theatre's owners, the City of London Corporation, offered the RSC the theatre as their London base early in the planning process. The company were thus able to become involved in the new theatre very early on, with their head-of-design John Bury having some influence in the design of the auditorium.

The theatre opened in 1982. Its technical installation, specified by Theatre Projects Consultants, built on their work for the National Theatre complex which opened five years earlier. Only the equipment, financed by a private corporation rather than the public purse, wasn't quite so lavish: there was power flying, but based on conventional cross-stage bars rather than the Olivier Theatre's point hoists and with a simpler control system. And the lighting control was by Strand's then newly-launched Galaxy system, rather than the National's ground-breaking Lightboards.

But in the 15 years since, the equipment has been worked hard. The RSC play a punishing repertoire system, often with a different show playing each night. And the theatre also has to cope both with new shows originated on its stage (which can be anything from Shakespeare to more modern classics through to new musicals: *Les Miserables* found its feet on the Barbican stage, *Carrie* tried, but failed, to emulate its success), as well as transfers from the RSC's Royal Shakespeare Theatre in Stratford-Upon-Avon. For the most part, though, the theatre has met all the demands placed upon it, even if time for maintaining or upgrading equipment was often hard to find.

Last year, though, things changed: the RSC announced that it intended to leave the Barbican for six months of the year, instead taking its shows out on tour to audiences around the country. This meant that the City of London had to adopt a new attitude to their theatre, since it would have to become a receiving house for visiting companies. They also recognised that, though the theatre had adapted itself to the RSC's requirements over the years, it would have to become more versatile if it were to be able to meet the demands of a wide range of visitors - and one visitor in particular: the Royal Opera company, who were about to become homeless as their theatre closed for its long-promised refurbishment.

The Corporation therefore decided on a works programme to improve the theatre's orchestra pit provision, and to increase the amount of flying space available upstage. The Barbican is unusual in this country in having a double-height flytower, used to reduce the changeover time between shows by allowing scenery not in use on a particular night to be stored above the scenery used for that evening's show. But the flying space upstage was also hampered by walkways that angled



The Lakeside Terrace fronting the Barbican Centre.

"Funded without recourse to lottery money, the refurbishment work - though evolutionary rather than revolutionary like the original installation - should help to see it through the next 15 years."

across the stage's corners. The works programme proposed by the City of London would cut out and rework these galleries, and create an adaptable, two-section orchestra pit, the first based on the theatre's existing pit in the forestage area, the second extending out into the stalls and replacing the front few rows of seating when in use.

While planning this work, the Corporation also realised that they had neither the staff nor the expertise to run a large-scale theatre. Fortunately, they knew a company that did, with staff already very familiar with the Barbican Theatre. And so, though the RSC acting company did leave the Barbican early in 1997, their London technical crew remained in the building - essentially becoming the resident staff of a large-scale touring venue.

LIGHTING

The construction work planned by the City of London necessitated closing the Barbican Theatre for four months. Time which Andy Scorgie, the RSC/Barbican technical manager, realised could also be used for other projects that would have been hard or impossible to achieve while the RSC were in residence, in

particular replacing the theatre's dimming system and lighting control. While some aspects of the technical installation, such as the flying control system, had been upgraded over the years, the dimmers - seven Strand STM racks containing 373 2.5K and 107 5K dimmers - were the originals and were felt to be reaching the end of their working life.

The RSC London team have also had a long term love-hate relationship with the Galaxy desk. They decided to replace it mainly just to move onto a desk that supported DMX, both as a service to visiting companies who might bring in DMX-controlled equipment, and to simplify the control of the scrollers already included in the RSC's repertoire rig. Having DMX available would also make it possible for the company to add moving lights to their rig relatively easily, something that they are considering as the cost of such equipment falls and its reliability improves.

Investigating the options quickly led Scorgie and his team to ETC, and in particular their Sensor dimmers. The appeal of these was the 'Advanced Features' option, which allows the dimmers to monitor their status and report problems including operating voltages and temperatures, and load changes - signifying blown lamps - to the lighting operator.

These features are commonly used on large-scale American productions such as *EFX* and *Mystère* in Las Vegas where they help to make fault findings in thousand-lamp lighting rigs manageable. The Barbican rig isn't as large, but the installation is very spread out with dimmer outlets scattered all over the building (including up in that double-height grid) and fed onto lighting bars. With the control room at the rear of the stalls and the dimmer room backstage in one of the seemingly endless concrete (and



The main auditorium of the Barbican Theatre.

sometimes stubbornly radio-proof!) corridors, fault-finding can, as Scorgie notes, turn into a series of long walks! If dimmer faults did occur, the Sensor's modular design also make first-line maintenance easy, since a dimmer module can simply be pulled out of a rack and replaced by a new one.

Having chosen the Sensors, ETC became an obvious candidate to provide a lighting desk to control them. Even though it's not yet that common in this country, Scorgie and his team were impressed by the Obsession desk, especially in its new Obsession 2 guise, launched at PLASA '97. Scorgie comments particularly on the high quality construction of the desk, its reliable software, its speed of operation, and the extent to which the software-upgradable desk is 'future proofed'. Version 2 retains the original Obsession's software and operating procedure, but incorporates a faster processor and support for moving lights - including rotary controls, a trackpad and a touch-screen - in a new case design. This is the most remarkable aspect of the desk: it is a swooping, sculpted, curvaceous affair that would look completely at home in one of the current Batman films! But the design is not all about looks - operator ergonomics have been very well thought out. The 'trigger finger' go button, in particular, is a delight!

Control from the desk to the dimmers is via ETCNet, ETC's Ethernet-based network system. This transmits DMX information to the dimmers, and returns the dimmer's fault reports to the lighting desk. It is also used to connect the desk to the tracking-backup rack that the Barbican have opted for to minimise the chance of a show being affected by a failure in the lighting desk; Scorgie's policy is that losing a show because of a technical failure is completely unacceptable. ETCNet also makes adding extra control 'positions' - such as remote controls or production desk video displays for lighting designers - a straightforward task, achieved simply by adding the appropriate boxes to the network. And because the Obsession can support multiple users, different operators can control different

parts of the lighting rig independently of each other - something that will be very useful during RSC change-overs.

Scorgie does admit to one minor teething problem with the new system, though: someone using the on-stage remote managed to switch off the house lights during the interval of a show!

The contract to install the new lighting system was awarded to Lighting Technology Projects, who received an order in mid-April for a project commencing at the beginning of May to be completed by the beginning of September ready for the Royal Opera's arrival: a schedule LTP's Simon Cooper admits was "quite tight!" LTP stripped out the STM dimmers and installed 482 Sensors (382 at 3K, 100 at 5K) in the existing dimmer room - though there is now quite a lot more free space in that room.

For the most part, dimmers were connected to the existing wiring with phasing and numbering being preserved, though the opportunity was taken to re-phase and re-number a few circuits in the grid based on the RSC's experience in the building, at the same time splitting out some outlets that were originally paired together. The Sensors and Obsession were supplied through LTP by ETC and their distributor, M&M (now sadly in receivership - see last month's L+SI) though ETC didn't actually have an Obsession 2 available in time for the theatre's re-opening and lent them an original Obsession in the interim.

Desk training for the theatre's crew was organised through ETC and M&M and progressed well, though the crew only really started getting to grips with the desk - and an operating philosophy that differs quite markedly from the Galaxy's - when they actually started using it on shows. Here they were helped by the fact that the first show was lit by an American lighting designer, familiar with tracking desks in general and the Obsession in particular, and so able to help the crew through their learning curve.

LTP actually ended up having rather more

involvement in the project than originally planned: the building work in the theatre was managed by construction company Robert McAlpine. McAlpine employed non-theatrical electrical contractors to work on the electrical services affected by the removal of the upstage catwalks, but they failed to carry out the work in a manner acceptable to the RSC. LTP were asked to get involved in the re-instatement of the theatre following the construction of the new, narrower upstage catwalks, but felt they did not have the resources to take on such a project at such short notice. They, with the RSC, did effectively become consultants on the project, however, advising McAlpine on what had to be done to re-instate the lighting services to the areas affected by the work.

Elsewhere in the theatre, the forestage area and the front of the stalls were being dramatically altered. The Barbican now has two pit options: a standard 'musical' pit in the forestage area, or a larger pit formed by removing the front few rows of seats and dropping the newly installed pit lift they are now mounted on. The lift is supported on a set of Spiralifts. Manufactured by Gala in Canada, the Spiralift looks a bit like an industrial strength Slinky, using interleaved horizontal and vertical steel coils to form a lifting mechanism which can fit into less than a metre of depth yet offer up to 12m of travel. The Spiralifts were installed in the Barbican by their UK agent, Glantre Engineering. The installation includes one bizarre piece of detailing: a jointed sprinkler pipe, designed to fold and unfold as the lift is raised or lowered!

The changes were completed - give or take the delivery of the final lighting desk and some minor discussions with the City of London about the Spiralifts - by the start of September, in time for the Royal Opera's arrival. The result, as tested so far, is a success - though the new orchestra pit hasn't been put to use yet, and is unlikely to see action in the next few months now that the RSC have returned home for the winter.

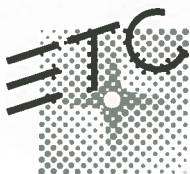
Andy Scorgie has been having a fascinating time dealing with a large-scale visiting company and the way they organise themselves, and the Opera have, in turn, been adapting to a new home - and particularly working with that double-height fly tower, the galleries of which look like a fully rigged sailing ship of old with carefully positioned breast lines nudging items of scenery clear of each other. The experience will no doubt be useful for all parties, especially since the refurbished Opera House will include the kinds of technology the Barbican has been pioneering for 15 years. It will also include Sensor dimmers, again chosen for their compact size and versatility.

The new equipment will also lead to changes for the RSC: with DMX now available from the desk (and eventually around the theatre if a planned theatre-wide Ethernet installation goes ahead) there is now much greater scope for using DMX-controlled devices, such as moving lights, to simplify the change-overs between shows. More immediately, the Stratford theatres will probably move to Obsession systems, to simplify the process of transferring shows to London - and, if the RSC's touring policy proves a success and is continued, there will probably be a need to take Obsessions on the road. The Barbican also finally seems to have broken the dam for this desk in this

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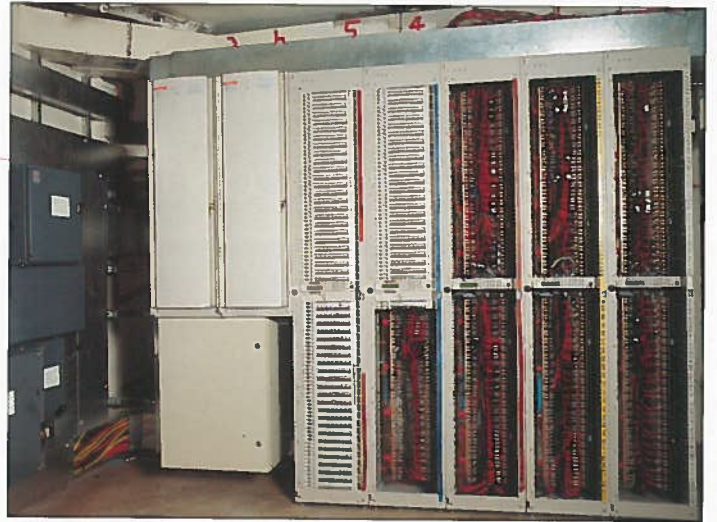
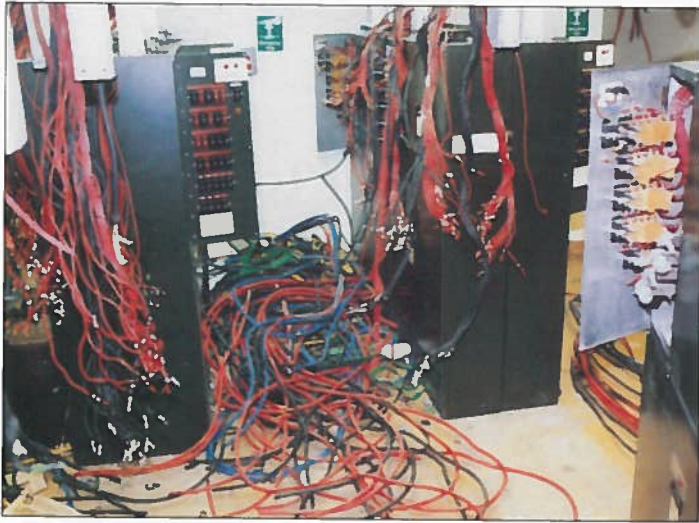


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The dimming room at the Barbican: before refurbishment (left) and following the installation of the ETC Sensor system (right).

country: several other UK venues have already placed orders for Obsession 2, and the London production of the musical Chicago is running on the first such desk to hit these shores.

SOUND

Graham Sheffield, the Barbican's arts director wanted a sound system that was going to be unobtrusive, but would be able to handle virtually any production so he called in Kirkegaards Associates, a world-renowned Illinois-based company of audio consultants, who recommended an acoustic enhancement system widely used in Dutch theatres. A trip to Holland last October to audition the system convinced Sheffield that this was the right system for the Barbican and so Dutch company, Acoustic Control Systems BV, were commissioned to supply the equipment and their UK agents, Raper & Wayman Ltd, would carry out the installation.

By December '96 contracts were being drawn up, but, as with the lighting elements, installation couldn't begin until the RSC had moved out and the new orchestra pit had been installed. As a result, it was June before audio installation got under way, and it was critical that all the work was completed, and the system up and running, before the end of August as the Royal Opera 'in exile' were booked from 1st September. The object of the ACS system is to create an absolutely natural-sounding acoustic environment that can be adjusted to suit a wide variety of different production, both musical and spoken. The best way of achieving this was, for a long time, by

means of moving acoustic panels - this, however is costly, not to mention labour intensive, and can interfere with aesthetics. ACS have chosen a far more elegant way by using modern electronics to create an artificial acoustic environment which involves a combination of Early Reflection and Reverb speakers which add to the acoustic capabilities of the theatre.

The basis of the Barbican system is 24 microphones arrayed above the stage and the orchestra pit - Sennheiser K6Ps with ME64 capsules - and three racks of electronics in a service area under the rear auditorium. The electronics consist of 24 separate channels of Early Reflection processing and 24 channels of Reverberation processing. In addition, a further nine channels of foldback are provided giving a mix of Early Reflection and Reverb.

Amplification is via cards built in to the electronic units - extra cooling had to be provided for these. Sound is fed back into the auditorium by 12 Early Reflection speakers and 12 Reverb speakers mounted above the proscenium arch. Jon Raper of R&W followed the architectural lines to enhance the natural acoustics of the theatre, rather than replace them, so the speakers blend into the natural lines of the building.

The Early Reflection speakers are angled down towards the audience to give the impression of a conventional reflective hard surface above the proscenium, while the Reverb speakers are directed towards the rear of the stalls and balconies. Raper had to be reasonably creative with the bracketing here to

get the speakers aesthetically positioned and out of the way of the stage lighting.

A further 12 Reverb speakers are located under the lip of the followspot balcony and provide reflected sound as though coming from the ceiling of the auditorium. On each side of the auditorium are six Early Reflection speakers flush-mounted in the wooden panelling, and these are used to effectively 'move' the panelling back to create a more spacious feel.

Finally, nine Reverb and Early Reflection speakers are mounted on the downstage lighting bridge - these project back towards the stage to give the performers a feel of the auditorium sound. They act almost like conventional foldback speakers enabling the cast and musicians to hear all they are saying, singing or playing.

The parameters for the system were programmed by the sound consultants during the commissioning period and seven settings, plus 'off' are available to suit the type of performance. These are selectable via a remote control which can be plugged in at the sound control booth, or in the wings stage right, so that acoustic settings can be changed mid-performance if required.

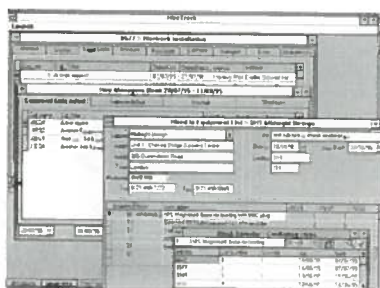
Funded without recourse to lottery money, the refurbishment work carried out at the Barbican - though evolutionary rather than revolutionary like the original installation - should help to see it through the next 15 years. And the minor clean-up and redesign of the foyer areas of the Barbican Centre, carried out at the same time, might even make it easier to find . . .



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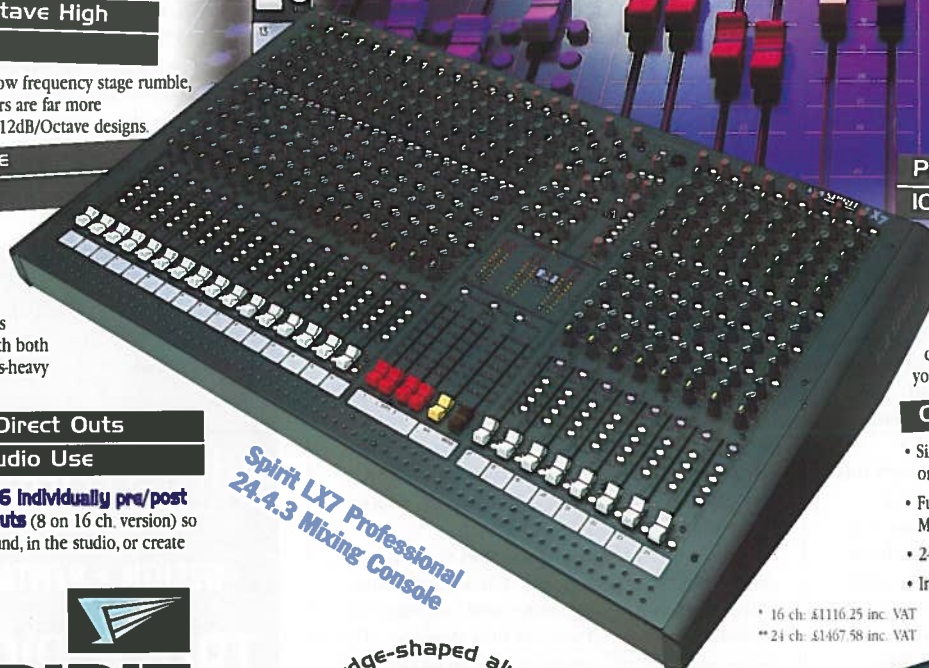
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Asleep in the Stalls

Ian Herbert

Being a reviewer sometimes brings with it heavy responsibilities - we hear often enough about critics killing shows, but what happens when a good review gives a show added life? A year ago, a little musical called *Maddie* was tried out in Salisbury and got some favourable notices. Tyro producer Kenny Wax wanted to bring it to London, and when a lack of finance scotched his plans it was an article from the Daily Telegraph's Charles Spencer, who does not praise musicals lightly, that persuaded a posse of Telegraph readers to put up the missing cash. The show arrives on Shaftesbury Avenue and lo, it's a stinker. What went wrong?

The answer, dear friends, lies in the production values. It's more than likely that the unfortunate Mr. Wax wanted his show to be much more glitzy than it was on its London press night - if he didn't, someone should have told him in preview that what may have looked (and sounded) smashing in Salisbury hadn't arrived intact in London. To take the problems item by item: the sets are uninteresting - rep-ish and far too low-key for a West End musical - dropping two bars of floods on the stage, for instance, isn't enough to create the feel of a Hollywood studio. The ghostly effects - this is a story about a flapper who comes back from the grave to audition for her big part - are pretty thin. The lighting does it no favours, muddy for the most part and boasting three big white floods downstage to do far too much work - one yearned for the occasional colour changer. The sound isn't much help either: it's elementary, surely, that when a character makes an exit singing (especially through a closing door) the mic should at least fade, better still cut. These didn't.

It's true the sound engineers had a major task to equalise the show's lead (an American belter who could break glasses a few blocks away), with her rather more tactful English co-stars, one of whom, a great success in his time, is now singing so embarrassingly off-key that a non-functioning mic would be the kindest solution to his problem. A problem for cast and audience alike is the orchestration, which picks a neat middle path between the play's two periods, the twenties and the eighties, to offer the sound of a third-rate fifties dance band. In Edinburgh this year at a youth show, I heard the original drummer from hell, whose only alternative to a melody-drowning thump on the bass drum was a subtly off-beat slash at the cymbal with his brush. The pit drummer for *Maddie* was, I presume, a professional, but his over-emphatic, unimaginative approach to the show's rhythms made him a first cousin to the Fringe basher - if not the drummer from hell, at least the drummer from purgatory.

Drinking out of the Lyric, with a muted crowd of critics and some still strangely optimistic investors, I felt a little sorry for Spencer, though my sorrow was alleviated when his second string loyally defended the London transfer in the Telegraph. A couple of



Maddie - promised much, but didn't deliver.

the Sunday critics had nice things to say, too. However, all to no avail - the show closes on November 8th. Only Cameron Mackintosh gets a second chance at a press night once a show has reached the West End.

I felt a lot more sorry for Spencer a week later when I found myself in exactly the same position. Last year I wrote a rave review for *The Meteoric Rise and Dramatic Demise of Edmund Kean*, a delightful, witty musical which showed the great actor's crazy life in all its switchback variety. Then, it played at the Kings Head. It has now arrived on the slightly larger stage of the Watford Palace, and I rushed eagerly to hail its reincarnation.

Oh dear. What had charmed and engaged in Islington looked coarse and effortful up the A41. The ghost of that Kings Head show still peeped out, enough to earn some more than respectful reviews from those seeing it for the first time. But I should hate to be the unwitting instrument of another West End debacle, so here are some notes for any new Kenny Wax out there thinking of transferring *Kean* Westwards. It's a matter of production values again, folks.

Have a look at those arrangements: at their best they have a fine period flavour, but they can be very distracting. Is a French horn the best instrument for such a small ensemble - wouldn't an oboe or clarinet be more versatile and less obtrusive? Did I imagine some harpsichord simulation? If not, why not?

Once you've got the right modest band sound, can't you get away without the mics? All the cast sing well and should be able to fill a space the size of Watford - or, for example, the Criterion - unmic'ed. The effect would restore some of the intimacy that is the key to this show, and at the same time take away the out-of-period brassiness of the present over-trebled sound set-up.

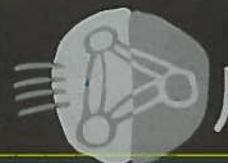
If you insist on keeping assisted sound, look very carefully at your levels. David Burt, who plays Kean, is a strong singer and can burst an audience eardrum if you let him strain so. (I'd better wait for my non-tech review to talk more about the Burt performance, which could be a world-beater but isn't yet.)

Get a lighting plot. The present on-off lighting does nothing at all for a fast-moving show that needs some more colourful emphasis. One reason it needs that emphasis is the set - the original clever arrangement of red plush curtains made excellent use of the six-inch depth of the Kings

Head stage, but they look, well, cheese-paring when expanded for the Watford gap. What can you do to light a set that's nothing but red plush curtains? Worth spending some money here, and you don't need to build a full-size replica of Drury Lane to get the effect you need. You can build in little miniature Bunny Christie-ish scenic jokes to match the joke costumes, like George IV's straitjacket, Marie Antoinette's head-on-platter. Have a closer look at those costumes. David Blight is one of the best costume designers in the business, and has some wonderful ideas here, but some of the fichus look a touch Brentford Nylons.

Don't get a new director - Philip George made that show at the Kings Head. But do ask him to look at the implications of the bigger stage and build bigger choreography and gesture to match. Above all, get him to restore the tremendous sense of sheer fun that infected his original staging. For all I know, that may be back, now that first night cock-ups are out of the way, but it needs attention.

After these two near misses, it's a relief to turn to a musical that completely hits the spot. *Enter the Guardsman*, at the Donmar Warehouse, has it right at every production level - modest, but effective, lighting (Mark Henderson, who else - even if 'modest' isn't the usual word for his plots), super functional but equally modest set full of little, scene-changing jokes (Francis O'Connor - looks like a cut-down version of his Williamson Park Pirates), subtle sound to the point of vanishing (John Leonard - was it really mic'ed? If it was, it was for the benefit of the top shelf). And oh, those orchestrations. When did you last hear a harp as a lead ensemble instrument? *Guardsman* is also a witty, sophisticated, endearing show, and *Kean* could be the same - but I trespass again into Theatre Record territory. Better stop while I'm being positive.



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REGENERATION

San Francisco's War Memorial Opera House has been given a new lease of life - Lee Baldock reports

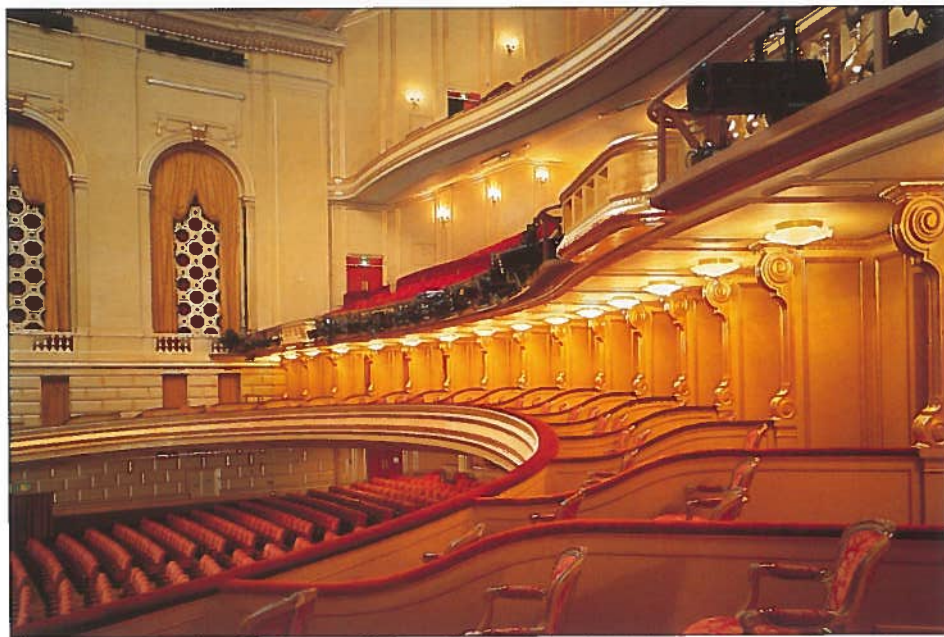
The recent reopening of the War Memorial Opera House in San Francisco's Bay Area marked the culmination of an eight-year regeneration process in which one of the city's greatest cultural landmarks was meticulously restored to its original 1930s glory. At the same time, it was brought up to date with all the benefits of modern theatrical technology and expertise. Rather ironically, the Opera House entered into this latest phase of its existence after being severely damaged in the Loma Prieta earthquake of 1989. This created the opportunity for the venue to undergo a much-needed overhaul - both aesthetically and technically - the first since its completion in 1932.

Perhaps against all the odds, opera has always been an important part of San Francisco culture. Ever since 1851, when an audience of pistol-packing gold diggers greeted the City's first operatic performance - Bellini's *La Sonnambula* - with "shrill whistles and savage yells", opera has thrived in the city. In the last century, Opera houses such as Tom Maguire's, The Jenny Lind and The Grand hosted performances by companies from all over the world. Then in 1906, nature dealt a cruel blow, as it tends to from time to time on the San Andreas fault, in the shape of the earthquake which laid the city - and all of its opera houses - to ruin. It also drove famed opera singer Enrico Caruso out of his bed and out of town, never to return.

The idea of a municipal opera house came about shortly after, but nothing was done until 1918, when a fund to finance a memorial to the soldiers of the First World War was started. In 1927, architects Arthur Brown and G. Albert Lansburg (whose respective credits include San Francisco's domed City Hall and the 6,500-seat Shrine Auditorium in Los Angeles) began work on the project, which was finished five years later. Critics declared the 776,000 cubic foot auditorium (built without a single pillar) to be acoustically perfect. "The War Memorial is in itself a musical instrument, a sort of architectural violin," the *Chronicle* declared.

Six decades ago, the War Memorial Opera House stood proudly, applauded by *Time* magazine in the week it opened as: "... easily the most attractive and practical building of its kind in the US." However, the rapid technological progress of the 20th century was to leave it standing in a metaphorical sense - trapped in the era from which it sprang. Before very long, the most 'practical' opera house in the US had become woefully outdated. Upgrades to the lighting and sound systems were attempted over the years, but the efforts were patchy and temporary in nature and ultimately led to a confused and jumbled mass. The existing communications systems and eventually video systems, also became outmoded and backstage production facilities became crowded and inadequate.

Heavy wire and cable ran seemingly at random through the backstage area as



Above, the restored auditorium and below, the grand facade of the San Francisco Opera House.



technical demands increased. Spotlights hung on bare pipes out in the auditorium, while the front lighting positions over the balcony were layered with cable, then covered over with gold lamé fabric to conceal the mess. The one beautiful ceiling, described by the *San Francisco Call* in 1932 as: "... a ceiling of solid blue, illuminated by hidden lights, clasping to its bosom the bright star-like jewel of a great chandelier," had not been painted since those words were written and had faded to dull grey, while the chandelier hung lifeless.

Following the earthquake of 1989, the Committee to Restore the Opera House (CROH) was set up by the City of San Francisco. Theatre consultants Auerbach + Associates of San Francisco and New York were retained by the committee to oversee and redesign the technical infrastructure to support the creative and artistic technologies and trends that had developed since the initial design of the building. The total cost of the renovation project is estimated at \$84.5m, which was raised - in a model of private/public partnerships - through City funding and through the private sector by the CROH.

Because the opera house is a designated historic landmark, the preservation and

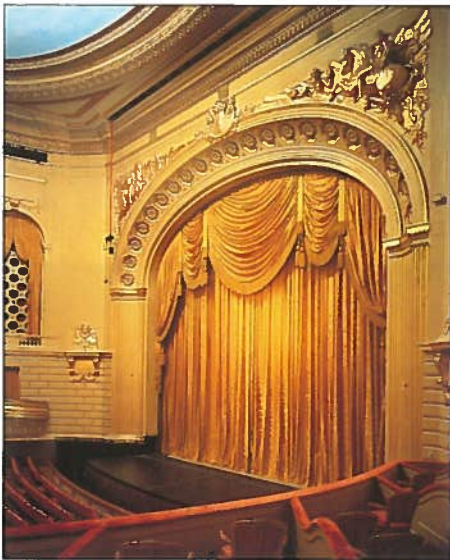
restoration of its architectural integrity was a primary consideration throughout the project. Carey and Company of San Francisco were brought in to act as preservation architect, with Rob Cole acting as preservation project manager.

A+A began the theatrical renovation by working closely with the technical and artistic staffs of the opera, as well as of the San Francisco Ballet, to whom the building was also home. Through this close co-operation, Auerbach + Associates were able to design and develop state-of-the-art stage lighting,

communication, sound, stage rigging and control systems which would serve the needs of both companies. President of Auerbach + Associates, Len Auerbach, outlined the background to the task: "Since 1932, the style and technical demand for scenographic expression has changed greatly. In 1932, scenery was much lighter weight, because it was generally composed of wood and canvas and painted drops, while lighting was used mainly for colour change and creative illumination.

"Technological development has created three-dimensional scenery that is much heavier and requires a movement system of much greater capacity. In turn, a more creative lighting design is required to enhance this three-dimensionality - which has been made possible by the development of new light sources and sophisticated control systems. All these advanced systems increase the demands of the building. Our responsibility is to serve these modern artistic requirements and make the building function for future demands."

The existing, obsolete lighting system was completely replaced with a new, state-of-the-art system which, Auerbach + Associates



The impressively restored proscenium arch.

claim, gives the War Memorial Opera House the most advanced theatrical lighting control system in the world. The new system includes architecturally integrated lighting positions in the auditorium, eight new lighting bridges above the stage and a rear projection system. The massive dimming system, totalling 1,978 dimmers, is housed in a new dimmer and transformer room built at mid-level within the stage structure. This positioning economises on wiring whilst acoustically isolating the dimmers from the stage itself. The system is based entirely around Strand's CD80 Supervisor range of status reporting dimmer modules and processors.

Control of the system falls mainly to two Strand 550i lighting control consoles (the 'i' indicates the presence of a Pentium Pro processor) with Lightpalette base operating system. Each 550i has 2000 channels, 2000 attributes and a total of eight DMX outputs, giving the system control of up to 4096 devices. Strand's software upgrades to the system include the 'Tracker' moving light library, the 'Reporter' status reporting service and the 'Networker' ethernet system manager. There is also a Strand 520 console for the focusing of moving lights, two wireless remotes and a lighting designer's PC station with four monitors, a file server, 45 DMX out nodes and two video nodes.

The chosen fixtures consist mainly of ETC Source Fours of varying denominations, with some motorised Par 56 strip lights custom designed by Phoebus Lighting and some Robert Juliat 2ks as followspots. The moving lights include a number of Vari*Lite VL5s, with Strand's movable PCs and Golden Scan HPEs from Clay Paky.

The new positions have been subtly integrated into the architecture so that the audience will be unaware of most of the lighting changes, according to Len Auerbach. "Over the years," he explained, "the Opera and Ballet had packed more and more lighting into exposed spaces. They put banks of lighting in front of the organ bays on each side of the house and crammed as many lights as they could onto balcony front light rails and into the ceiling positions. We've eliminated the most offensive exposed lighting - everything is much cleaner and more concealed within the architecture. The audience will notice that there are fewer exposed lights, but these



The Euphonix mixing console in the audio centre, with the Allen & Heath GL2.

provide more lighting sources from new positions. The result will be better lit productions."

A fundamental part of the new infrastructure is the distribution of audio and visual signals throughout the building - serving as the conduit for production monitoring, performer paging, communications and special sound effects. Auerbach + Associates designed a wiring infrastructure which uses almost 100 miles of AV wire and cable. The system makes extensive use of ethernet cabling to distribute DMX512 and other data around the venue, allowing control of multiple devices from multiple locations. This flexibility is further enhanced with the partitioning control which is included within it, meaning that areas of the rig can be subdivided and placed under the control of a chosen console.

The design of the auditorium sound system was the result of a close collaborative effort between Auerbach + Associates and the opera and ballet's sound designers. Auerbach + Associates specified a compact, high output loudspeaker system, which aimed particularly at providing accurate sound coverage, while minimising the physical impact on the interior architecture of the building.

The system is based around Meyer loudspeakers, with two CQ-1 and four CQ-2 column speakers on the proscenium supported by six UPM2s and four UPA2s out in the auditorium, and driven by Crown MA-1200 amplifiers with IQPIP digital input cards. The main mixing desk, positioned in the purpose-built audio centre, is a digital Euphonix desk, while an Allen & Heath GL2 desk is also available. The house mix is carried out via a small hand-held digital unit from Peavey, which interfaces via a line-level circuit with the Euphonix.



The new amplifier racks.

The overhead rigging was redesigned using a unique tracked motorised assist system for the Opera House that allows up to 24 of the counterweighted rigging linesets - normally operated manually - to be randomly motorised. The system also increases the load capacity of each line set by 1,000lbs to 2,800lbs (1.27 tons). In addition to this, a new system of motorised spot lines was installed, 1,000 and 2,000 capacity each, permitting the positioning of a lift line anywhere over the stage area.

The renovation was made more extensive by a fire that struck halfway through the process. According to preservation architect Rob Cole, the fire destroyed a lot of fine finishes which were extremely hard to replicate, including carved wooden scroll-work and much of the fabric in the dress circle boxes. The smoke damage meant that the building had to be regilded and repainted. Consequently, says Cole, "The auditorium will be more reflective and light efficient."

The regeneration of the Opera House represents a massive achievement, from the initial fundraising, through to the careful consideration of architectural integrity and the expertise brought to bear on the technical upgrade. All those involved in the long history of this project are to be applauded. The only real concern in the whole matter is the unhappy but inevitable thought that the location of the building has not changed. One day, sooner or later, it will all have to be done again.

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SOUND OF NEW YORK

Jim Evans covers the halls of the AES show in New York

The 103rd AES Convention, held at New York's Jacob Javits Center under the theme 'AES Goes Gold' featured a record 371 exhibitors showing a wealth of new products and technologies for all areas of the professional sound business. And the show was particularly strong on products for the sound reinforcement and installation markets.

As reported elsewhere in this issue, **Eastern Acoustic Works** chose AES week to unveil their new KF900 loudspeaker series, while **Meyer Sound** were showing two new loudspeakers in their Self-Powered Series - the SB-1 and MSL-6. Both are designed for long-throw applications in touring rigs, stadium installations and large-scale PAs. The MSL-6, intended for tightly packed arrays, is built into Meyer's trapezoidal cabinet.

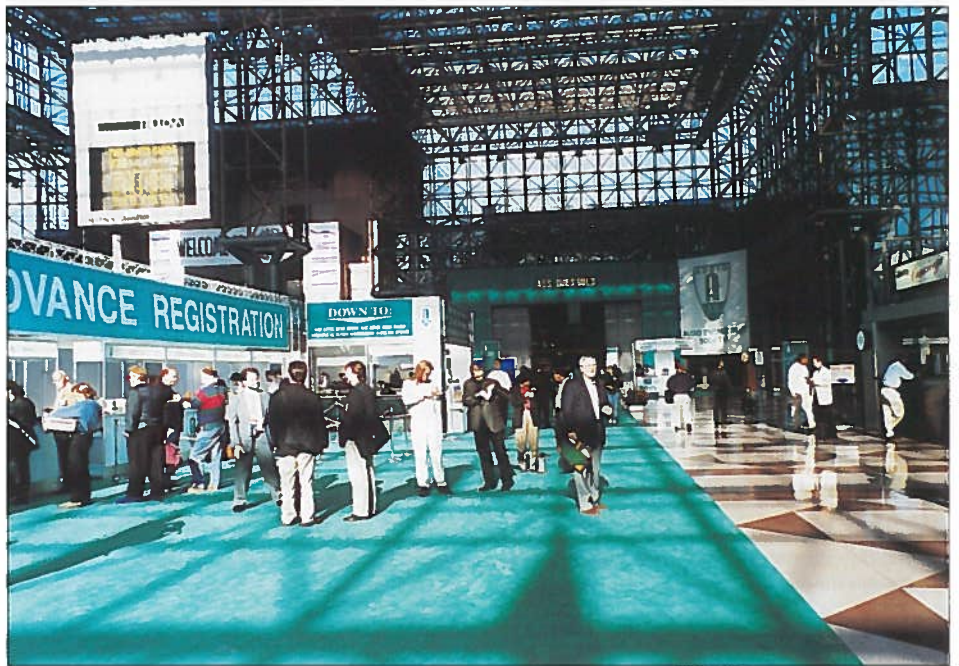
The SB-1, seen at PLASA earlier this year, is designed to offer "a revolutionary alternative to horn-loaded systems." and Meyer claim that it is the "world's first wide-band parabolic dish-based loudspeaker system." Earlier this year, the SB-1 was used by the band Globe for a stadium tour throughout Japan. The touring rig required a long-throw speaker that could send sound almost 400 feet from the stage to the furthest seats in the stadium. A total of 10 SB-1s were incorporated into the rig, five each side of the stage which, according to Meyer, exceeded performance expectations and received high praise from the Japanese press.

Also designed for long-throw applications in large arenas and stadiums is **Community Professional's** CBA6060, a three-way high output, high power horn-loaded system. Mathematically correct horn-loading for all drivers focuses the system's output in a tight 60 x 60 degree pattern over its entire bandwidth, intended to maximise efficiency throughout the operating range and provide strong array ability by minimising comb filtering and lobing within the overlap region between enclosures.

Meanwhile, **JBL Professional** announced the introduction of its digitally controlled JBL Installation Range of loudspeakers which features three product lines - the high-end Venue Series, the Sound Power Series for a broad range of mid-sized venues, and the Marquis for smaller venues.

The new lines are an indication of things to come, heralding a move towards bigger and better, as JBL vice-president of installed sound, Michael Macdonald, pointed out at the launch: "The fixed installation sound system is on the verge of a major change. While there will always be a need and a market for small sound contracting companies, the evolving nature of the business indicates that it will see the emergence of large contracting entities in the next several years. That's how this industry will address the increasing demand for better sound in virtually all types of venue, from meeting halls to churches to auditoriums to educational institutions. And the Installation Range of products from JBL Professional were conceived, designed and engineered to anticipate this market evolution.

"Then there's the digital factor - CDs and



digital film sound - that have made consumers more aware of good audio. The confluence of these things all over North America and to some extent throughout the world has turned the fixed installation sound contracting business into a rocket ship." Food for thought.

Quested also have an eye on the wider install market and unveiled the first models in a range of compact self-powered loudspeakers which they intend should find a greater variety of installation opportunities than is usually associated with this British designer of recording studio monitors. The first arrival is the F11 self-powered two-way. With built-in mountings to allow for fixing to walls or ceilings, the cabinet is a moulded construction, using a new, dense and hard-wearing mineral-loaded acrylic material. It is aimed at installations and surround-sound applications, as well as being a monitor for nearfield and broadcast use, with workstations, in mobiles and home and project studios.

Stage Accompany introduced its new Entertainer series, billed as a 'new concept in sound reproduction'. SA's Tom Back was on hand to offer further insight and noted that whilst the E24 is specifically designed as a compact, high-power full range loudspeaker, it is usable for a wide variety of applications such as theatres, discotheques, clubs, houses of

worship, auditoriums and theme parks. With a frequency range of 60Hz - 30,000Hz and a continuous power given as 400W, the E24 is claimed to produce very high definition, full dynamic, distortion-free sound at both low and high SPLs, up to 126dB. Key to these claims is the SA exclusive Ribbon Compact Driver.

The AES Convention coincided with the first dates of the Rolling Stones' *Bridges To Babylon* world tour. The sound system for this mega-tour includes Electro-Voice's new X-Array loudspeakers and Cadac M-Type monitor boards, both on display in New York. Rental company **db Sound** of Chicago, who won the contract for the Stones' tour, are one of the first companies to buy the X-Arrays. "This is the first PA system that I have ever used that maintains the integrity of EQ, regardless of volume," said db Sound partner Harry Witz. "The X-Array sounds good at lower volumes, and when you crank it up, your mix doesn't fall apart. It doesn't get offensive and rip your head off. It's very user friendly."

UK manufacturer **Cadac** has supplied two 44-way M-Type monitor boards for the tour. And monitor engineer Chris Wade-Evans is quick to praise the desk: "This is a spectacular tour, involving a huge stage area and the need for loads of outputs. The band is going to try some in-ear monitoring as well, which also puts the emphasis on needing extra outputs.

Last time around, we had to make some compromises over the discrete mixes at different parts of the runway, and wanted to find a better solution for this tour. With the M-Type, I know that I can give the band exactly the mix they want, anywhere they want, rather than having to make do with a bit of a fudge.

In fact, Wade-Evans talked with Cadac very early on in the development of the M-Type and, although he had no direct experience with their desks previously, became very impressed by their sound, build-quality and overall reliability the more he got to know



The Spirit LX7 console.



Crest Audio's John Lee (left), Chuck Augustowski (centre) and Jeff Alexander at the launch of the V12 Console.

them. "The M-Type is a complete step-up from normal monitoring consoles with regard to the quality element, and although this is a new design, it is easy to say that it will work fine, given their track record."

Continuing on the console front, **Soundtracs** unveiled the new MXD Series of sound reinforcement desks. A padless sound transistor pre-amp provides good front-end headroom, ensuring pure mic or line signals are fed to the 4 band mid-sweep EQs, and 18dB/oct High Pass Filters. The auxiliaries continue Soundtracs' predilection for dual purpose design - every one of the eight busses can be switched pre or post (four globally, four locally) allowing the console to undertake a wide variety of front-of-house and stage monitor mixing applications. The addition of an 11 x 4 matrix, a group and aux reverse feature and a separate centre master buss allows most medium-sized theatre and 'extended PA' requirements to be met.

Yamaha Professional showed a new line of multi-purpose mixing consoles designed for the installation market and smaller live sound/MI applications. The GA series, which is a result of Yamaha's targeting of the install market, offers a range of features, including bus re-assign, useful in situations at low to mid-range churches, theatres and other applications

where budget restraints may rule out separate house and monitor consoles. Being able to mix monitors from the house position is a useful feature in such cases.

The first morning of AES witnessed **Crest Audio** unveiling 'the biggest product launch in the company's history' - two new desks and two amplifier products. The V12 is Crest's new flagship live performance desk for the high-end mobile and installed sound market. This features 12 VCA groups, a total of 16 aux sends, a versatile and easily-controlled microprocessor-based mute and MIDI control. It can also double as a monitor mixer, providing up to 30 total mixes. Additional features include gold-plated connectors throughout, separate direct output controls, illuminated and dimmable switches and integrated talkback and intercom facilities.

The X Series (no, not a follow-up to the X-Files) is Crest's new range of 'application-tailored' mixing consoles. Each model offers specific feature sets aimed at addressing installation and tour sound market disciplines. Ultimately, X Series will encompass eight- and four-bus front-of-house, dedicated stage monitor and rack-mountable products. The first desks available are the X-Eight-HS (house/stage) and the X-Eight-RT (recording/theatre).

TKS is Crest's new line of advanced tour

sound amplifiers. TKS amps are more compact and lighter than the current Professional Series, and have direct computer control network connection for NexSys software monitoring, control and load analysis and on-board DSP modules with digital or analogue capabilities. The Pro 2 Series of power amps builds on its successful predecessor, the Professional Series, while many new features and improvements have been added in a significantly lighter package.

Making its US debut was **Allen & Heath's** GL3300 console, an eight-group sound reinforcement mixer. It is dual functional, allowing it to be used in front-of-house or dedicated monitor roles, or in dual mode which combines both tasks in a single console. The key to the console's dual functionality is a series of sub-panel switches that reconfigure the auxes as main outputs and the mono out as the engineer's wedge. The company is also expanding its Contractor Series with the launch of GR05, a four-zone mixer featuring two mic inputs and three stereo line inputs, with front panel level control on all inputs and outputs. Mic inputs are on balanced XLRs and have rear gain trims, three-colour LED meters and comprehensive EQ, specially designed for speech frequencies.

Soundcraft was showing its recently launched Series Five FOH console. It is now available in a range of sizes from 24 to 48 mono input channels, with each size including an additional four mic/line stereo inputs - so the 56-channel frame gives a total of 64 mic/line inputs. With eight groups, 12 aux busses, sweepable high and low pass filters, true LCR panning, 256 MIDI snapshot memory, 10 matrix outputs and 10 VCA groups, the desk offers an attractive package of features. It has already attracted a strong following and touring artists who have used Series Five desks include Texas, Del Amitri and Sheryl Crow. **Spirit's** new LX7 console is aimed at a wide variety of mixing tasks. Housed in a choice of 16- and 24-channel frames, the LX7 offers a maximum of 32 inputs with seven separate bus outputs.

Summit Audio displayed its full range of vacuum-tube-based high end equipment, including the new TMX-420 linkable line-level mixer, EQP-200B dual programme equaliser and MPC-100A mic pre-amp compressor/limiter.

In what should prove a very interesting move, **Sennheiser** has entered the wireless



The Jacob Javits Convention Centre, New York - home to AES.



The JBL Professional Sound Power Series.



On the Cadac stand - Tony Waldron and Peter McGuire.



Ready for business on the Meyer Sound stand.

in-ear monitoring arena with the introduction of the new 3050 Series, which consists of the SR3054-U single channel and SR3056-U dual channel transmitter, and the EK3052-U receiver.

Meanwhile, **Furman** introduced the MM-3 Three Input Mic Mixer. It provides low budget, basic mixing ability for small sound reinforcement and desktop audio/video applications. The lightweight MM-3 accepts up to three microphones and one line level stereo source, which makes it suitable for applications where just a few mics are used along with music playback from tape, CD or other source.

BSS were showing the FDS-355 Omnidrive Compact, a smaller, more flexible and less expensive version of the successful FDS-388 Omnidrive, whilst **SCV Electronics** debuted the DIGI-Q, a DSP-based equaliser and dynamics processing package in a 2U case with large screen display and 99 programmable memories. Aimed at concert sound applications, the DIGI-Q emphasises instant access control, allowing an engineer to access each of the main functions with a single key press.

Samson Audio introduced the Servo 4060 and 4120 Quad power amplifiers to provide more power, flexibility and features for a variety of applications including distributed sound and multi-media home theatre use.

dbx announced the worldwide introduction of its new MC6 Mini-Comp compressor. The table-top device which somewhat resembles a portable CD player, is designed to be "easily accessible to the performing musician or engineer who wants to see settings at a glance."

Rubber feet and a metal spring clip for mounting enhance the design of the MC6.

Peavey Electronics showed the PVM 22 diamond-coated diaphragm microphone, a dynamic, cardioid, hand-held vocal/instrument microphone, available at 'entry level price'.

AKG unveiled the AKG Solid Tube microphone. This is a single-polar-pattern, large diaphragm, pressure gradient tube condenser microphone offering features including a bass attenuation switch (12dB @100Hz) and a pad of 20dB, allowing the mic to be used in high-SPL applications. A new feature is AKG's Window, a viewing port that allows visual monitoring of the internal tube operation and offers ambient light in darkened recording environments.

Steinberg announced the availability of Cubase version 3.5 with Virtual Studio Technology (VST) for the Windows 95 platform. Cubase is a software application that combines MIDI sequencing with digital audio in an integrated recording and editing environment. Steinberg's VST allows for real-time effects processing. Cubase VST provides up to 32 tracks of digital audio, 128 equalisers in real time, a fully equipped effects rack with four multi-effects processors, a master section and an open plug-in interface for additional real-time effects and mastering tools.

The BEQ Series Four from **Oram** is a professional small format console utilising four sub-masters, stereo and mono outputs. Applications include broadcast, theatre, studios but it is aimed particularly at mobile locations

and surround-sound mixing. New at AES was the flightcased version of the BEQ Series Four. Mains or battery powered, the internal battery pack will run for 10 hours on a recharge of less than 30 minutes.

A high end editing tool for film/video sound, **Waveframe's** new 408 offers greater speed and an augmented feature set at a significantly reduced cost. Based on the latest generation of fast Pentium processors, Waveframe 408 delivers increased editing speed and enhanced real-time control.

Neutrik featured the Patchlink SP, the latest addition to the family of Patchlink 1/4" modular patching systems. According to Neutrik USA's James Cowan, it will prove tough to match: "No other patchbay at this price level fully protects the PC cards - the system is designed to streamline patchbay installations for most audio applications."

Equi=Tech launched the 'smallest, most compact and most affordable' addition to its line of balanced power AC power distribution systems at AES. The Model ET1R is heralded as ideal for applications such as small recording sessions, mastering rooms and sound reinforcement use with live bands.

Telex featured the new VHF and UHF Prostar Series wireless microphone systems. "We are viewing the two Prostar systems as two completely different classifications of product," said Telex's Gary Bosiacki. "The Prostar UHF model comes in at about the same price point as the older VHF product. The Prostar UHF unit offers power and quality beyond any other system in its price range."

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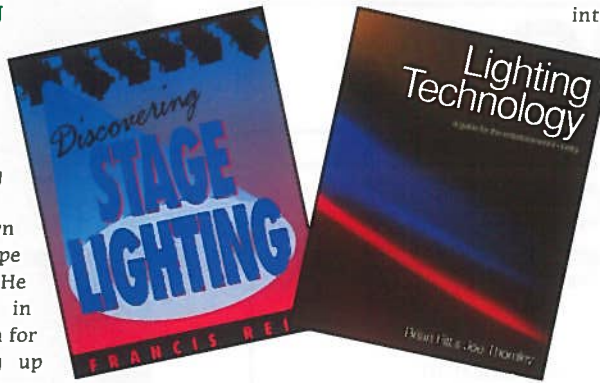
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Nigel Morgan has written the first UK degree course in theatre lighting design. He is also a lighting consultant based in London and his main areas of work are: theatre (production and installation design); architecture (project design and management); and education (lecturing and course design).

This book will enhance and develop the understanding of anyone involved in the creative process of lighting.

Herbert Press Ltd • ISBN 1 871569 71 0 • 144pp • paperback

Price: £12.99

DISCOVERING STAGE LIGHTING

Francis Reid

The core of the book is a series of 'Discovery' projects, using minimal resources to explore the use of lighting in the theatre, with particular emphasis on the interaction of conflicting visual aims. Tried and tested over 25 years of lecturing, the projects cover all the major scenarios likely to be encountered by lighting students.

Focal Press • ISBN 0 240 513452 • 1993 • 144pp • paperback

Price: £18.99

LIGHTING THE STAGE

Francis Reid

This new edition approaches stage lighting from the human angle. It is concerned with the relationships between the people involved in lighting and how they fit into the creative team.

Written in an easy, informal style, Francis Reid draws on his many years experience as a world renowned lighting designer to pass on tips and pointers which will

interest all those concerned with using designed light on stage. Since the book includes discussion of many aspects of lighting which are matters of opinion rather than fact, it will provide lecturers with a valuable source of ideas for essay assignments.

Focal Press • ISBN 0240 51375 4 •

1995 • 112pp • paperback

Price: £14.99

STAGE LIGHTING HANDBOOK

(5th edition)

Francis Reid

A new fully revised and enlarged edition of this standard introduction to stage lighting, an excellent source of advice and information for everyone involved in lighting design and practice. New chapters cover lighting dance, new technologies and more on organisation and planning.

A & C Black • ISBN 0 713 6443962 • 208pp illus • paperback

Price: £13.99

THE ABC OF STAGE LIGHTING

Francis Reid

This glossary of lighting terms is for both amateur and professional theatre workers. It assembles all the key current words and phrases and explains them simply and clearly, allowing a deeper understanding of terms and facilitating better communication between specialists and non-specialists.

A & C Black • ISBN 0 7136 360 2 • 1992 • 136pp • paperback

Price: £9.99

THE ABC OF STAGE TECHNOLOGY

Francis Reid

This illustrated reference book is an encyclopedia of stage technology terms. A companion volume to The ABC of Stage Lighting, it embraces all aspects of the technical operation of the stage, including the use of flying and other machinery for effective scenery handling.

Each term is defined and described concisely, and, where appropriate, supported by an illustration. The format is arranged to provide quick answers to specific questions.

A & C Black • ISBN 07136 4055 3 • 1995 • 108pp • paperback

Price £9.99

STAGE LIGHTING - The CD-ROM

Dan Redler

The Stage Lighting - CD-ROM is an advanced learning tool for the complete beginner wishing to see the theory put into practice. It enables you to learn what tools to use and through sophisticated multimedia technology, enable you to see and hear their effects. You can watch a video clip of a famous opera performance, observe through animation how different colour arrangements affect interpretation or construct your own lighting set up for a virtual 3-D stage.

A demo of a lighting CAD programme allows you to plan your designs and see their effects, or simply discover information by browsing the hundreds of topics the CD-ROM covers - from an analysis of luminaires to dimmers and control, special effects or the history of stage lighting.

Focal Press • Compact Disk • 965 222 7331 • 1996

Price £39.99 + VAT

LIGHTING AND SOUND

Neil Fraser

One of five inter-related volumes designed to help amateurs develop their theatre skills. The author shows how, by careful planning and a creative use of often limited amounts of time, money and energy, truly outstanding results can be achieved. The manual offers new and imaginative approaches to classical plays, whilst also tackling less conventional outdoor shows and productions in unusual settings.

Phaidon Press • ISBN 0 7148 2514 X 128pp • 160 illus • paperback

Price: £9.99

FILM AND VIDEO LIGHTING TERMS AND CONCEPTS

Richard K Ferncase

This invaluable reference clearly defines and illustrates more than 1,000 of the most commonly-used terms and phrases that cinematographers, lighting directors, camera operators and assistants, gaffers, electricians, and grips may encounter during a typical day on the set.

Focal Press • ISBN 0 240 80157 1 • 1995 • 170pp • paperback

Price: £14.99

SET LIGHTING TECHNICIAN'S HANDBOOK

(2nd edition)

Harry C Box

This handbook provides students and professionals with practical, hands-on information about the day-to-day practices, equipment and tricks of the trade essential to the motion picture and television set lighting technician. All aspects of the job are covered in a comprehensive, friendly manner, providing a wealth of basic knowledge and a discussion of the advanced aspects of electrical distribution. This book has been fully updated to include valuable checklists, National Electrical Codes, safety guidelines and extensive appendices of vital reference materials - an invaluable reference for even the most experienced lighting technicians.

Focal Press • ISBN 0 240 80257 8 • 1997 • 416pp • paperback

Price £30.00

THE TECHNIQUE OF LIGHTING FOR TELEVISION AND FILM

(3rd edition)

Gerald Millerson

This third edition of this internationally acclaimed book has been reformatted and restyled to reflect current developments. Although still concerned with the fundamental principles of lighting in studios, on location and display, the vastly extended text now covers single-camera, small unit production, improved and economy lighting, and working with limited facilities. Emphasis is also placed on the safety aspects of working with lighting equipment.

Focal Press • ISBN 0 240 51299 5 • 1991 • 448pp • hardback

Price: £32.50

BASICS OF VIDEO LIGHTING

Des Lyver & Graham Swainson

If you are a student wishing to learn about all aspects of lighting a video production, this is the book for you. Starting at the

beginning with the make-up of the lighting team and who does what, you will then go on to learn everything from the different types of lights and their control, to basic studio and location settings. Examples are also given of how to light different types of production. A short explanation is offered of the simple electricity that is needed to understand the relationship between the camera and the lights.

Focal Press • ISBN 0 240 51414 9 • 1995 • 128pp • paperback

Price: £10.99

BASICS OF VIDEO SOUND

Des Lyver

Starting with a basic understanding of acoustics, microphones and an introduction to some of the technical terms, the book goes on to consider the specific problems of creating good sound for a single camera shoot. The studio shoot is covered, explaining in simple terms mixers and studio techniques of foldback and effects units.

A short explanation is offered of the electricity and physics that you will need to know in order to become a good sound recordist.

This book is equipment non-specific, dealing primarily with the principles and processes involved in obtaining professional results.

Focal Press • ISBN 0 240 51410 6 • 1995 • 128pp • paperback

Price: £10.99

LIGHTING FOR VIDEO

(3rd edition)

Gerald Millerson

Enables readers to produce top-grade results whether lighting off-the-cuff with a portable compact kit or tackling a major project with an extensive heavy-duty rig. It does not assume technical knowledge nor previous experience and, after covering the basics, it guides readers towards the most effective ways of handling projects, and shows typical professional solutions to everyday situations.

Focal Press • ISBN 0 240 51303 7 • 1991 • 176pp • paperback

Price: £15.99

PROFESSIONAL LIGHTING HANDBOOK

(2nd edition)

Verne and Sylvia Carlson

Handy, yet thorough, this book contains description and discussion of hardware functions, as well as advanced lighting techniques, giving guidelines to the proper use and operation of all kinds of lighting equipment, primarily for film and TV. The book features illustrated details of different types of lamps, fixtures, lenses, reflectors and filters. It also covers controllers, powerlines, modifiers and generators.

Focal Press • ISBN 0 240 80020 6 • 1991 • 250pp • hardback

Price: £30.00

SOUND FOR FILM AND TV

Tomlinson Holman

This book provides an overall introduction to the fascinating field of recording, editing, mixing, and exhibiting film and television audio. It strikes a balance

between aesthetic and technical content, combining theory and practice, to approach sound as both an art and a science, as no other text has before. Emphasis is on the principles involved rather than specific equipment, with illustrations from actual production and post-production activities.

Focal Press • ISBN 0 240 80291 8 • 1997 • 368pp • paperback

Price £30.00

SOUND ASSISTANCE

Michael Talbot-Smith

Sound Assistance offers a highly readable and easy-to-understand account of sound operations in radio and television studios. By knowing the characteristics of the equipment, such as threshold and compression ratios, it is much easier to achieve professional effects quickly. This book will suit anyone wishing to work as a sound assistant who does not have a thorough grounding in maths and physics.

Focal Press • ISBN 0 240 51439 4 • 1997 • 160pp • paperback

Price £14.99

SOUND SYNTHESIS & SAMPLING

Edited by Francis Rumsey

Martin Russ

Sound Synthesis and Sampling is all about the principles of electronic musical instruments. It provides a comprehensive introduction to all the most common forms of analogue and digital sound synthesis, as well as covering many of the less commonly encountered techniques used in research and academia.

Focal Press • ISBN 0 240 51429 7 • 1997 • 224pp • paperback

Price £25.00

SOUND AND RECORDING:

An Introduction

(3rd edition)

Francis Rumsey and Tim McCormick

For those students or trainee engineers entering music recording, broadcasting or associated industries, this book will provide a vital introduction to the principles of sound, perception, audio technology and systems. This third edition offers: completely up-to-date standards and systems, new sections on digital mixers and automation, the latest on MIDI and a revised chapter on digital audio.

Focal Press • ISBN 0 240 51487 4 • 1997 • 384pp • paperback

Price £19.99

SOUND FOR THE THEATRE

Graham Walne

This basic manual is a revised, reillustrated and expanded version of the author's Sound for Theatre published in 1981. It provides the reader with a thorough grounding in sound theory, acoustics, equipment and system design. Solutions are offered to problems caused by particular buildings, outdoor events and touring with a sound system. There is also an introduction on digital audio which explores the most recent developments in this field and predicts some possible changes. A section of technical glossary and data aids understanding.

A & C Black • ISBN 0 7136 3135 X • 152pp • paperback

Price: £12.95

• PLASA TECHNICAL BOOKSHOP •

SOUND RECORDING AND REPRODUCTION

(3rd edition)
Glyn Alkin

This book is a comprehensive practical guide for newcomers to the industry who want to improve their technique and gain a better understanding of the recording medium and sound quality in general. The book follows the processes involved in producing a recording from the acoustic environment and production techniques to the various methods of sound recording and reproduction. This new edition contains more material on: four track recording; CD-ROM and CD plus MIDI Minidisc and Motionless Recording.

Focal Press • ISBN 0 240 51467X • 1996 • 256pp • paperback
Price: £15.99

SOUND REINFORCEMENT HANDBOOK

Gary Davies and Ralph Jones

A thoroughly useful reference for anyone who is interested in learning the basics of sound reinforcement. Each page is dated and, as technology advances, each subscriber will be provided with periodic updates.

Music Sale • Item HLE00500964 • 1987 • 384pp • paperback

Price: £23.95

SOUND EFFECTS: Radio, TV and Film

Robert L Mott

Newcomers to the field of audio/sound production, or producers, directors and other production personnel who need background on sound effects, could find no better resource than this latest book. This book provides the first comprehensive treatment of sound effects - their history, make-up, equipment and applications in radio, TV and film.

Written by a veteran versed in these different media, the book offers insights into the unique problems presented by each medium and the diverse high tech applications in everything from news to commercials to dramas.

Focal Press • ISBN 0 240 80029 X • 1990 • 222pp • hardback

Price: £35.00

SOUND TECHNIQUES FOR VIDEO & TV

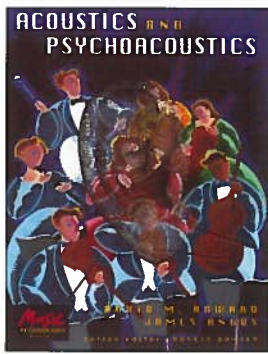
(2nd edition)
Glyn Alkin

This new edition is a completely updated version of TV Sound Operations, a widely used instruction manual. The new book describes in detail the essential techniques for producing effective sound in conjunction with visuals. It also covers the basics of audio theory and equipment in very straightforward, non-mathematical terms.

This second edition will be of interest to anyone who makes video recordings or telecasts, whether amateur productions or complex operations employing a professional studio.

Focal Press • ISBN 0 240 51277 4 • 1989 • 240pp • paperback

Price: £15.99



SOUND ENGINEER'S POCKET HANDBOOK

Michael Talbot-Smith

This is a pocket data book - a comprehensive resource covering everything connected with sound, from noise measurement, acoustics, microphones, loudspeakers, mixing equipment, CDs, DAT and MIDI, to telephony, ISDN, digital interfacing and ultrasonics.

If you are a professional audio engineer, responsible for broadcast or studio recording or a student on a music technology or sound recording course you will find this an essential part of your work kit. This is a handy, compact source of essential data that every sound technician should have.

Focal Press • ISBN 0240 51406 8 • 1995 • 192pp • hardback

Price: £12.99

ACOUSTICS AND PSYCHOACOUSTICS

Edited by Francis Rumsey

David Howard and James Angus

An introduction to Acoustics and Psychoacoustics is a comprehensive book designed to provide a broad-ranging introduction to the subject of acoustics, including the principles of human perception of sound, sometimes called psychoacoustics.

Ideal for students of music technology, sound recording, traditional music and acoustics, as well as engineers studying audio, multi-media and communications systems, the book is geared very much towards those who want a practical understanding of how real musical sounds behave and are perceived in real spaces.

Focal Press • ISBN 0240 514289 • 1996 • 224pp • paperback

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Vivian Capel trained as a radio engineer and through his work has gained extensive knowledge of audio and public address equipment and has worked on many PA installations. This practical book covers everything you need to know about public address systems, varying in size and complexity from the small club room to the large factory, theatre or sports stadium installation.

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The book covers fundamental requirements for safety, protection, control, circuit design, testing, inspection and problem solving.

Heinemann • ISBN 0 7506 2858 8 • 1996 • paperback

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COLOUR TEMPERATURE

Colour Temperature Correction And Neutral Density Filters In Television Lighting

Alan Bermingham

The author presents the subject clearly and completely as he judges it relates to television as practised by the BBC and other large organisations. He is well qualified for the job having spent many years teaching lighting at the BBC's own training school near Evesham.

STLD • 1989 • paperback

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A guide for users and installers

Adam Bennette

The purpose of this guide is to explain the DMX512 specifications and to offer examples and professional advice on how to set up a successful DMX512 system. This publication is a joint PLASA/USITT Recommended Practice, not a USITT or PLASA standard.

PLASA • paperback

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ESTA - INTRODUCTION TO MODERN ATMOSPHERIC EFFECTS

This booklet is designed to inform you about current fog-making technologies and gives suggestions for their safe and effective use.

ESTA • 1996 • paperback

Price £5.00

ESTA - RECOMMENDED PRACTICE

For Ethernet Cabling Systems In Entertainment Lighting Applications

This Recommended Practice is written by industry lighting experts and members of the IEE 802.3 committee and describes preferred system topologies, hardware and labelling practices, and gives a synopsis of how Ethernet works.

Ethernet is the preferred technology for linking multiple consoles, designer's stations, and dimmers in permanent installations and is also becoming popular with touring companies that use it to cut the amount of control cabling needed for large shows. Proper wiring is the first step towards a reliable Ethernet System.

ESTA • 1996 • paperback

Price £16.00

ESTA - STANDARD

For Construction And Use
Of Wire Rope Ladders

This technical document describes how to make and use wire rope ladders safely. The wire rope ladder is an indispensable piece of gear for shows touring with their own rigging, but until now there was no standard describing the construction or use of this tool.

If you make, sell, specify, or use wire rope ladders, the ESTA Standard is every bit as important to have as the ladder itself.

ESTA • 1996 • paperback
Price £13.00

PROJECTION FOR THE PERFORMING ARTS

Graham Walne

This book is the definitive book on all forms of projection, whether live theatre, ballet TV or outdoor events.

Every practitioner in all aspects of the performing arts will find this book fascinating and instructional. Written in non-technical language, the book gives a brief historical overview of early projection attempts, then goes on to look at equipment and the planning and design of every kind of live performance, both inside and outdoors.

Focal Press • ISBN 0240 51390 8 • 1995 • 192pp • paperback
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The Astonishing Art of Rock Concert Design
Sutherland Lyall

Rock Sets presents the most dramatic inventions of this kind ever made, namely those created by Fisher Park, one of the best-known rock concert design companies in the world. Among their clients are The Rolling Stones, Stevie Wonder and Tina Turner.

The results of their rock architecture are chronicled here with photography set against original scale drawings. Sutherland Lyall, former editor of Building Design, has written extensively on modern architecture and has created with Rock Sets a permanent record of these short-lived works of art.

Thames & Hudson • ISBN 0 500 276978 • 1992 • 96pp paperback
Price: £12.95

THE ART OF DIGITAL AUDIO
(2nd edition)

John Watkinson

The first edition of this book is now regarded as a classic in its field. Because of the fast moving nature of the technology described, the new edition has now been completely updated to include all the latest developments, including DCC, the Minidisc and digital audio broadcasting.

Focal Press • ISBN 0 240 51320 7 • 1994 • 490pp • hardback
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CONTROL SYSTEMS FOR LIVE ENTERTAINMENT

John Huntingdon

As the title suggests, this book covers the control of lighting, sound machinery, video/multimedia, projections, process control and pyrotechnics in live entertainment. As far as we're aware this is the first book to cover the many control methods and protocols used by the

industry. In addition, the book introduces readers to data communications and fundamentals, which are not well covered in traditional live entertainment training.

Control concepts and protocols are brought together and demonstrated in several realistic (although fictitious) example systems: theatrical productions, a computer multi-media trade show, a rock concert and a theme park.

Focal Press • ISBN 0 240 801776 • 1994 • 312pp • paperback
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KLARK TEKNIK AUDIO SYSTEM DESIGNER

A volume of thoroughly researched relevant textbook material, condensed into a unique compilation of essential sound system engineering data and formulae. Specifically written for consultants and professional sound system designers and engineers.

This book covers acoustics, sound insulation/absorption, psycho acoustics and speech intelligibility, system engineering and physical data.

Price: £10.00

COMPRESSION IN VIDEO & AUDIO

John Watkinson

Compression technology has been employed for a long time, but until recently the technology was too complex for everyday applications. However, compression has now reached the stage where it can economically be applied to video and audio systems on a wide scale. This book recognises the wide applications of compression by treating the subject from first principles without assuming any particular background for the reader. An introductory chapter is included which suggests some applications of compression and how it works in a simplified form. In addition, a fundamentals chapter contains all the background necessary to follow the rest of the book. Theory is balanced with a wide range of practical applications in transmission and recording, and throughout the book the reader will find notes of caution and outlines of various pitfalls for the unwary.

Focal Press • ISBN 0240 51394 0 • 1995 • 224pp • paperback
Price: £25.00

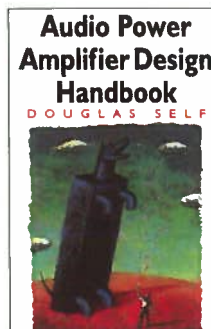
AUDIO POWER AMPLIFIER DESIGN HANDBOOK

Douglas Self

This is a uniquely detailed and practical manual on the design of audio amplifiers. Both pre- and power amp-lifiers are covered, although more time is spent on power amps as the design problems encountered are much harder.

The book provides a clear practical text on the state-of-the-art, and will be useful as a text for teaching, as well as a key source for engineers.

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AUDIO FOR TELEVISION

John Watkinson

Audio for television has become more sophisticated with new technology and surround sound systems in the home. This book deals with all aspects of audio used in television, from a definition of what sound is to audio signal processing, compression and recording. Written for audio engineering students and professionals wishing to improve their knowledge.

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STEREO MICROPHONE TECHNIQUES

Bruce Bartlett

This book tells how to position the correct microphones in the proper locations in order to record optimal quality stereo sound. It is the first fully comprehensive handbook devoted exclusively to stereo miking. The many illustrations and clear organisation easily explain the theory behind stereo miking methods and describe specific techniques, including comparative evaluations. In addition, Stereo Microphone Techniques offers suggestions on session procedures and stereo trouble-shooting, as well as recent developments in binaural and transaural stereo and stereo boundary arrays.

Focal Press • ISBN 0 240 80076 1 • 1991 • 192pp • paperback
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THE USE OF MICROPHONES

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Alec Nisbett

How to select position, balance and control microphones. Includes speech/music balance, simultaneous sound/picture recording, and performance control. To anyone with a practical interest in using microphones, whether a complete beginner or professional who seeks to expand his skills.

Focal Press • ISBN 0 240 51365 7 • 1994 • 192pp • paperback
Price: £15.99

MICROPHONES:

Technology And Technique

John Borwick

This complete microphone handbook integrates engineering design and theory with musical/artistic applications. This new volume begins with a brief history of microphone technology and then explains the basic theory of acoustics, electricity and magnetisms. The working principles and

design of all types of microphones, including the most popular models and accessories, are described in detail. The second half of the book provides guidelines on the creative balance techniques used for musical instruments, voices and ensembles of all kinds from classical to pop. Production methods in studios, on location, on public address systems and for live shows are also outlined.

Focal Press • ISBN 0 240 51279 0 • 1990 • 241pp • paperback
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BROADCAST SOUND TECHNOLOGY

(2nd edition)

Michael Talbot-Smith

This book brings together everything you need to know about audio technology in one concise volume. It covers the basic principles of all the main aspects of the broadcast chain. Written in an easy style that is ideal for beginners and professionals alike, this book has been updated to incorporate the latest developments in audio technology, including recent digital advances

Focal Press • ISBN 0240 51436X • 1995 • 224pp • paperback
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STUDIO MONITORING DESIGN

Philip Newell

The quality of the recording studio acoustics can make a good or a very bad recording. Therefore the initial design is of paramount importance. This book, written by an international studio designer, deals with the problems faced and how they can be tackled.

The component parts of studio design are covered individually and then ideas are suggested of putting the components together in different ways for different purposes.

Focal Press • ISBN 0240 51407 6 • 1995 • 400pp • hardback
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VIDEOWALLS:

The Book of the Big Electronic Image

(2nd edition)

Robert Simpson

Since the first edition of the book, the videowall has become an accepted method of both big image and multi-image presentation, whilst at the same time major developments in video projection have increased the choice of methods for big single image display.

This second edition, completely revised, offers a complete overview of the application of big image and multi-image electronic display, which shows both why such displays are used, and how they are best realised using a variety of technologies.

Focal Press • ISBN 0240 51450 6 • 1997 • 256pp • paperback
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EFFECTIVE AUDIO-VISUAL

(3rd edition)

Robert Simpson

A handbook for anyone who needs to know more about A-V equipment technologies. The book discusses traditional A-V approaches such as OHP, slide-tape, multi-image, film and video and the

increasing use of the computer.

In this extensively re-written third edition, the computer is shown to be, not only the basis of computer graphics and interactive AV, but also essential to the effective use of traditional methods.

Focal Press • ISBN 0 240 51416 5 • 1996 • 256pp • paperback

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VALVE AMPLIFIERS

Morgan Jones

In audio applications valve amplifiers are considered by many to offer better quality sound than transistor amplifiers. This book allows those with a limited knowledge of the field to understand both the theory and the practice of valve audio amplifier engineering design, such that they can analyse and modify circuits, and rebuild an amplifier. Constructional techniques are also provided so readers can build from scratch designs that actually work.

Focal Press • ISBN 0 7506 2337 3 • 1995 • 312pp paperback
Price: £25.00

SPECIAL EFFECTS IN TELEVISION

(3rd edition)

Bernard Wilkie

This unique book is essential reading for anyone involved in the world of special effects; from the effects assistant about to launch a career, to the experienced director and production staff who wish to familiarise themselves with all the latest available types of effects.

Focal Press • ISBN 0 240 51435 1 • 1995 • 282pp • paperback
Price: £27.50

MIDI SYSTEMS AND CONTROL

(2nd edition)

Francis Rumsey

A number of topic areas in this revised edition have been expanded to provide more comprehensive coverage of every area of MIDI. There are more examples of real implementations, more diagrams and the whole book has been rewritten to include a far greater practical element, to complement its existing technical strengths.

Several completely new sections and complete chapters have been added, including a new opening chapter as an introduction to principles and terminology; MIDI timecode; librarians and editors. There is also a discussion of the choice of computer for MIDI control, different approaches to sequencer software design, user interfaces, the Apple MIDI manager etc. The final chapter covers practical systems design.

Focal Press • ISBN 0 240 51370 3 • 1994 • 256pp • paperback
Price: £19.99

MULTI-IMAGE DESIGN AND PRODUCTION

Phiz Mezey

This book tells you everything you need to know to create one, two and three projector productions, and prepares you to tackle larger projects. It leads you through the production process, from planning

and preparing scripts, visuals and soundtracks to final editing and programming. It shows aesthetic and technical considerations and outlines methods with step-by-step directions.

Focal Press • ISBN 0 240 51740 7 • 1988 • 176pp • paperback

Price: £27.50

THE STAGING HANDBOOK

(2nd edition)

Francis Reid

This book is concerned with the details of staging a production. It brings together the different elements - scenery, costume, props, sound, lighting - and explains how the staging can be achieved effectively and successfully. Invaluable for all those involved in

putting on plays, dance, opera, musicals etc. There are photographs and diagrams through-out and a comprehensive glossary.

A & C Black • ISBN 0 7136 4176 2 • 176pp • paperback
Price: £14.99

EFFECTS FOR THE THEATRE

Edited by Graham Walne

Theatre productions can be greatly enhanced by effects, from the simple door-slam to the more complex simulation of a thunderstorm. This practical handbook divides effects into four sections: scenic, sound, lighting and special. Each section has been written by an internationally experienced expert in the field.

An exciting range of effects are described from waterfalls, flying people, snow and fog, to blood, ghosts, ringing telephones, explosions and flashes. Techniques are explained, often with a choice of how to carry out the effect depending on the budget available.

A significant number of effects that we know today have been in use for many years; their importance is discussed in an introductory chapter on the history of effects. There is also a chapter on planning effects, safety, cueing and plotting. In addition, there is a glossary, a list of useful addresses (including suppliers) and a bibliography suggesting further reading.

A & C Black • ISBN 0 7136 3985 7 • 176pp • paperback
Price: £14.99

THEATRES - Planning Guidance for Design Adaption

Roderick Ham

No city, town or college is complete without its places of assembly. Although the form these may take greatly varies, they all have principles in common. Drawing on a wealth of expertise, this book, produced in tandem with the ABTT, examines each function and requirement of a theatre building and gives technical guidance on achieving the best results.

Butterworth Architecture • ISBN 0 85139 418 3 • 1988
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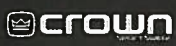
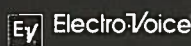

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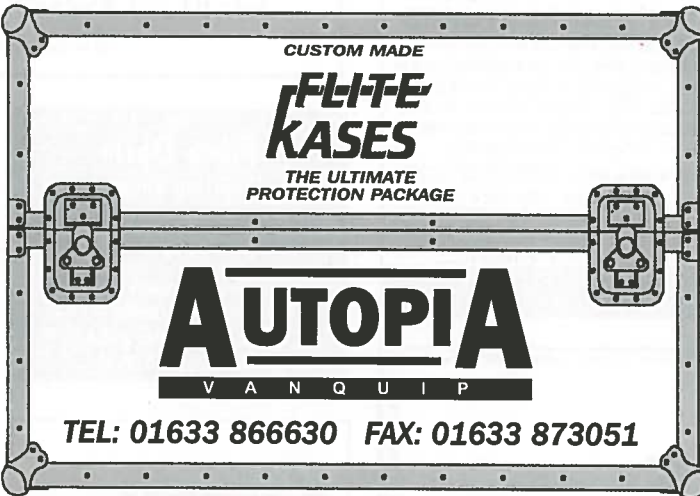
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Steve Moles talks to Production Manager Dougie Souness

The round smiling face of Dougie Souness seems to have been a familiar feature of the touring industry for ages. He's worked as production manager and tour manager for Wet Wet Wet throughout their career, and now, at just 32 years of age, finds himself promoted to assistant band manager. This, in part, goes back to his roots. "Ironically, when I was a lad growing up in Glasgow, the band members lived just four miles away from me across the Clyde. But it wasn't until I was past 20 that we met."

For Souness, his early years were typical for a city that still has more than its fair share of adversity. He lost his mother when only nine; by the age of 16 he was ready to leave school and join his father in the Yarrow Shipyard. "I apprenticed as an electrician. It's what everyone in my neighbourhood did. Within a couple of years I became the yard's youngest ever shop steward at just 18." On first examination, not the most well-matched training for the free enterprise zone of rock and roll, but when you look deeper . . . "The preparation was great for this business, dealing with political bullshit, people and authority. Perfect."

The fact that he achieved such a position so quickly also highlights another aspect of the man, a desire to learn and take responsibility, and a determination to go out there and find both things for himself. But Souness was also a drummer in a band, and with some courage he left the shipyard in late 1985 to pursue his musical career in a more professional manner. "By chance, my band were rehearsing in a little studio right next door to the Wets. We got talking, discovered we were all Rangers fans, and became mates."

It was a friendship that was to last. When the Wet's first single broke two years later they called Souness and asked him to come down to rehearsals and help on the tour. "They had Jimmy Innes looking after the guitars and back line, but because I had a driving licence and had apprenticed as an electrician they figured I could do the drum kit, sort out the electrical stuff and drive the transit."

It all grew rather wildly after that initial decision to head off with the band. Just as he



Dougie Souness.

got down to rehearsals, Souness's father died, but there were other issues to keep him from dwelling on his loss. "The single was really big: we ended up playing the 2-3,000 seater circuit, finishing up at the Hammersmith Odeon (as then was). But there were gaps in the way the tour management side of things was handled. There were some very disgruntled people on the crew and because I was good friends with the band and management they came to me to try and sort things out."

And sort it out he did, becoming production manager by default and not a little effort on his part. "I thought I could handle it, but didn't know what I was taking on." And then he added, rather wryly: "I also didn't think at the time that I'd still be doing it 10 years later." But ever a quick learner, Souness warmed to the task. And he had a fall-back plan if it didn't work out. "I thought I'd maybe get 10 months out of it. There were lots of similar pop bands around at the time - T'Pau, The Christians, Terence Trent D'Arby. I thought it would all be over pretty quick, but I knew by the end of it I'd stay on this side of the business, even if that meant going back and having another go at being a professional musician."

As it transpired, the Wets proved a more durable commodity and Souness has grown and learned in equal measure with the band. He talks proudly of milestones along the way: a free concert for 70,000 on Glasgow Green in 1989, and the Nordoff Robbins charity show they produced at the Royal Albert Hall with the Wren Orchestra in 1992. Now, as assistant band manager, he finds himself discussing promotion, marketing and budgets with record company executives, but maintains a ready route to sanity. "I still play football with a team of old mates back home in Glasgow - friends from school and my old shipyard days. They keep my feet on the ground. They don't want to hear about any old rock and roll bollocks."

As you can see, the cultural connections go deep. Souness has a passion outside rock and roll and it's called Glasgow Rangers. It's one that has a special importance for him and the band. He even admitted a 90-minute speaker-phone call from a Durban production phone to a friend back home so he and the band could listen to the radio commentary of a key match before they went on stage. (The promoter's feelings were not recorded). It's not a clannish thing, and it's not overtly laddish. In fact, Souness, to his credit, is one of the growing band from the production fraternity who encourage women in the business, women like Liz Holden who has recently been promoted to the position of tour and production co-ordinator.

But it is a strong, palpable bond. For now, Souness seems content in his role, having worked hard to get there; for the future who knows? "Perhaps band management with some unsuspecting artist," he mused.

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| ADVERTISERS' INDEX | | CITC | 46 | Jands-Hog | 48 | Par Opti | 22 | Starlite Systems | 18 |
|--------------------|----------|--------------------|----|-----------------------------|----|-----------------|----|---------------------|-----|
| AC Lighting | 16/23/32 | City Theatrical | 46 | Kupo | 31 | PLASA Shanghai | 42 | Technotronics | IBC |
| Adastra | 22 | Clay Paky | 9 | Lee Filters | 4 | Production Arts | 50 | The Effects Co | 54 |
| ADB | 47 | CTS | 34 | Leisuretec | 27 | Pulsar | 19 | The Event Show | 20 |
| Aliscaff | 34/53 | DHA | 26 | Le Mark | 49 | PW Enterprises | 15 | Tomcat | IFC |
| Altman | 30 | E\T\C | 11 | Lighting Technology | 8 | RB Lighting | 67 | Total Fabrication | 33 |
| Amptown | 24 | ETC | 59 | Light Opera | 82 | Selecon UK | 24 | Trantec | 13 |
| Artistic Licence | 6 | Flying Pig Systems | 38 | Lite Structures 49/53/55/62 | | Selecon | 29 | Triple E | 12 |
| Avolites | 69 | Hand Held Audio | 40 | LSC UK | 37 | Sennheiser | 15 | Universal | 64 |
| Bandit Lites | 56 | Hardware Xenon | 8 | MA Lighting | 10 | SGM | 28 | Vari-Lite | 5 |
| Bose | 7 | Harkness | 11 | Martin Professional | 3 | Slick Systems | 31 | Wilkes | 53 |
| Celco | OBC | High End Systems | 41 | Navigator | 60 | Soundcraft | 21 | World Lighting Fair | 54 |
| | | HW International | 17 | Northern Light | 67 | Spirit | 61 | WYSIWYG | 14 |

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