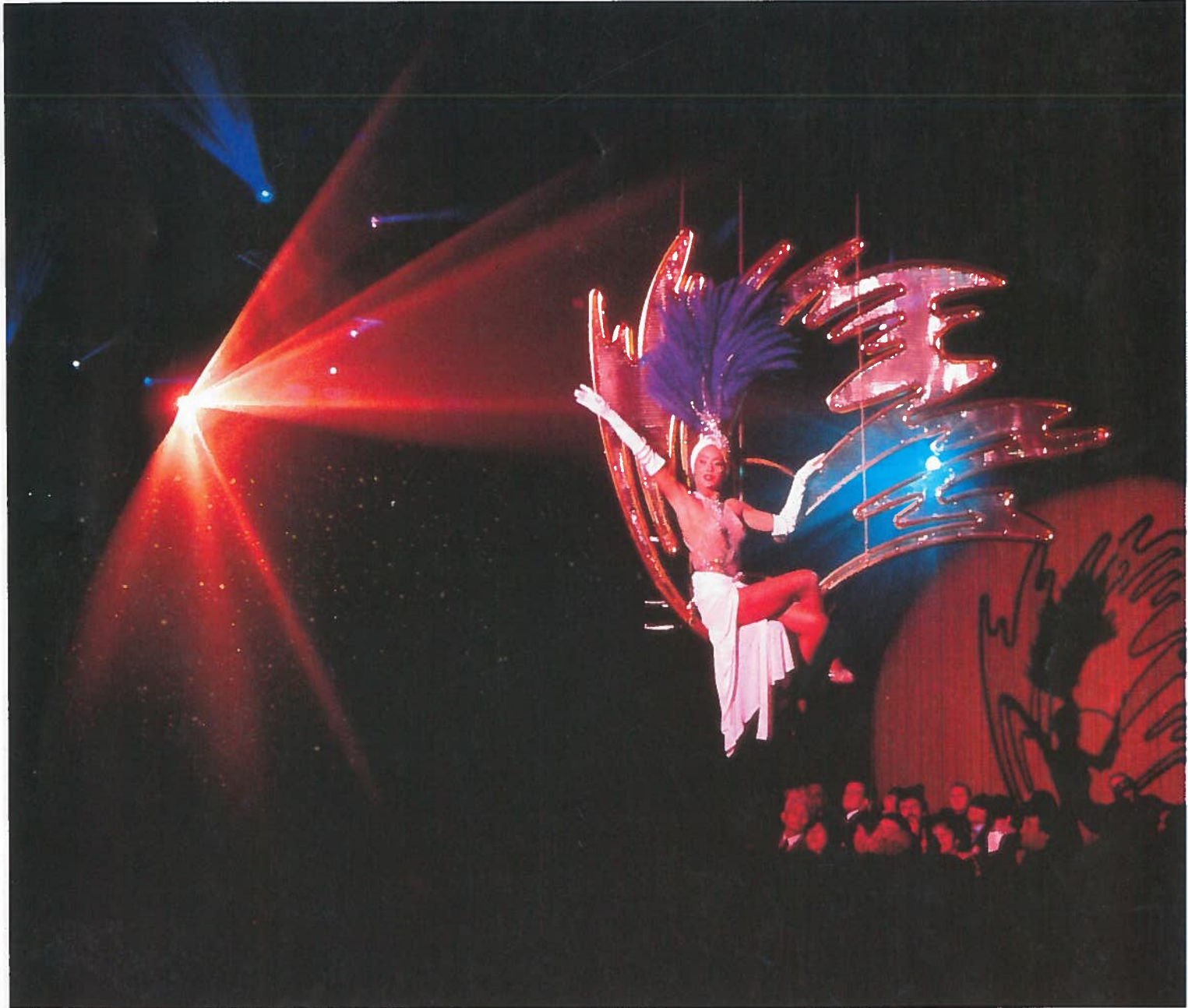


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VIVA CABARET AT THE LIDO DE PARIS

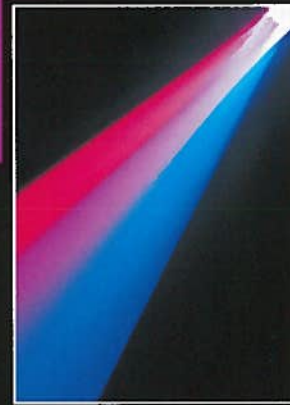
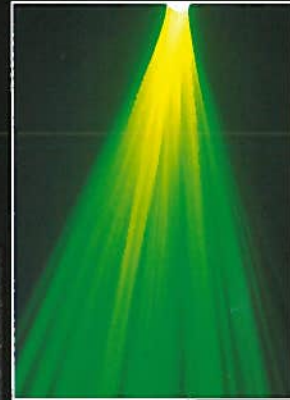
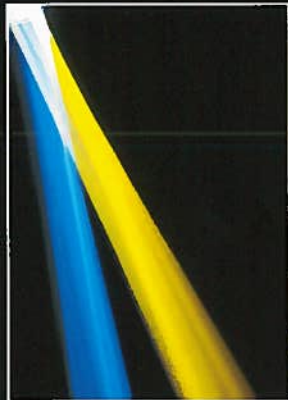
- A new chapter for Sydney's Capitol Theatre
- C'est Magique: Tony Gottelier in Paris
- Company profile: Celco and the M9 Factor
- Gothenburg Opera House unveiled
- London's Club 180 - a sound challenge
- Five Guys Named Moe take to the road

FEBRUARY 1995

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It's a fair cop. We changed the spots on the Dalmatian (by computer - we didn't paint her, if you're worried). But the image demonstrates two important things. First, you can have the colour you want, where you want it. And, secondly, technology and colour really must go hand in hand.

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LIGHTING+SOUND *International*

FEBRUARY 1995

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Assistant Editor: Ruth Rossington
Associate Editor: Tony Gottelier
Editorial: Lee Baldock
Advertisement Manager: Barry Howse
Production: Sheila Bartholomew
Advertising assistant: Jane Cockburn

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PLASA Boosts Services

Following the merger of interests of SCIF within an enlarged PLASA, the range of services offered to members is already on the increase and to ensure that members are kept in touch, a new-style Membership News (pictured above right) has been introduced. Containing information on services and items of specific interest to members, the first issue was mailed in late January and has been well-received by members.

Schemes introduced or at the final planning stage include a Status Reporting Service, an industry-specific Insurance Scheme, Legal Advice Service, Credit Reporting Plan and an Approved Installer Scheme. It is hoped that the latter, which was agreed in principle at the 1994 PLASA AGM, will be based on the scheme already started by SCIF and detailed discussions on the project are now taking place.

PLASA also plans to 'phase in' a full-time Standards Officer to take over from George Thompson and advertisements for this post have now been published.

Show Tragedy

The final day of the Outdoor Event Show was marred by an accident that resulted in the death of a stage performer. Neil James, 40, a member of the battle re-enactment group Kiss My Axe, received an injury to the femoral artery during a choreographed battle sequence. Wembley paramedics were quick to assist, but he later died in hospital whilst undergoing surgery.

Sound Technology suffer Alesis Theft

Despite extensive security improvements after two previous break-ins, Sound Technology have suffered another burglary at their warehouse in Letchworth.

The theft took place in the early hours of February 2nd. Among the technical equipment taken were Alesis S4 Quadrasynth modules and Alesis Q2 effects processors.

The company would appreciate being contacted by anybody who may have been offered Alesis equipment in suspicious circumstances. Telephone Robert Wilson on (01462) 480000.



L+SI Gains a Sister

Agreement has been reached for PLASA to purchase the title and databases of Sound & Communication Systems magazine from Pirate Publishing Ltd. It is intended to promote the title as a sister publication to Lighting+Sound International. Its direction will be linked closely to the needs of the members of the Association in the sector and the promotion and direction of other PLASA services and activities including the annual Light & Sound Show.

Stage Fright

Following problems last year with the hydraulic system used for scenery changes on the London production of Sunset Boulevard, Andrew Lloyd Webber's Really Useful Theatre Company put in a claim to its insurers for compensation.

The basis of the claim was that components of the stage equipment, supplied by Berendsen Fluid Power Ltd, halted productions as a result of their control system being susceptible to interference from walkie-talkies. This caused the scenery to move in an illogical and arbitrary manner. As a consequence, and for safety reasons, nine performances were lost from schedule and the claim went in for £878,000.

The RUTC's insurers duly paid out, but have decided to pursue Berendsen for the money. If successful in their action, the implications for the industry could be enormous, and according to George Thompson, PLASA's standards officer, this is the very scenario that the forthcoming EMC regulations are designed to eliminate. They don't come into effect until January 1st, 1996, so are not relevant in these circumstances.

As proceedings are pending, neither the insurance company's lawyers, Clyde, nor Berendsen were willing to comment.

Acoustic Virtual Reality in the UK

In late January, the first full UK demo of the Lexicon LARES system took place at the Medina Theatre on the Isle of Wight. The system can improve the acoustic quality of any acoustically dead venue without architectural alteration.

The premise on which it is based is simple. If, like me, you sing in the bath, then you may have noticed how much better you sound than when singing elsewhere - the enhancement is caused by reverberation, which can be a double-edged sword. Whilst making music sound great, it can play havoc with speech intelligibility. As many of today's requirements are for drama and conferencing, the modern trend has been to design buildings with very little reverberation at all. As a result, many theatre and halls are now somewhat unsuitable for the performance of acoustic music.

The LARES (Lexicon Acoustic Reinforcement and Enhancement System) can effectively 'put back' what modern acoustic design has taken out by adding reverberation to acoustically dead spaces. Using advanced digital electronics and patented digital signal processing (DSP) techniques, LARES provides a method of augmenting and redirecting the natural reflections of a space. The system's solution is twofold: first, eight uncorrelated reverberators are used; second, each reverberation channel includes a random time-variant delay function. Both of these work to foil the feedback process. The system can be set so that the reverberation time is appropriately long for music. When speech is detected the reverberation parameters are adjusted for better speech intelligibility.

In its first outing in the UK at the Medina Theatre, with the Isle of Wight Philharmonic Orchestra conducted by Peter Lipari, the LARES system was teamed up with an impressive array of sound equipment. Four AKG cardioid condenser microphones were run through a Soundcraft Spirit Folio desk mixed down to two input channels on the LARES, via twin BSS graphic equaliser stores. Connected to the output of the LARES were six JBL MPA275 amplifiers, linked to 22 JBL 4208 monitor speakers.

The LARES system is now available from Harman in the UK.

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The newly launched Martin Pro 1220 Studio series automated luminaires offers television and theatre lighting directors a choice of models -from 1200 Watt HMI or MSR lamp with color temperature correction facility, and full color mixing for an infinite palette of ravishing colors, - or with the same choice of lamps, a straight 9-color changing model with correction.

Most importantly in the studio, all Roboscan Pro 1220 STs have a special silent fan plus a remote ballast, which takes the hum away while reducing weight on the grid.

Also included in the package is a high-res DMX card to enable the 2-channel, 16-bit method of applying DMX to pan and tilt functions. So not only is elliptical tracking possible, but also precise placement, and replacement, of the beam.

Every model in the Roboscan Pro 1220 ST series includes proportional dimming, iris and focus plus black-out and strobe. For washes, there's a frost filter on-board, and a choice of two prisms for subtle effects. There are four rotating gobos and nine fixed, your choice from our huge selection, plus custom, and even etched color dichroic gobos.

Finally, the Martin Roboscan Pro 1220 ST series offers superb adaptability and long term potential through total modularity.

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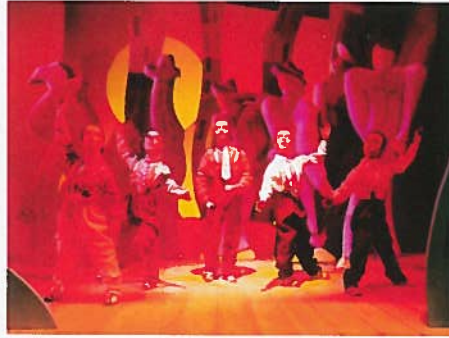
Drama Open Day

Over 80 groups and organisations had a unique chance to look behind the scenes at Loughborough-based staging company Stage Systems and theatrical equipment subsidiary Stage Services, when they threw open their doors to amateur dramatic groups, professional theatres and event organisers during a special three day event.

Visitor's to the Group's headquarters on Prince William Road were able to look round the recently opened Stage Services Stage Shop, the only one of its kind in the East Midlands, which supplies lighting equipment, sound systems, special effects and stage hardware. Stage Services personnel held a series of informative demonstrations offering advice on how to achieve the best effects with lighting and sound. Information was also given on stage and production management and Portable Appliance Testing. Stage Systems, meanwhile, demonstrated its full range of portable staging equipment.

The event allowed customers the chance to see the Group's newly expanded headquarters for the first time. Founded in 1966 as an industrial design consultancy, Stage Systems is now one of the UK's leading designers and suppliers of portable staging and tiering. It was high demand for the product that led the company to double the size of its headquarters in 1994, after growing by over 70 percent and increasing staff by nearly 25 percent.

West End Window



Echoing the theme of the Regent Street decorations, eight of Liberty of London's Christmas windows portrayed scenes from Cameron Mackintosh's West End shows.

To light them, Richard Rafter, of Liberty's display department, specified Selecon's low voltage Accent Spot and Accent profile luminaires from M&M, which gave him the versatility and creativity of theatrical lighting.

In addition to its many other features, the profile takes gobos, and in the 'Phantom' window Rafter used DHA animation discs to create a ripple effect. For 'Five Guys Named Moe' (see article in this issue, page 63), the Selecon lanterns had the addition of Microscrollers to give an ever-changing colour wash (interestingly, the West End production uses Rainbow Colour Changers for the same effect).

Additionally, the 'Les Miserables' display was suitably foggy thanks to a Smoke Factory Spaceball.

PanCommand '95

PanCommand and sister company Morpheus Lights are currently enjoying an increased period of activity at the moment.

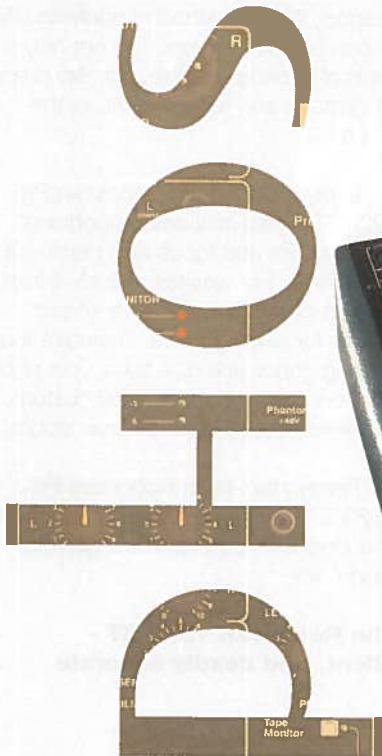
PanCommand saw 1994 out with a huge installation at the Lido de Paris (see main feature, pages 34-38), and are looking forward to a busy 1995, with initial interest promising a strong year again for ProSpots and ColorFaders, which should be further boosted by the recent agreement with White Light, The Moving Light Company and Tour Services to represent and stock the company's FaderBeam washlight.

It was a similar story from Morpheus who also started 1995 with a bang and report numerous tours going out with Reba McEntire, Jon Secada, Metallica, Barry Manilow, Kenny Rogers and The Beach Boys, to name just a few.

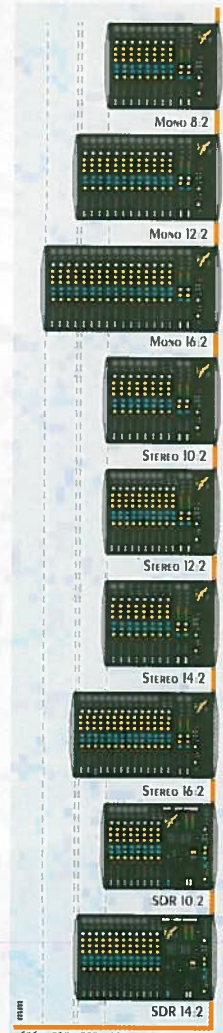
A Free Spirit?

A new Soundcraft Spirit could be yours for free. The company are offering buyers the chance to win their money back on any console from the Spirit range. The promotion begins in March and will run for six months. Anybody purchasing a Spirit console will have the opportunity to enter a tiebreaker competition. Entry forms are available at dealers, and these must be stamped upon purchase and returned to Spirit with a receipt.

For further information contact Andy Farmer at Soundcraft, telephone (01707) 665000.



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Le Maitre in Europe

Following the initial launch of Le Maitre's new smoke machine, the G300 at PLASA and LDI, Le Maitre now plan to introduce the product to mainland Europe.

Starting in Paris at the Siel show, they will be demonstrating the G300, along with a range of Le Maitre pyrotechnics. The company are represented in France by CP&P France. At the Musik Messe in Frankfurt, they will be represented by their German distributor, LMP, whilst at the SIB show in Rimini, they will be showing the G300 with their Italian distributor Sangalli.

Arri Deals

Arri GB is running a special deal on Grip equipment throughout February and March 1995. A substantial discount is being offered on certain items in the Grip range - in most cases this represents 40% off the original price. In addition, a further 10% will be granted on all orders placed on or before March 31st or while stocks last, whichever is the sooner.

For further information contact Arri in London, telephone 0181-848 8881.

Sennheiser Classics

Whitfield Street Studios has adopted the Sennheiser MKH80 as its standard microphone for classical recording. The switchable-pattern mics are now used for main stereo pickup on symphonic recordings in an off-centre-right configuration, and in a stereo pair arrangement for solo piano recording.

First Event System



RCF UK have announced the UK's first installation of their new Event series speaker system, by PA Installations Ltd.

PA's MD Paul Adams, pictured above at the recent Live! show in London, confirmed the deal with RCF's UK head Phil Price. The first installation is at the Kooler Nightclub in Merthyr Tydfil, where PA Installations are undertaking a major refurbishment.

The full range of Event series products will be shown at Siel in Paris, the Frankfurt Musik Messe and the SIB show in Rimini.

WL Help Chickens

White Light has donated lighting equipment for the new North London theatre base of the Chicken Shed Theatre Company.

The Enfield-based theatre is the first permanent home for the company for over 15 years and offers a wealth of facilities to give young people, whatever their background, the chance to perform. The company has, over the years, secured both financial backing and professional support from many top names in entertainment, including Sir Richard Attenborough, Trevor Nunn and Derek Granger.

The first performance at the new theatre was 'Night Before Christmas', with the lighting designed by Alastair Grant. The equipment donated by White Light will form the basis of the permanent in-house rig and included Parcans and T-Spots.

Light Opera's New Division

Light Opera, the service and supply company based in South Staffordshire, have announced the set-up of a new division within the company, dedicated to the supply of theatre lamps to the trade.

The new operation is headed by marketing director Richard Archer. The company aim to supply lamps at greatly discounted prices, and the range offered will include all types of theatre lamp and also extend to cover energy-efficient fittings.

As a special launch offer, Light Opera are offering an extra 5% off any orders of £150 (excluding VAT or carriage) or more placed before the end of March 1995.

For more information contact the company on (01827) 69382.

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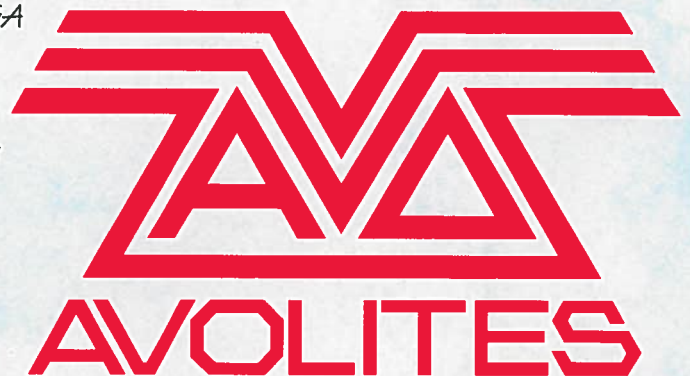
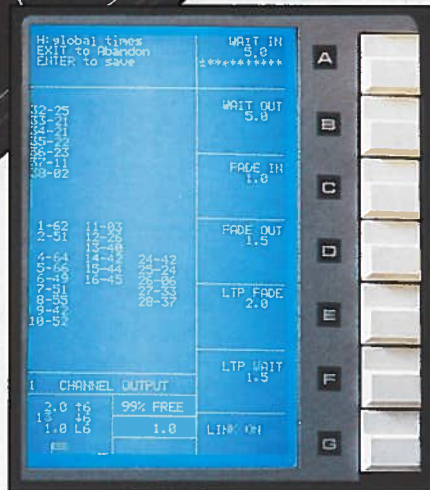
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Fuzion plc Begins Trading

Since the announcement six months ago that Tony Oates had left Shuttlesound, the company he founded in the early eighties, there has been speculation about his plans for the future. We can now report that he is alive and well and back in business.

At the beginning of January, Fuzion plc officially opened its doors for trading. During the previous month, the operation had been run from interim premises while the facility in Walton-on-Thames was being organised. The company will trade as an independent distribution and service operation providing professional audio products and related support.

Most of the people at Fuzion are well known in the industry. The new company directors are: Tony Oates (managing), Paul Ward (sales), Gary Ashton (technical) and Sharon Oates. Paul Ward (differing in background from the Oates/Ashton contingent) should need no introduction after his many active years in the pro-audio sector, most recently at Network. The team is enhanced by the addition of Paul Mears (operations manager) and Liz Poncia (sales/marketing administrator). Further appointments will be announced over the coming months.

Fuzion are now supplying equipment from Crown, Nexo, Sabine and RDL (Radio Design Labs).

Tony Oates told L+S: "Fuzion is a motivated, highly experienced group of people with a range of first class pro-audio products who want to focus on meeting and, if possible, exceeding customer expectations regarding supply and service in this specialised area of the market: no incompatible diverse activities, no conflicting policies - just competent distribution. The changes in this industry over the last couple of years make this simple goal for a truly independent operation even more pertinent. If everyone can have some fun at the same time then it makes even more sense."

The company has acquired an 8,000 sq.ft, three storey, self contained facility in Walton-on-Thames, comprising offices, warehousing and workshops.

TiLE 95 in Maastricht

The TiLE (Trends and Technology in Leisure and Entertainment) conference and exhibition celebrates its fourth year in 1995 and will be held at the Maastricht Exhibition & Congress Centre, The Netherlands, from Tuesday 13th to Thursday 15th June.

Andrich International Ltd, the organiser of TiLE, have announced that Joe Meck, the general manager of Warner Brothers Movieworld in Germany, has agreed to be a keynote speaker at the conference. Amongst the other speakers will be Howard Kelly, chairman of the Sally Corporation, USA; Mats Wedin, president of Liseparken, Sweden; and Reinoud van Assendelft, marketing director of Efteling in The Netherlands. The conference committee recently met in Paris to finalise the conference programme which will be issued in March 1995.

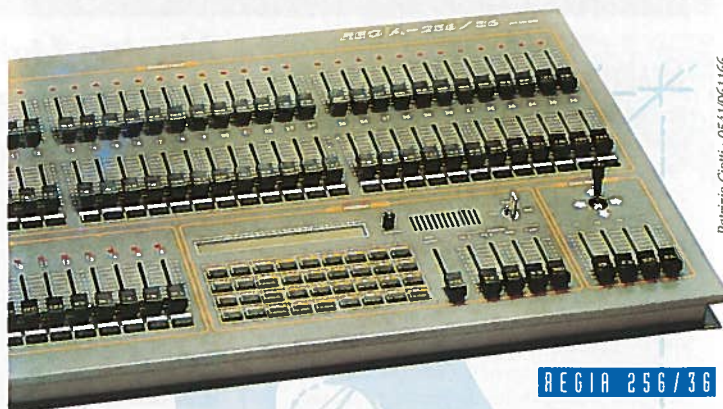
TiLE looks into the future of leisure and is of particular benefit to operators and designers of theme parks, museums, cinemas, entertainment venues and other out-of-home leisure facilities. For further information on the TiLE Conference contact Andrich in Warminster, telephone (01985) 846181.

PIGI Goes to USA

Following discussions at the PLASA Light & Sound Show, Production Arts has been appointed the exclusive US distributor for ETC Audiovisual, the French manufacturer of large-format projection systems. As part of an ongoing expansion plan in large-format projection, Production Arts will be adding new projection products and image-making services to meet the needs of various market segments.

The P.I.G.I. projector from ETC Audiovisual features a double-sprocketed scroller capable of running two 100ft long pieces of film through the gate of a large-format (18cm x 18cm) projector. The two films can be moved independently at speeds of up to 180cm per second. One scroll contains the imagery, while the other can contain masks which can be changed by moving the film. 'Visual interference' between the two images can create effects that were previously not possible. In addition, the scroller's sprocketed design enhances position accuracy and speed. The ETC Audiovisual projector complements Production Arts' rental inventory of Austrian-made Pani projectors.

Pani's modular system permits a wide variety of interchangeable accessories - such as effects machines, slidechangers, image scrollers and lenses to be utilised with projector heads of different sizes. Pani projector heads are available in sizes ranging from 2,000W tungsten to 12,000W HMI.



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REGIA

TECHNOLOGY AND RELIABILITY



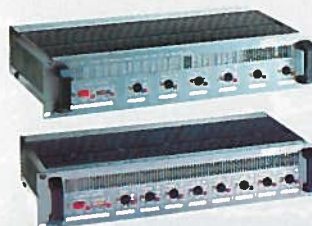
SGM professional lighting control consoles stand out for their advanced technology, reliability, ease of use and excellent performance. The most suitable lighting control console for every need (live entertainment, club use, theatre application, etc.) can be chosen with the certainty of having made a good choice, as they're manufactured by one of leading companies in entertainment electronics.

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- REGIA 24: 24 CHANNELS, 24 PRESETS, DMX 512 and SGM 256 outputs.
- REGIA 12: 12 CHANNELS, 12 PRESETS, DMX 512 and SGM 256 outputs.
- REGIA 8: 8 CHANNELS, 12 PRESETS, 0/10 V and SGM 256 outputs.

The ideal complements for SGM lighting control consoles are the compact, rack-mounting modular power packs, available in the following models:

- P 610/D, single phase/three phase, six 10A channels, inductive and resistive loads, 0/10V, DMX 512, RS 232 and SGM 256 inputs.
- P 810/D, single phase/three phase, eight 10A channels, inductive and resistive loads, 0/10 V, DMX 512, RS 232 and SGM 256 inputs.



P 610 / D
P 810 / D

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Supergames 95

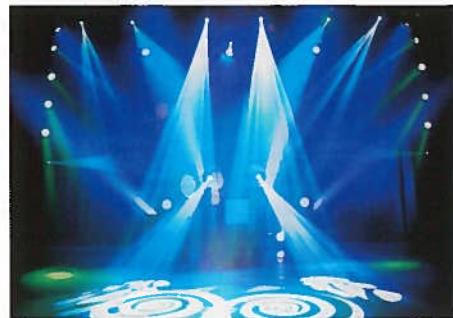
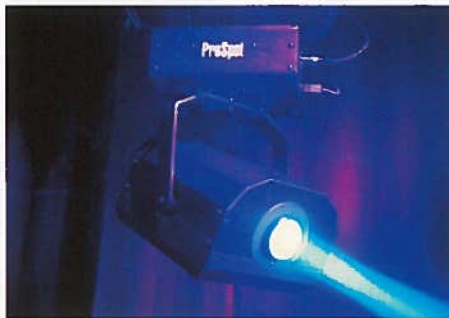
The Blenheim Group and ITE Exhibitions & Conferences have jointly announced the first International Gaming, Amusement, Sound and Light Exhibition - Supergames-Moscow '95 - which will take place at the Krasnaya Presnya International Exhibition Centre in Moscow on 7-10 December, 1995.

Held in conjunction with Mostoy, the first international toys and games exhibition, Supergames-Moscow '95 will unite the world's leading suppliers of casino equipment, interactive entertainment and video games, and the organisers hope that an estimated 50,000 key buyers, and industry professionals from Russia and the CIS will attend.

The rapid westernisation of the Russian market has been astounding: 27% of the population are in the high-earning bracket, and a further 41% have purchasing potential. Since gambling has been made legal in Russia, the number of casinos has doubled in the last year. It is not unheard of for Russians to queue for hours in order to play a video game.

Supergames-Moscow '95 is co-organised by Blenheim, who are also responsible for Supergames in Paris, one of Europe's leading casino, interactive entertainment and video games exhibitions which covers 27,000sq.m of exhibiting space, and ITE Exhibitions & Conferences Ltd, organiser of over 20 international trade exhibitions in Russia and CIS.

Moving Light Co. adds to PanCommand



The Moving Light Company's ProSpot (left), and a group in action (right).

The London-based Moving Light Company is celebrating its first birthday by introducing further PanCommand products to its successful portfolio of moving lights.

The White Light subsidiary, which was set up to introduce the ProSpot into the UK hire market, held its launch event at the Old Vic last January. One year on, the company is capitalising upon its success with a new move to sell, as well as hire, the popular ProSpot. In addition, FaderBeams have now joined the range. These 1kW tungsten, variable beam angle 'Wash' fixtures use a dichroic colour change system to offer a wide range of colours.

Since its launch, the Moving Light Company has worked hard to make the ProSpots a success in the UK. Initial criticisms of fan noise and lack of technical manuals have now been resolved and evidence of their popularity can be seen in the sheer number of tours which have used the moving lights.

ProSpot tours in 1994 included the Paul Daniels Magic show, the Rocky Horror Show, Tommy Steele's 'What a Show' and the Michael Barrymore show. The moving lights were also chosen for the prestigious BAFTA awards and have been used by both HTV and Carlton. At the end of last year, ProSpots were hired for 'Out of The Blue', designed by Mark Henderson, whilst at the beginning of '95 lighting designer Christopher Toulmin specified the ProSpots and FaderBeams for the Live Bed Show.

Another plus for the Moving Light Company is the LDS system, which controls both the ProSpot and the FaderBeam.

The LDS system is a dedicated controller which uses a standard 486PC with a customised console. A popular feature is its ability to pre-programme a show without the actual units present. According to White Light, this, combined with the use of the preset focuses, means that the system is one of the fastest ways of programming moving lights available.

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- Narrow/wide fresnel or PC optics
- Silent cooling system, with thermal switch

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Donmar and Arri in Control

The New Year is continuing Donmar's success with the Arri range of control desks. Recent installations include the Questors and Arts Theatre in London. In January, Mayfair Theatres & Cinemas Ltd ordered their fifth Arri control desk to be installed in one of their chain of West End theatres, - the Phoenix Theatre.

In February, Donmar will be installing a 324 channel, 600 cue Arri Focus desk at the Stag Theatre in Sevenoaks. This new model has special support for moving lights and colour changers, two digital wheels for channel, rate and X/Y positional control and MIDI, SMPTE, networking and remote control options. The Stag specification includes two colour monitors, infra red remote control and a remote focus unit with 36 functions and large LCD display. Arri, meanwhile, are also planning a programme of software upgrades for their control desks.

Wired for Sound at MTV Awards in Berlin

MTV's first European Music Awards ceremony employed a total of 11 Spirit Folio consoles. Used to mix feeds from the main stage, press conferences, DAT recorders and in some cases Mini Disc and CD players, the Folios played a central role in the show's radio coverage - handled by remote radio specialists Wired for Sound.

Wired for Sound was responsible for providing temporary on-air studios for 11 European radio stations who broadcast live coverage of the event from Berlin's Brandenburg Gate. The company had to source equipment from over 20 suppliers in the UK and Germany, and selected the Spirit Folios after examining many options.

The show, held last November, had an estimated global audience of over 250 million and featured many top recording names including Tom Jones, Prince, Take That, Aerosmith, Ace of Base and George Michael.

Owl Spreads its Wings

Owl Video Systems recently celebrated the opening of its new offices in Uckfield, East Sussex. The company, which distributes video projectors, monitors, videowalls and broadcast products has moved for the second time in three years, as a result of its ongoing expansion. In 1993, Owl achieved a turnover of £5.5 million and made a healthy profit, in addition to its substantial commitment to research and development.

The 12,000 sq.ft freehold premises are three times larger than the previous building and the company has invested £1.75 million in the purpose-built premises to bring all of its functions under one roof.

A key aspect of the new complex is a demonstration suite which features highlights from the company's product range, including a 4 x 4 videowall, 36-monitor round video wall, 3 x 3 cube system and five video projectors. This will enable Owl's dealers to experience new and existing products in a 'real' situation and help their sales efforts by offering a demonstration facility to which dealers can bring any customers.

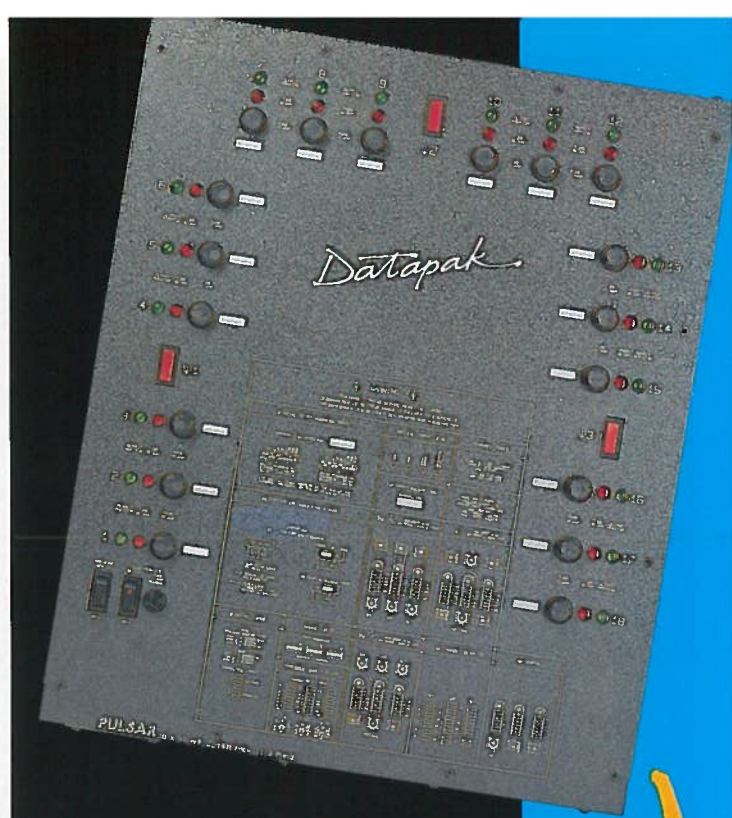
The offices were officially opened by local MP, Sir Geoffrey Johnson-Smith. In addition, as exclusive distributors of Seleco Professional's product range, NEC graphics projectors and Sanyo LCD projectors, Owl Video Systems invited to the opening leading personnel from these companies, as well as over 30 of its accredited dealers.

Cadac's High Profile J-Type

A Cadac J-Type mixing console featured on two high profile events in the US recently - the Kennedy Center Honors and NBC TV Special 'Christmas in Washington' were mixed on the J-Type by engineer Patrick Baltzell. Both events were attended by President Clinton and broadcast on network TV, with inductees for the Kennedy Center Honors including Aretha Franklin, Kirk Douglas, Harold Prince, Pete Seeger and Morton Gould.

The 60-input J-Type is fully automated, using Cadac's sophisticated software programme. The automation is designed to facilitate easier, faster changeovers, as well as allowing for more intricate monitor sends. In addition to live events such as these, local distributor ProMix, of New York, has also supplied J-Type consoles for use on numerous Broadway musicals including Miss Saigon, Sunset Boulevard and Showboat.

The inaugural US event for the brand new Cadac Concert board was the 75th Anniversary of the National Football League, which took place in mid January.



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What's in a NAMM?

The 1995 NAMM International Music Market, held in late January, was the biggest and best attended ever, according to the organisers. New records were set in the number of visitors (over 48,000), exhibitors (978) and countries represented at the show (87).

Exhibitors reported that business was brisk during the four day event which also ran a successful seminar programme. In the space available, it's not possible to give a full review of the show, so what follows is a series of snapshots of some of its highlights.

Group One were showing a bevy of Clay Paky intelligent lights, operated by a Pulsar Masterpiece. JBL launched its new EON Series - a range of enclosures targeted at the MI and installation markets. One of the busiest stands was that of American DJ who had the usual comprehensive range of discotheque hardware. ETA, Leprecon, Lightronics and NSI were all showing dimmers and lighting controls whilst Tracoman had the Martin range. Unipar once again showed their colourful Parcan fixtures. Sabine expanded its FBX Feedback Exterminator with the introduction of the FBX-Solo, a miniature model designed for use on individual microphones. Ness had their full range of lighting effects as did Program Sistem. EAW's latest speaker range was also unveiled: the LA325 is a floor wedge monitor and the first in a new line of full range boxes developed by Kenton Forsythe.

Other companies exhibiting at the show included: Allen & Heath, AKG, ATM Flyware, Audio Technica, Beyerdynamic, Cerwin Vega, Celestion, Crest Audio, Drawmer, Electro-Voice, Eminence Speaker Europe, Fane, Garwood, Headwater, JBL, Penn Fabrication, John Hornby Skewes, Soundcraft, Studiomaster, Wharfedale and Yamaha.

Bose on the Ball



Furthering the trend towards better quality audio systems in sports venues and public places, Tottenham Hotspur Football Club has installed the new Bose Panaray LT system throughout White Hart Lane in North London. The new public address system has been designed so that the stadium can be used for concerts as well as football matches, and consists of a mix of 36 mid, wide and narrow dispersion cabinets and 10 bass units.

The Panaray system is capable of reaching distant listeners with clear, intelligible sound - a result of its patented speaker arrays producing tightly focused, virtually interference-free sound waves, hence its suitability for this application.

Panaray systems are finding favour in venues worldwide and are currently installed in a number of major arenas, including Madison Square Garden and the Omni in Atlanta. In the UK, eight Bose 802s and six Panaray arrays have been installed at Streatam Ice Rink by Middlesex Sound & Light and the system was also recently demo'd to major leisure companies in Blackpool.

Daily Mail Ski Show



Neg Earth Lights supplied the lighting equipment for the recent Daily Mail Ski Show at London's Olympia exhibition centre.

The spectacular ski slope centre-piece to the show was lit by 18 High End Cyberlights with custom gobos, along with more than 70 assorted Par 64s. Four 8-Lite and five 4-Lite Molefays were also included in the rig. The understage area had to be kept completely clear throughout the show due to the presence of the hydraulic equipment that raised and lowered the world's first computer-controlled hydraulic ski slope, designed by Peter Kemp Consultants. The rigging was supplied by Concert Lights UK.

Show Pair . . .

January saw the Live! and Outdoor Event shows held in London. The third Live! Show was held on 17th-18th, attracting 1,150 visitors over the two days. Among the exhibitors were Klark Teknik, Harman Audio, Avolites, Midas, Martin Audio, Pulsar, Autograph Sales and Turbosound, to name a few.

At the Live Awards Dinner, held at the Hyde Park International Hotel, the main awards were as follows: best lighting console - Avolites' Rolacue Pearl; best new lighting Luminaire - High End Systems' Cyberlight; overall lighting award - Vari-Lite, for the VL5; most popular sound mixer - Midas XL3; best sound FX/processor - BSS Audio's Omnidrive; best new sound mixer - Soundcraft's SM Series.

In the company awards section, Concert Production Lighting won best lighting rental company, Britannia Row won best PA company and the award for most progressive sound company went to Skan PA. The award for European company of the year was won by Clay Paky.

Outdoor Event 95 achieved new attendance records, with over 5,000 visitors for the first time in its five year history. Held at the Wembley Conference Centre, the show had over 250 exhibitors representing a wide range of performers, suppliers and services for the events industry.

TP Put it in Print

TP Sound Services Limited have made available their 1995 Rate Card. It lists all their latest kit and hire charges. The detailed listings cover amplifiers, consoles, mains distribution, microphones, multicore systems and processing, as well as radio mics, speaker systems and their Multi-Art show control system.

For further details contact Theatre Projects Sound Services, telephone 0181-813 1112.

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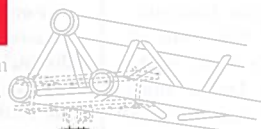


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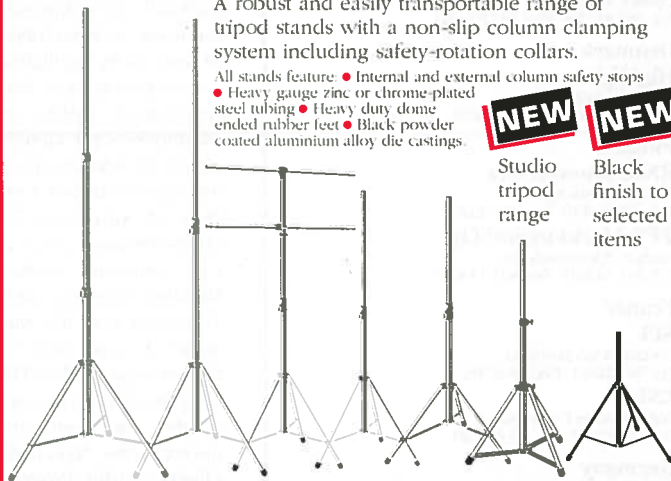
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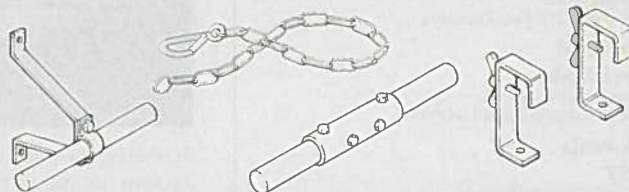
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Conclusions of AETTI Research

The Arts and Entertainment Technical Training Initiative, one of the industry's lead bodies which is delivering Scottish and National Vocational Qualifications (S/NVQs) for backstage workers in theatre, has been at the centre of a major research project funded by the European Commission.

The project looked at the feasibility of providing training in the place of work, in terms of what exists at the moment and what can be provided in the future, and compared these findings with those in other countries in order to ease the movement of people around Europe. Three theatres were selected as being good barometers of their type - the Nuffield Theatre, Southampton, the Theatre National de la Colline in Paris and the RO Theatre, Rotterdam. Each worked with a local training organisation to monitor progress. In the UK this involved the City of Westminster College, in Paris, the Centre de Formation Professionnelle des Techniciens du Spectacle (CFPTS) and in Rotterdam, the Stichting Opleiding Theatertechnici (SOTT).

The year-long project undertook surveys into work patterns and quickly identified some fundamental differences between the three countries. For example, funding is lowest in the UK, whereas in France a levy is deducted from all wages and fees to fund training. It was clear that in each of the three countries the best training involved management support, as well as individual commitment. In Holland and France, restrictions on the number of working hours are enforced by law, but although the UK has not entered into the Social Contract, the number of working hours is very similar. It was also discovered that the term 'training' required definition because users felt this covered everything from formal tuition to informal and impromptu demonstrations from experienced staff.

Most employers were concerned with the development and quality of their staff rather than the pure enhancement of their technical skills and it was thought that national and international exchanges could contribute to this, but it was noted that such schemes tended to be rewards for good staff, rather than given to everyone as part of their planned development. All three theatres are now working on exchange schemes which the project has placed in a higher priority than hitherto. Similarly, it was thought that schedules and budgets should encourage attendance at trade shows and technical seminars if staff are not to feel 'out of touch'. Most theatres were well aware of the major shows and had active programmes of disseminating the trade technical publications. Video and CDi were thought to be valuable ways of demonstrating induction programmes, safety issues and new techniques, especially during the 'half' and other occasions when work was usually not possible. Overall, the research felt more should be done to recognise, encourage and support the master/apprentice relationship between experienced and young staff. In this respect, the French system, called 'tutoring', was a useful model. Tying these themes together, the project produced a flowchart which demonstrates how the results of any activity can be fed back and integrated into training programmes.

There was much agreement that training would be improved if it was informed by an assessment system and it was agreed that a system which produced outcomes would enable different country's methods to relate to an outcome each could identify and recognise. The AETTI's qualifications were a useful model of an assessment system, and the generation of such a system, which can be used by all countries, and thus aid the mobility of people, is to be next phase of the project starting in mid-1995.

Zero 88 Achieve Quality Standard

Zero 88 Lighting have joined the select, but ever increasing band of industry companies to achieve the coveted BS EN ISO 9001 (formerly BS5750) accreditation. Freddy Lloyd of Zero 88 told L+SI: "We are no longer the 'cottage industry' many of us started as some 25 years ago; we have worked hard to achieve a professional standard. As more and more companies aspire to this international standard of excellence, so the overall standard and image of our industry will be improved."

Tyrell Studios go Uptown

Tyrell Studios in Madrid have installed a 56-channel Uptown motorised fader system in the facility's Neve 8128 console. The installation, carried out by Reflexion Arts, Audiomation Systems' agent for Spain and Portugal, was completed in two days and included the addition of mute switches, not fitted as standard on the Neve 8128.



Pirella Göttsche

GALILEO

TECNOLOGY AND RELIABILITY

GALILEO II

Galileo II stands out for its advanced technology, reliability and unequalled performances such as high speed of gobo-changer (fixed and rotating ones), colour-changer, strobe, opening/closing of the diaphragm, smooth dimming and extremely low noise level. This is due to the transmission that is no longer mechanical, but with special professional belts, which are non-slip and noiseless. The main characteristics of Galileo II are:

GOBOS: • 8 gobos, of which 4 rotating and all interchangeable • 25 possible pattern combinations • Angular gobo position in relation to PAN ensures steady images during beam movement. • Gobo-change with audio sync.

COLOURS: • 8 colours • Bi-coloured beam

• Variable speed rainbow effect
• colour-change with audio sync, in two-tone or single colour setting
• Colourchange with or without blackout.

IRIS: • Very high speed, opening/closing (100mS) extremely low noise and linear. **SHUTTER/STROBE:** • Variable flash rate (0,5-12 flashes/sec.) • Strobe can be run in sync, with audio bands resulting in effects with really great visual impact.

DIMMER: • Very high speed, extremely low noise and linear for 100% - 0% dimming.



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Lights on the Humber



The longest single-span suspension bridge in the world, the Humber Bridge in Humberside, is now lit using Osram's Vialox Nav Super (SCN plus) high pressure sodium lamps, fitted with Breha arch tube supports, which help protect the lamp from vibration.

In consultation with Osram's development department, Bill Grant, maintenance manager for the bridge, chose the lamps to reduce maintenance costs and lengthen replacement intervals. The lamps, which are manufactured in Osram's UK factory at Shaw, Lancashire, replaced the 200 existing ones which ran the length of the bridge.

Superbowl XXIX

Bandit Lites has announced their appointment as lighting supplier for Superbowl XXIX, to be held on January 29, 1995 at the Joe Robbie Stadium in Miami, Florida.

Bandit is providing all of the lighting and power distribution equipment for the half-time show, produced by Walt Disney World.

Two 48ft tractor trailers full of equipment will be on site from January 18th until February 1st. The equipment was prepared and shipped from Bandit Lites' Knoxville warehouse, and a staff of four will guide the production.

Bandit Lites is also currently on tour with R.E.M., Aerosmith, and Faith No More.

Deco Leisure Move

Deco Leisure & Dare Pro Audio have moved offices, and can now be found at 10 Carver Street, Birmingham B1 3AS, telephone 0121-693 9292, fax 0121-693 9293.

Theatre World 95

An exhibition aimed at bringing together all aspects of theatre under one roof will take place at Wembley Exhibition & Conference Centre from 12th - 14th May.

Designed to attract professionals, technicians, enthusiasts and audiences of all levels of interest, Theatre World 95 is being supported by numerous industry bodies, including The Independent Theatre Council and The Guild of Directors, as well as The Stage newspaper and leading theatre publications from the USA and Europe.

Among the highlights of the exhibition will be the finals of the 'Drama Student of the Year' Awards and a range of musical stage performances and drama workshops. A lecture and seminar programme will also be run, featuring topics as diverse as 'How to transfer a multi-million pound show to a low-budget tour' and 'CAD in set design.' Other attractions will include a careers centre and recruitment fair.

Exhibitors at the show include White Light, Theatre Projects, Lightfactor, Hall Stage, Arrow Rigging, Flint Hire & Supply, Northern Light, Harlequin, PL Parsons and Primarc.

Booking information is available from Performing World Events, London, on 0181-364 8680 or fax 0181-364 8063.

Jade . . . unjaded

Despite the successful launch of the Solitaire production console, Soundtracs' Jade production console remains popular. The score for ITV's new courtroom drama series, Kavanagh QC, was recently composed and produced by Roger and Anne Dudley on a Soundtracs Jade. Anne Dudley, originally from the Art of Noise, has recently released her first classical album, Ancient & Modern (on the Echo label), which was also produced on the Jade.

Other new Jade users include Per Gessle and Marie Frederiksson of Roxette, UK remix trio Fluke, Shioh Studio in Singapore, UK dance band K-Klass, Bangkok's Jam Studio in Klongton and Homestead Studios, in County Antrim, Northern Ireland.

New NEC Dealer

Owl Video Systems, the distributor of video projectors, monitors and videowalls, has been appointed distributor of NEC's new series of data graphics projection systems. Based on NEC's award-winning MultiSync projection monitors, the new 6PG Plus, 9PG Plus and 10PG offer, in addition to high-impact images, the brightness and colour accuracy associated with the earlier models and new innovative features to meet the demands of presentation and display environments providing even higher levels of image quality, reliability and ease of use.

All three projectors incorporate the newly-developed AccuBeam, which provides high levels of focus control and flexibility. According to NEC, the 10PG is one of the most advanced graphics projectors on the market, designed to meet the most stringent image projection requirements while the 9PG Plus is a straightforward projector compatible with almost any computer or video source and the 6PG Plus offers a low cost, business quality solution.

Both the 6PG Plus and 9PG Plus monitors are capable of projecting bright, sharply detailed images on screens from 5" to 25" diagonal. This degree of image clarity is made possible by NEC's AccuPoint digital convergence memory, which gives a convergence accuracy of 99.8% through the projector's pinpoint. The colour reproduction by the 6PG Plus, 9PG Plus and 10PG projectors is achieved by high resolution CRTs and lenses.

Pulsar Seminars

Pulsar will once again be running their in-house seminar programme. This has proved very successful over the past three years, and Pulsar hope that, with the addition of a new two-day workshop, it will continue to be popular.

The workshops will target specific application types, and cover aspects of CAD design, specification, presentation, installation and commissioning of systems, covering suitable products from the full Pulsar & Clay Paky ranges of lighting equipment.

For further information, contact Pulsar in Cambridge, telephone (01223) 66798.



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Praise for Avolites . . .

Avolites have been receiving attention from people in high places recently.

A Diamond II console was the object of the Dalai Lama's interest at the Trondheim Students Union during the Isfit Student Festival at the end of last year. His order is apparently in the post.



The Dalai Lama shows a student how to work the Diamond II.

More recently, the Rolacue Pearl was awarded the 1995 Live! award for 'New Lighting Console' in January. The Rolacue Pearl has 512 channels, 450 memories and full moving light control. Steve Warren, who collected the award, told L+S: "the advance orders we have had for the Pearl reflect keen interest from the marketplace. I think 95 will be a very successful year for Avolites."

Martin Audio

Martin Audio enjoyed success at the recent Clothes Show Live Exhibition, supplying systems for two award winning stands.

One of these, the Joe Bloggs stand, which won the award for the best entertainment during the show, was equipped with EM15s, the EM150 sub-bass and LE350s, which were used for live monitoring.

Martin have also been enjoying success with the recently-launched wedge monitor - the LE350. The latest sales have been to Theatre Projects and the Warwick Arts Centre who have taken eight and nine LE350s respectively, both supplied by Marquee Audio. London News Network have also recently taken delivery of LR350s for use in their studios.

Take That have taken delivery of an EM25 System, which they are using for music playback during dance rehearsals. The system was supplied by Capital Sound Hire, who have also supplied an F2 system to the band.

Elsewhere, Inta Sound have supplied systems for Kylie Minogue, Bad Manners and The Damned. Inta Sound had been sub renting F2 from CAV in Gloucestershire for well over a year before purchasing their own system.

TESA Award for LCI



LCI's Marlyn Weeks accepts the trophy from Burt Van Horck, chairman of TESA.

The 'New Product of the Year' Award has been given to Laser Creations International Ltd (LCI) by The Event Suppliers Association (TESA), at the annual Event Industry Awards 1994. The ceremony took place at Wembley on Wednesday 18th January, during the Outdoor Event 95 Exhibition.

The award was given for their water screens and laser video projection. A further nomination was awarded in the International Event Industry Award for the work that LCI has done to develop markets worldwide for its products, including the Middle and Far East.

LCI's water screens are large semi-circular screens of water up to 35m wide and 18m high, onto which static and moving images can be projected. The LCI Laser Video Projector, with its infinite focus qualities, can then project video images onto the screen creating unusual illusions, such as heads appearing out of the water and speaking to the audience.

Brixton Academy Begins Refit

Work has begun on the world-famous Brixton Academy, which has been awarded over £400,000 funding from the Brixton Challenge Company for restoration and development. English Heritage and Foundation for Sport and the Arts are also contributing to the £1.6m plan, which is scheduled for completion in 1998. Brixton Academy is one of London's most popular venues, having played host in recent years to artistes such as Lenny Kravitz, INXS, Robert Plant, Carter USM and Brian May. The restoration will include the installation of 1,226 removable seats in the auditorium, sound proofing, and a facelift for the exterior.

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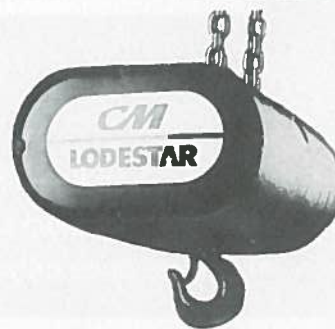


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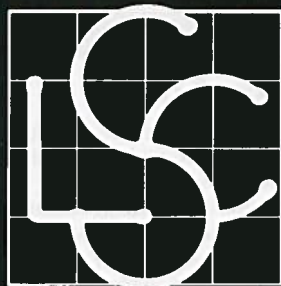
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Scene Memories - 12 pages	144	288	432
Total Memories	1022	1022	1022
Scene Masters	12	24	36
Chases - 99 steps per chase	12	24	36
Stacks - 99 Cues per stack	12	24	36
Sound-to-Light setups	12	24	36

- Proportional softpatching - 4 patches - multiple dimmers per channel allowed
- Crossfade or snap steps on individual chases
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- Channel selection for Highest-Takes-Precedence or Last-Takes-Precedence (for colour changes and moving fixture control)
- Timing Fader with View/ Ride facility
- 20 character by 4 line LCD with edit wheel and six function buttons ensuring easy operation
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- 2 effects playback masters
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- Add/Kill master with mode button
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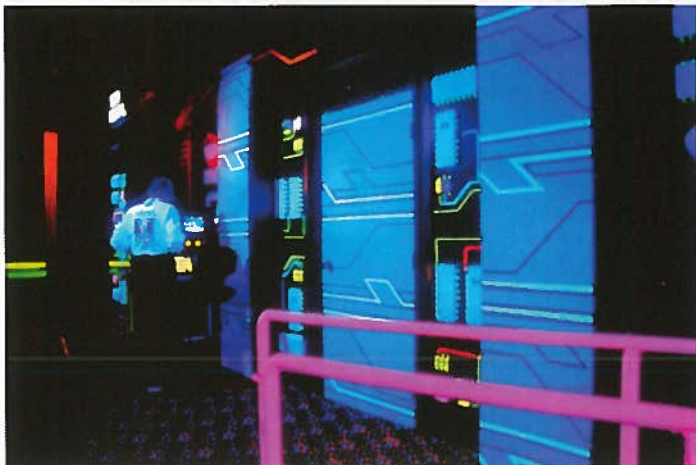
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Wildfire Theme For Las Vegas



Los Angeles-based Wildfire Inc has announced the completion of the first in a series of themed entertainment installations using the Wildfire system of long-throw UV fixtures and custom fluorescent materials.

The Cinema Ride at the Forum Shops at Caesars Palace, Las Vegas, uses special Wildfire vacu-formed fluorescent panels to give the visitor the impression of moving inside a massive, glowing computer.

Auerbach Reorganise

After 21 years in business, S. Leonard Auerbach & Associates has announced the reorganisation of the firm into Auerbach and Associates, who will handle theatre and media facilities design and Auerbach and Glasgow, who will act as lighting designers and consultants.

Auerbach and Associates, Inc continues to function as the parent company with Auerbach and Glasgow operating as a division within the corporate structure. Len Auerbach, president of Auerbach and Associates, Inc and vice president Holly Auerbach are now joined by new vice presidents Patty Glasgow and Steve Pollock.

Auerbach and Associates has also announced the opening of a New York office, headed by Steven Friedlander, principal theatre consultant. Friedlander's relationship with S Leonard Auerbach and Associates began in 1993 when the firm, SFA, Inc, joined forces with the San Francisco-based theatre consultants in the collaborative design of a 1,000 seat production showroom for Celebrity Cruise Lines. The growth of this relationship is now cemented by Friedlander's formal association with the company.

Current project work includes renovations of San Francisco's War Memorial Opera House and the Philadelphia Academy of Music. New construction projects include the New Orleans Convention Center expansion, as well as showroom theatres at the Eldorado Hotel in Reno and the Soaring Eagle Casino complex in Mt. Pleasant, Michigan.

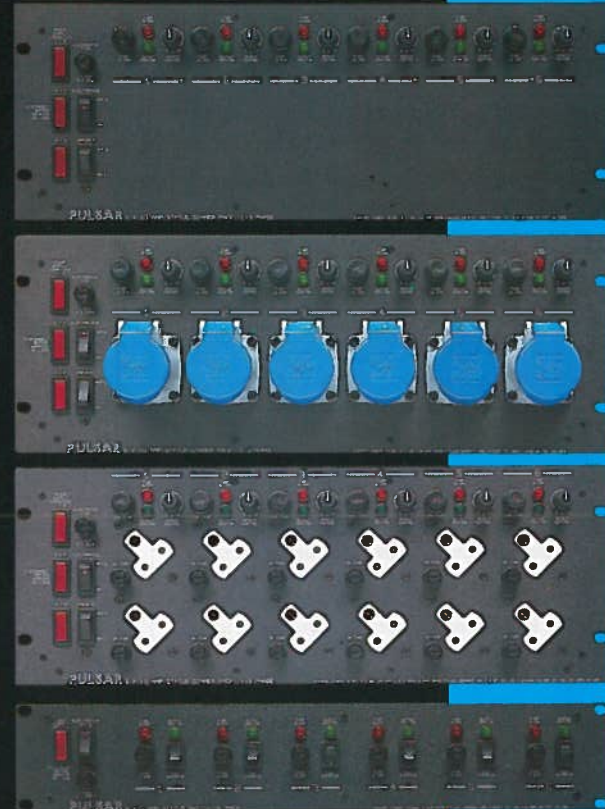
Auerbach and Glasgow is architectural lighting designer for the Soaring Eagle complex, and also lists among its concerns the new International Wing of Vancouver International Airport in British Columbia, as well as renovations of the Geary Theatre and War Memorial Opera House in San Francisco, and the Warner Brothers Pavilion and Westin Bonaventure Hotel in Los Angeles.

New Catalogue from PLE

Derbyshire-based Philip L. Edwards, suppliers of theatre lighting, have published a new catalogue. This brings the available range of equipment, mostly from Strand, up to date, and includes the GSX and MX controls and Optique and Alto lanterns, as well as White Light VFX effects lighting. A list of second hand equipment is also available.

Lite Smiffs Become LTM Dealer

Lite Smiffs Ltd have been appointed the exclusive UK dealer for LTM Film, TV and Studio Lighting. The range available extends from the Pepper 150W to LT-20000 20kW studio heads, cyclorama and softlight units and 200W discharge kits, through to Luxarc 12/18 kW HMI systems, including the Cinepar single ended units. For catalogues or further information telephone 0181-845 9337.



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Ethel Langstreth

Ethel Langstreth, who was awarded the MBE in 1975 for services to the theatre, has retired after serving the ABTT, the Theatres Advisory Council and the British Drama League for over 30 years.

Ethel joined the British Drama League in 1957, and seven years later achieved the post of assistant to the administrator. She then took on the responsibility of providing administrative services for the ABTT and the TAC. In 1979, with the ABTT's move to larger premises in Great Pulteney Street, Ethel became an ABTT employee, whilst still taking care of the interests of the TAC and the STD. When Arts Council funding was withdrawn in 1986, the organisation suffered a heavy blow, and in 1992 Ethel took up lone residence in a much smaller office in Bermondsey Street, where she has continued to carry out every necessary task in the running of the association.

The ABTT intend to make a formal presentation to her at their annual dinner on 6 April this year. Companies and others in the industry have been invited by ABTT's chairman David Wilmore to contribute toward a retirement fund for Ethel, and any donations should be sent to the ABTT at 47 Bermondsey Street, London SE1 3XT with cheques made payable to the ABTT (Ethel Langstreth Fund).

A HUNDRED YEARS AGO THIS MONTH

BRITISH THEATRICAL PATENTS 1801-1900

Intro' to Patent Abridgement 2432 of 1895 (Harry Stelling)

The important thing about the paper-work of theatrical patents is the detailed account given there of each invention and how it is to be applied for use in the theatre. But not all of these inventions were practicable. Some, of course, were brilliant: others probably never left the drawing board. Whatever happened, I wonder, to the clever gadget for making an elephant turn a somersault? We shall, doubtless, never know. Careful examination of patents submitted by genuine theatre folk sometimes yields additional and rewarding details otherwise lost to us. With the account of his quick-change costume, Harry Stelling includes drawings which show not only how the thing worked, which is what you would expect, but also two different versions of the idea and actual details of his facial make-up.

2432. Stelling,
H. Feb. 4.

Wearing apparel for athletic purposes.—Consists of a loose garment A, such as a night gown, shirt, wide coat, or blouse, having a lining D to which straps B, having hooks H at their ends, are attached, and is intended for use by performing gymnasts. The person wearing the garment performs on a bar, and, when desired, slips or is pulled through the garment, leaving the latter hanging therefrom.



The above extract comes from British Theatrical Patents, 1801-1900 by Dr Terence Rees and Dr David Wilmore, which will be published later this year.

DHA's Light Curtain Success

The success of DHA's Digital Light Curtain has been reinforced by the largest delivery yet, to Natasha Katz, for the MGM EFX show in Las Vegas.

An ambitious project, the new MGM Grand Hotel, Casino & Theme Park in Las Vegas is a vast complex housing in excess of five thousand hotel rooms, two theatres and an arena. The larger of the two theatres, the MGM Grand Theatre, is currently in the throes of production for what is to be, allegedly, the world's most expensive theatrical extravaganza ever. Katz first came across the Digital Light Curtains when she used them in her design for *Beauty and the Beast* at Houston Music Hall in 1994. She was so impressed with their performance and the ease with which they could be rigged and programmed that she decided to use them for the EFX show, and a total of 44 units were sent to Las Vegas and installed in October 1994 under the supervision of DHA's Tad Trylski.

DHA's moving effects department also had a considerable input into the production supplying 64 RTR 003 gobo rotators for ETC Source 4 lanterns and 20 Mk 4 DC Controllers. This is also the largest request for the new style DC Controllers DHA have supplied to date, allowing more effects units to be independently run off fewer controllers.

The MGM's EFX show, which also stars Michael Crawford, is scheduled to open in mid-March.

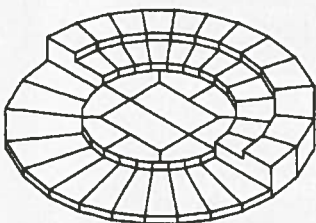
XTA Appointment

XTA Electronics have recently appointed Beyerdynamic France SA to distribute their signal processing equipment in France. The new contact is Marco Vifian, Beyerdynamic France SA, 7 Rue Labie, 75017 Paris, France, telephone +33 1 44 09 93 93, fax +33 1 44 09 82 33.

Adam Hall Install

Adam Hall are now able to offer an installation service incorporation a leasing package on Wharfedale Sound Systems, Citronic amplifiers and mixers and Denon CDs, to nightclubs, hotels, pubs and theatres.

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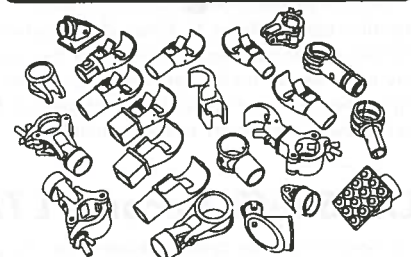


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The Television Show '95

The Television Show, now in its fifth year, will take place from 15-17 March at London's Business Design Centre. A host of industry luminaries are set to present their vision of how British tele-

vision will develop during the next few years. In a three day programme of workshops within the exhibition, high profile speakers will include Janet Street-Porter, who will unveil her plans for new Cable TV channel Live TV Plus, Michael Grade, who will discuss his plans for Channel 4, and Stephen Dorrell MP, National Heritage Minister.

The focus of this year's event is the business of television production, an opportunity to make contacts and learn about new ways of producing creative television, discovering new ideas and gaining inspiration for creating more profitable programmes.

While major hardware manufacturers, including Sony, Panasonic and Panavision will be in attendance, the majority of exhibitors are facilities and service companies to both the BBC and the independent sector. The Show, at which exhibition space has been sold out for several months, features a range of production and post-production facilities from OB trucks, to the latest cameras, lighting, music libraries, to graphics and other such services.

Over 160 exhibitors will occupy 2500sq.m of floorspace, including a collective from BBC Resources who will be promoting BBC programme making facilities in London and the regions.

Once again, the popular HDTV Festival, in association with Sony Broadcast & Professional, returns allowing visitors to see the UK's leading High Definition pictures. The event will offer producers and directors the chance to talk to creators of recent high definition programmes; compare HD and film projection and find out about marrying the two. A highlight of The '95 Television Show is The Indies Awards, presented to independent programme makers. BBC Midlands & East will once again televise these awards for coverage on Pebble Mill. For the first time this year, the awards ceremony will take place at BBC TV Centre, one week prior to the exhibition.

Over 8,000 people are expected to attend the three day event. Ticket prices are £10 (pre-registration) or £20 (on door). For more details telephone (01203) 717897.



THE
TELEVISION
SHOW

AC have the Answers

For those of you who have struggled to keep fog density to the level where the light beams are clearly defined and the audience can still see the stage, AC Lighting might well have the answer. They will soon have a device that simply measures the oil or water particles in the air and controls the power of the fog or cracked oil machine as required. The company are being a little coy about its name, but promise to reveal more when it is finally released later in the year.

Meanwhile, AC also claim to have an answer for those who are looking to increase the dramatic effect of existing lighting fixtures. The Vision Light Enhancer fills the air around the stage with microscopic particles of food grade mineral oil. Almost undetectable, the fine mist enhances the light, enabling the audience to see the projected beams, without the sometimes distracting fogging effect of conventional systems.

For full technical details call AC Lighting in High Wycombe.

People in the News

High End Systems have appointed **Dennis Jolly** as vice president of sales and marketing for the United States, whilst **Woody Smith** joins the company as the director of research and development. Jolly worked in sales, marketing, and business management consulting before joining High End Systems. Smith comes to the company from Orion, having also founded and operated various successful lighting and sound companies, including Cyber-Kinetic and Spectra-Light.

Meyer Sound Laboratories Inc have appointed **Jim Cousins** to the post of European co-ordinator. The announcement closely follows the establishment of a European service centre in Holland. Cousins has been associated with Meyer Sound for more than 10 years on a consultancy basis and has extensive knowledge of both the product range and client base.

Phill Capstick has been appointed to the board of directors of AC Lighting. Formerly UK sales manager, Capstick has been a key player in the successful growth of the company. He joined AC eight years ago as a warehouse man, where his determination and product knowledge quickly led him to head up the UK sales team.

Production Arts Lighting has recently announced the promotion of five key managers. **Wayne Lawrence** assumes the role of vice president of the rental group. Lawrence has been with the company for 15 years, and will continue to focus on sales and customer service efforts. **Michael Lay** is now vice president of the Systems Integration Group. His area of responsibility will be management of systems installations in the US and abroad. **Anne Johnston** has been promoted to vice president of Image Systems. Her responsibilities will include the management of the projection market, including Production Arts Lighting West in Los Angeles and the Pani product line. **J. Thomas Ferguson** is the new vice president of rental operations, overseeing the management of the entire rental staff in New York and New Jersey. **George Alexander** has been promoted to chief financial officer. Alexander joined the company in 1990 after 15 years' experience on Wall Street.

Exhibition organisers, P&O Events, are set for expansion in 1995 with the appointment of four new show directors to develop new and current shows. Of interest to L+SI readers is the appointment of **James Brooks-Ward** as show director with responsibility for the management of the PLASA Light and Sound Show and Vision 95, the UK video, film, sound and broadcast technology show. He will also take charge of developing new shows with PLASA in the entertainment technology sector.

Our apologies to **Stephen Phillips** who we inadvertently omitted to mention in our news story on Vari-Lite's new company Irideon Inc. He has joined the company as European sales manager and will work alongside Rusty Brutsché, Robert Dungan, Anne Valentino and Gina Yates.

Changes at Celestion

After eight years at Celestion International Ltd, chairman and managing director, **Gordon Provan**, has decided to leave the company. Gordon has also been group managing director of KH Industries (UK) Ltd, the holding company of both Celestion and KEF, for the last two and a half years.

Gordon Provan told L+SI: "Celestion's sales have almost doubled over the last three years. I have thoroughly enjoyed the challenges presented during the eight years I have been involved with the company. From a personal point-of-view I consider it is the right time for me to seek a different kind of challenge, and change the direction of my career."

Andrew Osmond, currently KH group chief executive, has been appointed acting managing director of Celestion International Ltd with effect from 1st February, 1995.

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A man with a beard and curly hair, wearing a white shirt and a dark tie, is carrying a large stack of electronic equipment. The equipment consists of several large, light-colored metal cabinets with ventilation grilles and control panels. The man is looking towards the right. The background is a bright, hazy sky.

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Afterburners in Hollywood

ARX North America chief Bruce Maddox reports several recent sales of the Afterburner dual channel enhanced compressor/limiter, and other ARX products, to the TV and Film production industry in Hollywood

Paramount Television's sit-com 'Wings' has been using the ARX Afterburner for the recording of the show's audience tracks. Culver Studios, where Gone With The Wind was filmed, have added the ARX Afterburner to their already impressive portable sound reinforcement packages for location use during playback and record on location.

ARX power amplifiers have recently been chosen by the Loudspeaker Company, in LA, for inclusion in their surround sound monitor rental packages. The debut for the SX500 Amps was the recent Columbia Pictures release 'Immortal Beloved'.

Garwood Expand to USA

Garwood's international success with its in-ear monitoring system has necessitated some major corporate developments.

With effect from this month, the company opens a subsidiary operation in the USA - Garwood Communications Inc - which is based in New York. In Europe, Garwood has acquired the interests of its European distributor, PRS Ltd, and will now trade directly with customers in the UK and via agents in continental Europe. Garwood also has a new managing director in Andrew Frengley who has joined the company from PRS.

Finally, the company has also moved premises. The new address is 136 Cricklewood Lane, London NW2 2DP.

Crest Audio UK

Crest Audio Inc has announced the launch of Crest Audio UK Ltd.

Established to handle distribution of Crest products in the UK, the company is headed by Andy Simmons, formerly professional markets manager for Crest Audio Europe. Assisting him in the sales department is George Thorn who brings with him many years of sales experience in the pro-audio field.

Utilising the existing personnel and resources of the Crest Audio European offices in Hove, East Sussex, the two operations will shortly be moving into new premises in the Brighton area that will also house a service department and warehouse facility.

Turbosound Hit NZ

The first Turbosound Flashlight system has arrived in New Zealand: PA systems specialist Oceania Audio has taken delivery of a Turbosound Flashlight and Floodlight rig.

The core of Oceania's new system is made up of 16 Flashlights and 32 Floodlights with full flying hardware and system managers. The cabinets, which had survived a long sea journey from England to New Zealand, received a windy welcome as Jose Carreras and a 91-piece orchestra braved stormy conditions to perform for a 25,000-strong stadium crowd. In December, the Flashlight rig supported Billy Joel on the Auckland dates of his world tour.

Lamba chosen by Cerwin Vega

Lamba Plc have been appointed the sole UK distributor for Cerwin Vega's professional range of loudspeakers.

As the UK distributor for KAM, Stanton and Gemini, Lamba already specialise in pro-audio distribution, and view the addition of the Cerwin Vega range as complementary to their existing pro audio line of equipment. Lamba will handle the entire Cerwin Vega professional range from their renowned junior earthquake Bass cabinet through to the Prostax range.

Lamba is currently setting up a pro dealer network across the UK for both the installation and live hire markets.

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New Dealers for Euro Tech

Luna Tech Euro has announced new dealers in Germany and Finland for their Pyropak range of products.

In Germany, the products are available from Special Effects, based at Zennerstr. 6, D-81379 Munchen, telephone (49) 89 7236 598, while in Finland, the dealer is now DSC Information Technology, who can be reached at Perustie 11, SF-00330 Helsinki, telephone (358) 0484 022.

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Messe Berlin

Spring in the Air . . .

As expected, the spring touring season is getting off to a brisk start this year, and a little earlier than is normal. Both Britannia Row and Light & Sound Design will have all their equipment out during February. LSD are even having to contemplate manufacturing some more truss! These two companies are not alone; everyone looks set to have a busy first quarter, especially with acts touring the town hall provincial theatre 1,000-3,000 seater market. The big bands are there too, but are keeping their powder dry until a little later: Janet Jackson loads out on March 2nd and is soon followed by a host of Arena productions. Her brother will also be venturing forth again later in the year. Rumour has it the tour is primarily to fulfil all the shows cancelled on his last ill-fated excursion, but this is perhaps a cheap shot, as he is apparently recording a new album to accompany the tour at this moment.

The big production that seems to be attracting most attention, and the one we can expect to produce some new and innovative ideas, is the VE celebration being held in Hyde Park on the 6th-8th May. The organisers are expecting 130,000 visitors per day, including 52 heads of state - probably the best year for the security industry since Chuck and Di got knotted. LSD are also bidding for a major event around August/September time (they're not saying what just yet) and are expecting to put 500 of their new moving Washlights onto it. With only 30 of these lamps produced since they were first shown at PLASA in September, another handful of grain should be dropped on the famous Black Country Hamsters to turn the wheels of industry that bit faster.

Tom Armstrong, now on Chile's most-wanted list for evicting a homeless family of 30 from UB40's dressing room, is keen to point out a major success for European pop broadcasting. Not only was there a severe lack of 'luvviness' at the recent MTV awards ceremony in Berlin "not a single change was made to the set - unheard of!" Quoth Tom, "and we actually brought the show in at 30 seconds less than scheduled." (Is this a challenge for the Brit Awards to aspire to, we ask ourselves?) The show, staged in front of the Bradenburg Gate, featured the novel idea of a see-through back-drop. This proved so exciting that the Americans are now contemplating broadcasting their next home-based awards from in front of Mount Rushmore.

Partly prompted by the death of Tim Warhurst last year (see L+SI October), the 20 crew members on the latest Morrissey tour will all be insured against accident, death and injury, courtesy of the production budget. Tour manager Chris Vaughan has arranged the cover with the help of Alf Doodson (regular band/promoter insurers). Not only is the cover relatively cheap (£350 for just over three weeks) but it also provides rapid compensation rather than having to wait aeons for litigation to work its way through. There is also income replacement cover should you be obliged to leave the tour after breaking a finger nail coiling multicores.

I doubt this is the first time a road crew have had specific insurance cover - John Coppen has for years been encouraging individuals to take out their own, but it is certainly the first time I've been made aware that such cover is easily available and as Chris pointed out, "it's cheaper than the budget for load-out sandwiches."

Steve Moles

Canon Get in Lane

Canon background music loudspeakers have been installed at the glamorous Lloyds Lanes bowling centre in Eastbourne.

Atmospheric Audio & Lighting Ltd were commissioned to install the audio system. With 10 pairs of Canon V-100 background music loudspeakers between the visual monitors, the installation provides a discreet audio system, with a smooth sound dispersion throughout the bowling and rest areas, no phase error between cabinets and no discernible hot spots - even along the length of the lanes.

The V-100s are used for paging announcements over the lanes and music from the CD, tuner, video and satellite TV. The V-100 application in Eastbourne follows the installation of Canon V-100s at the Lloyds Lanes site in Raynes Park.

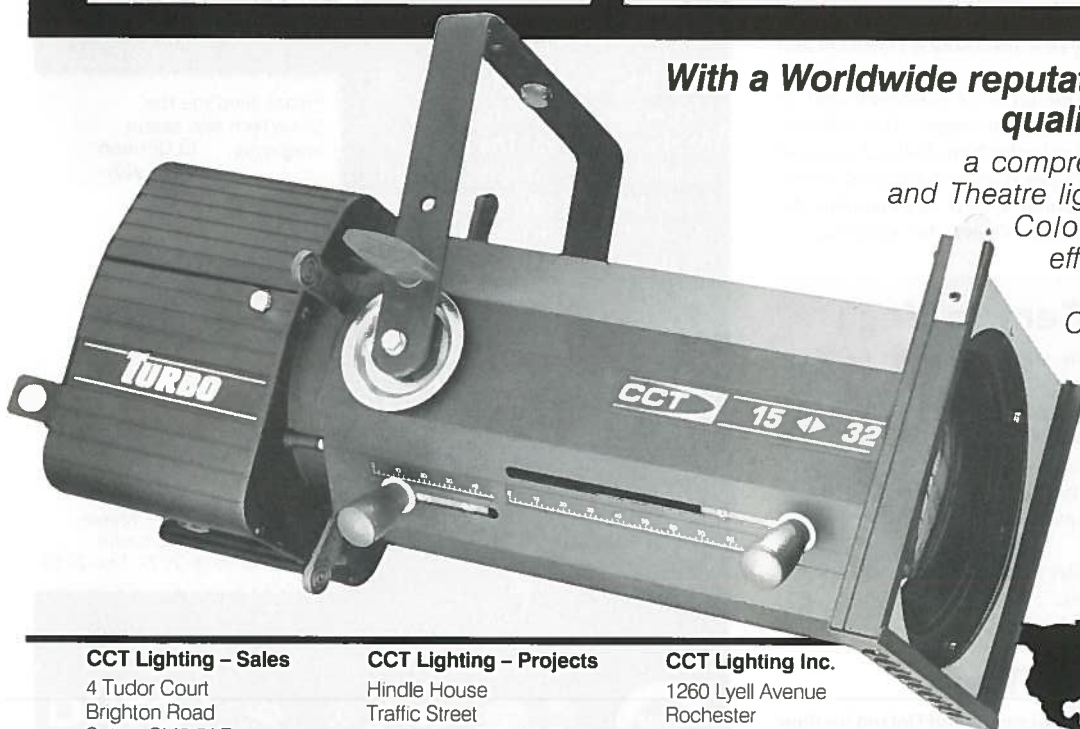
New DDA Dealerships

DDA of Hounslow have announced new distributors for their full range of consoles. Scandec Systemer will represent DDA in Norway, while AmpCo will handle the products in Belgium. Two new distributors for the UK are Syncrotech Sales and Raper+Wayman, both based in London.

DDA also report that sales of their Interface console have been high, both in the UK and abroad.

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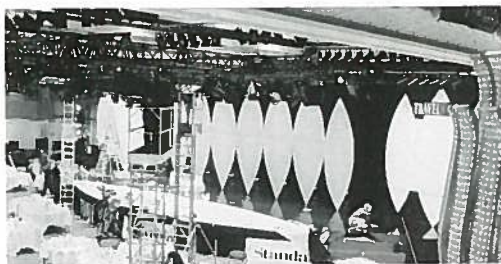
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WORLDWIDE DISTRIBUTION

Golden Globes 1995



The annual highpoint of the Travel Industry's calendar, the Golden Globe Awards (the preparations for which are seen above), were held at London's Grosvenor House Hotel recently, with lighting provided by Vari-Lite and Theatre Projects.

Lighting designer Steve Mackie, of production company Format TDC, had to cater for a dinner and dance, the awards ceremony and live on-stage entertainment, which included a Disneyland Paris 'The Lion King' performance. His rig consisted of 18 VL2Cs and 21 VL5s, seven of which backlit the row of gauze ellipses that made up the backdrop to the stage set. A Pani BP 1200W projector projected logos across the set, while Parcans and Sils were rowed along the front truss. Dataflash strobes, ZR20s, Sil 30s and 30 252 projectors were positioned along the house bars, controlled through a Celco 60 and two Avolites 72 racks, which had been rigged and patched by Theatre Projects' Nick Jones. In the rink balcony, sharing space with further Pars and two Intellabeams, was a 5W Argon Laser and accompanying mirrors, supplied by The Definitive Laser Company.

Effects Co Cyclone

Amptown Lichttechnik are exclusive distributors in Germany for The Effects Company, and will be exhibiting their product range at this year's Frankfurt Musik Messe.

There will also be the world preview of the new Cyclone 4000 Turbo smoke machine. This is a high power twin-block machine with powerful turbofan boost, that claims to be the most sophisticated smoke machine in the world - with all digital microprocessor control of power management systems and either 0-10v or DMX remote control. The Cyclone features single/alternate/ twin block operating modes, low or high power mains/heating modes, servo control of turbofan power and thermal cutout of overheating pumps. A novel feature for DMX users is the facility to plug in the standard 0-10v controller which will then 'mimic' the indications on the panel, which are not normally visible when using DMX control. Amptown can be found in Hall 6, Stand D51.

RJ appoint Kitsch

Robert Juliat has a new agent in Canada. Kitsch Audio will handle the French manufacturer's range of followspots and luminaires. Kitsch can be reached at 1960 Parthenais, Montreal, Quebec. Telephone +1 (514) 527 2323.

New Theatre Contracts for White Light

White Light has announced five new major lighting hire contracts. The first is for the London transfer of the Broadway musical, Mama, I want to Sing. The show opens at the Cambridge Theatre on February 1st and stars Chaka Khan, with the lighting designed by Marshall Williams.

Three more are also London-based. Dangerous Corner, with lighting designed by Bill Bray, is opening at the Whitehall Theatre after a successful run at the Chichester Festival Theatre. Cell Mates, starring Rik Mayall and Stephen Fry, with lighting designed by Mick Hughes, comes to the Alberty Theatre on February 16th. Meanwhile, Tom Stoppard's new play, Indian Ink, starring Felicity Kendal, transfers to the Aldwych Theatre at the end of February, after a three week run in Guildford.

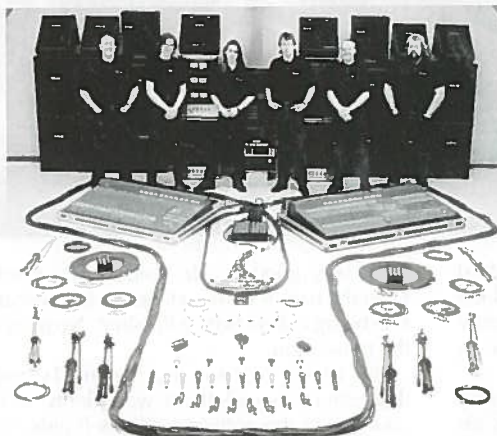
Finally, White Light's lighting equipment has been specified for the tour of Return To The Forbidden Planet, now in its third year of production. The play is produced by Pola Jones and the lighting is designed by Benny Ball.

Helvar Ltd Relocate

At the beginning of 1994, Helvar Ltd became the sole UK distributor of Electrosonic lighting control products.

This has led to a considerable expansion of the business and customer base, and for the last year, sales and administration have been split between the two offices at Brentford and Dartford. To allow for further expansion, the Brentford sales and administration department will now be relocated to the Electrosonic Head Office at Dartford.

First Yamaha PA



Pictured with the first complete Yamaha PA rig are (left to right) Tony Henderson, Simon Evans, Richard Oxley, Colin Anderson, Steve Williamson (Yamaha) and Arthur Williamson.

The UK's first all-Yamaha PA rig has been commissioned, and is now available for hire through Transmedia Services. The system has been assembled as part of a unique joint venture between Transmedia and Yamaha-Kemble UK.

As a result of the collaboration, Yamaha-Kemble has access to a professional PA service to support the company's extensive charitable, sponsorship and educational commitments - these include the Prince's Trust, Yamaha's own annual Music Quest, and providing technical support for a host of arts events and musical and theatrical productions. In addition, Transmedia will provide PA support for Yamaha's promotional activities at trade shows, exhibitions, clinician tours and the like. Transmedia, in return, are able to offer for hire a high spec Yamaha PA system throughout the rest of the year.

Among the most recent beneficiaries of the new rig was Edwin Starr, normally a stickler for using his own engineer on a familiar system; after a soundcheck, however, he was more than happy to work with Transmedia's house engineer and the Yamaha rig.

Transmedia has a seven year history of assisting Yamaha in various projects. Besides offering PA services, Transmedia also operates recording studios, and TV and video production facilities.

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AN AMERICAN IN PARIS

Tony Gottelier views the new Lido show with lighting by Marilyn Lowey

Paris is justifiably famous for many things - a list so long I won't tax you with the repetition. One of those things is its enviable reputation for being the epicentre of what is left of the European cabaret tradition. Only across the pond, where Las Vegas continues to wave the flag with its star-studded Show Lounges and Showrooms, is this grand old Nightclub tradition, originated in the twenties and thirties, still maintained elsewhere. (For American readers, a showroom is a demo room in the UK, or more often a car lot).

In Britain, where there are some recent stirrings of a possible revival, though it has been tried many times with no enduring success, the cabaret nightclub died with the demise of the Talk of the Town some ten years ago before it re-emerged as The Hippodrome discotheque. Of course, in the States the Show Lounge is the direct descendant of a different genre, the Wild West Saloon and the Speakeasy, and the glitzy cities of the Nevada desert still offer that slightly shady hint of excitement with the link to gaming, still illegal in other places.

While the European version may have had a different root, decadence was definitely an essential ingredient. This was provided by the titillations of the chorus lines, made most famous by the Folies Bergères and the Moulines Rouges - those of the gyrating legs and the lace garters. Though the Folies has recently, and sadly, succumbed while Les Moulines Rouges continues to grind on, the mantle has de facto passed to the Lido and the Crazy Horse.

Paris is the city where anything goes, and where a glimpse of stocking, or several, was once considered something shocking, nowadays the tourists expect something a little more risqué for their dollars and yen. And they get it, plus a considerable production. There are certainly a lot fewer of the traditional feathers to cover up the naughty bits, most of which are in full view, much to the haughty disregard of the French provincial matrons in the audience, most of whom sniffily stare into their laps for fear of some imagined contamination. Once again, it is the slightly illicit innuendo which scores every time, something we have never



been very good at - le froidur des Rostbifs. Even the names of the set menus are evocative, one being called 'Soirée Passion'. No prizes for the translation.

But I went to Paris, not for the Ts and Bs (honestly!), though there was plenty of that, courtesy of the notorious Bluebell girls, thank you very much. I went to see the result of a \$15m investment in the new show they call 'C'est Magique' at the Lido, and to talk to its American lighting designer Marilyn Lowey, and others associated with the production.

The Lido was founded in 1946, when it initiated its enduring formula of reviews with dinner-shows, moving to the present site in 1977 when it also added the designation 'de Paris'. Previously a cinema, the building is located in pole position on the Champs-Élysées, not a stone's throw from the Arc de Triomphe. In a previous existence it had originated some 18 years earlier as a fashionable hydro and casino at number 78, under the quaint title of 'La Plage de Paris', which name today would surely invoke a writ from the seaside town of Deauville.

So it was only a short leap of imagination and language from there to the hijacking of the identity of the famous Venetian strand, when for a period, in one of its guises, the venue offered canal rides by gondola under that

monumental thoroughfare! From then on it's not just been the name Lido which has stuck, but also its reputation for the exotic.

Talking of exotic, the last time I saw the Champs-Élysées, it had been entirely planted with wheat from one end to the other in a demonstration of support for eco-culture. I promise you it's true. Can you imagine such a thing ever happening in Piccadilly or Broadway? On that basis, subterranean boating could seem quite tame. But this time the boulevard was alive with a million tiny white bulbs of random Christmas tree lights, glistening and winking in the breeze on every side, as the taxi delivered me down its length to the door.

The Lido is still a family business run by Christian Clerico, son of one of the two founding brothers. It occupies 6,000 square metres set out in traditional style, accommodating 1,200 guests, with dinner served in the stalls, and two shows per night. With kitchens, servery and all the other services required for such an operation, and with the back stage of an ex-cinema sans fly-tower, I was most curious to see how they managed to shoehorn all the stage machinery and equipment required to put on the kind of spectacular I anticipated I might be about to enjoy. I didn't have long to wait, for I was joined



The Casino set: a tribute to Las Vegas.



The dancers change their spots, as do the lights.

over a delicious dinner by a trio who had first hand experience of wrestling with the problems presented by the old girls' tight corsets - set designer Yves Valente, technical co-ordinator Olivier Panhuys and American lighting designer Marilyn Lowey.

It was Marilyn who had attracted my attention to the new show. She got the job through having worked previously with American director Bob Turk who devised the production, and it was principally to see the new lighting that I had come. Emmy award-winning Lowey is perhaps best known for her long-term professional relationship with Neil Diamond, whom she has been lighting for over 15 years, though she has many credits in industrials, plus television and film, as well as for lighting many other performing artistes and spectacular events. However, it was Valente and Panhuys who explained how the new show came about, and gave me a taste of the sheer scale of the exercise: "One of the ways The Lido keeps ahead of the competition is that we totally re-vamp the show every four years," they told me. "And by re-vamp, what we mean is creating an entirely new show from costumes and props, to sets and drops, stage machinery, sound, lighting and dimmers, the complete interior of the night-club, the carpet, the upholstery, everything! Absolutely everything, is re-designed and renewed." And all done in two months on site, of which only one month was allowed for the entire lighting and sound installation, including cabling.

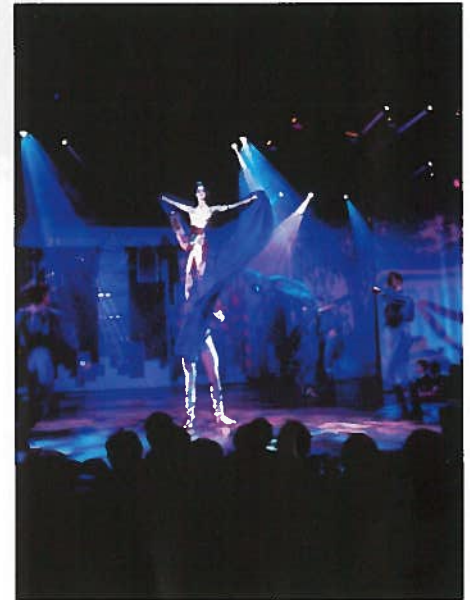
If for Yves Valente, this meant cramming in even more stage machinery, for Lowey it was not just a completely new lighting design from scratch, but also an entirely new Arri GB 42-way dimmer system for which one week had been allocated. The pragmatic Belgian, Olivier Vanhuys, solved the cabling problem, for which the same meagre length of time was available, by concentrating on the new, quite independently of the old, which was left to be removed at a later date. This was Marilyn Lowey's first close encounter with the technology: "It was very exciting for me, because I don't normally get so involved with the nuts and bolts."

Lowey is a product of the Imero Fiorentino Associates school of lighting design, which seems to be a prerequisite if you plan to be a successful designer in the States, and it was while she worked there that she first struck up her long-standing arrangement with Neil Diamond. Not a bad client to be working for as a rookie designer, nor to carry off as your 'starter for ten' as a freelance. She left IFA in 1986 after eight years and commented at the time in an interview: "I really learned a lot from Immy, especially from doing all the breakfast TV shows I did. But what I really admired about him is that he made lighting design legitimate, virtually inventing the title 'Lighting Director'. But it was time to leave and move on."

Somehow she finds time between shows to indulge her passion for tennis, which never seemed far away from her thoughts during our brief encounter. She simply could not believe that I had rejected a Wimbledon Centre Court ticket last year due to pressure of work. She is also a fan of the Apple Mac which is a constant companion on her travels and which she uses for all her equipment scheduling, while doing most of the plots by hand. And, judging from her resumé, she has been a Morpheus/PanCommand fan since the Neil Diamond 91/92 'in the round' tour. Lowey turned to Steve Terry and Production Arts in New York for technical support. "Naturally, I also had Steve design all the technicals, including the DMX distribution of course. He's one of the good guys," Marilyn confided. "And Production Arts



The photographs on this page illustrate just how Marilyn Lowey's designs have embellished the multi-million dollar performances of the Lido de Paris



are a great outfit - I wonder how I ever managed without them." She also enlisted Adam Bennette of Arri GB, and the author of 'Recommended Practice for DMX512' to assist with the dimming issues, plus planning, control and show-control hook-ups. "Adam's a sweetheart," according to Lowey, and "he speaks French as well as you and me," according to Olivier Panhuys, which isn't saying much in my case, but then Adam has married into the language!

Aside from keeping the Pan Command requirement on track, which consisted of 42 Deluxe Prospots, 94 ColorFaders and LDS console, Production Arts supplied the nine High End Systems' Cyberlights and controller, 180 Parcans, 100 ETC Source Four ellipsoidals, 64 Wybron Coloram scrollers, and three Strong Supertrouper 2kW followspots, plus all the lamps, twofers for the 115v Source Fours, spares and networking equipment, both DMX and Ethernet. They designed the considerable data and power network in its entirety, produced all the installation drawings, provided supervision of the installation, programming assistance during technical rehearsals and arranged training for the Lido operators in St Jose, Austin and Paris. "We didn't supply the dimming and control for this project, despite the fact that Marilyn Lowey had originally suggested ETC Sensor dimmers, because we thought that the customer would be better served by a 220v/50Hz system, which ETC do not manufacture, best made by a reputable European maker with good local support," Steve Terry informed me. "It was also going to require a very large local crew to meet the installation slot of a single week for some 432 ways of dimming!"

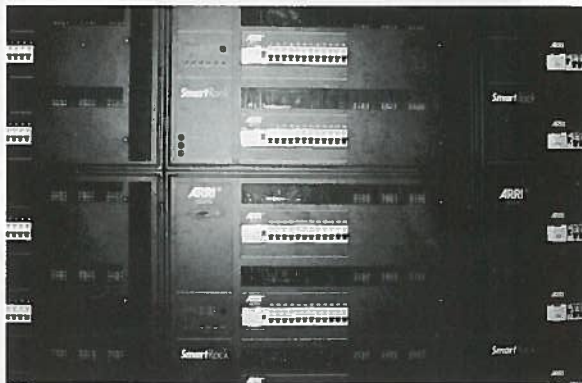
Hence the appearance on the scene of Arri GB, entirely logical in view of their close links with ETC through Tim Burnham, and the fact that they make the Imagine lighting boards for Arri in Middleton, Wisconsin. "We produced the SmartRacks especially for The Lido with the two-pole circuit breakers, favoured in France, with integral neutral disconnect," Adam Bennette advised. "And all racks featured an RCD for every 12 channels." The Arri SmartRacks drive all the entertainment lighting, and an ETC Obsession, also supplied through Bennette's company, runs all the lights and the ColorFaders, except the Prospots and the Cyberlights. "The fact that the dimmer and control installation was completed on time in the allotted seven days, including the 30 kilometres of cable runs for all the lighting, a new main power supply and distribution equipment, is a great credit to Olivier Panhuys for his advance planning and especially to Bob Abecera at our French dealer's Pariscene, for the implementation." Apparently, I wasn't the only one who was amazed that such an installation could be achieved in such a short time, including official certification, of the entire system for earth-leakage, insulation and polarity, before power-up. Marilyn bet Olivier a bottle of Dom Perignon he wouldn't have all channels up in time. She lost the bet and the vintage champagne.

At the same time a comprehensive new sound system was being installed, based on 60 EAW speakers, 25 Crest Audio amplifiers and an Amek Recall 32 into 8 desk. The new system includes a SAM 200, 8 into 24 programmable digital controller for intelligent control of the surround-sound and spatial effects delivered by an SSP 200.

Other interesting gizmos are the massive JVC-Hughes 3500 video projector, one of only three prototypes in the world (no information has been forthcoming), which delivers huge,



Marilyn Lowey - in control.



Arri GB SmartRacks at the Lido.

specially designed animated images and extraordinary graphics; two ETC-A (no, not Electronic Theatre Controls, but Audiovisuel), large frame, 7kW xenon PIGI projectors which include a scroller capable of running two 30m long film strips at independent speeds of up to 180cms per second and, interestingly enough, now being offered in the US alongside Pani products by Production Arts; four Coherent 5W Purelight lasers, in a system with 32 kilometres of optical fibre conceived and delivered by Gerard Schallier of Paris-based Nee-N-Ger; plus pyrotechnics, 17,000 lamps and 600 metres of neon.

The interior of the room offers advantages and disadvantages from a lighting point of view. One big advantage is that when the front stalls slowly descend out of sight, courtesy of



Set designer Yves Valente, pictured with one of the Lido's less attractive performers.

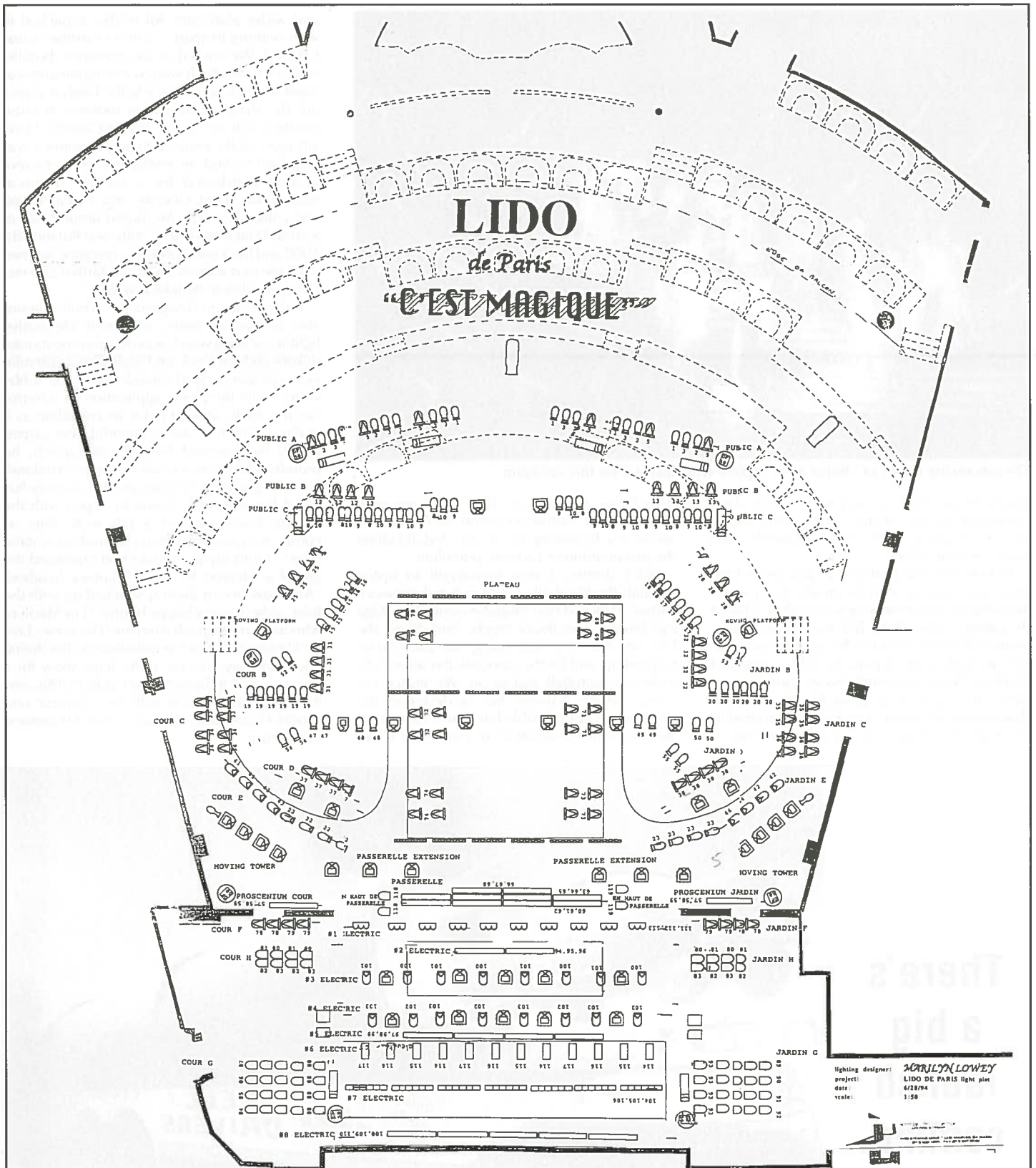
the famous lift, and the house lights not only dim, but also vanish physically, the whole room is very dark, reminiscent of a typical lighting demo-room where there is always an unrealistic lack of ambient light which, of course, practically never happens in the real world. On the minus side all the performance light fittings are hanging from the ceiling in full view of the customers, a result of the building's cinematic origins and the consequent lack of proper proscenium arch and fly tower. Every inch over the stage has to be used for scenery. This must have been hard for Lowey who has expressed her opinion in favour of concealed light sources on numerous occasions in the past.

So what was the outcome of all of this in lighting terms? With the exception of some early problems with Prospots, which did not seem to like European voltage and frequency, but which were quickly resolved by the engineers in St Jose, the Prospots and ColorFaders were immaculate in operation as far as I could see. These really are excellent devices and deserve more exposure than they get, but apparently due to something strange in the air in California, the will seems to be lacking. They looked good to me, even fully exposed to view, after all to most people a luminaire is secret until lit. The Cyberlights were as impressive as ever and the Rams performed flawlessly. The whole package integrating seamlessly with all the other kit. Lowey has created some really beautiful looks with all these instruments, and achieved a spectacular result in very difficult circumstances.

I watched the show over dinner from the mid stalls with Marilyn, Yves and Olivier, though the latter barely had the opportunity to eat as his short-wave radio was constantly on the go. His dessert was certainly forfeit when, for one terrifying minute, a chandelier over one of the tables became dislodged from its mountings and hung precariously on a wire during the whole of the finalé. It was a rumbustuous performance, described in PR-speke as 'no longer a review in the traditional sense, but rather a total entertainment', and relies heavily on the mechanical effects created by Yves Valente and his American collaborator Bob Rang.

Essentially, four exotic tableaux feature the statuesque Bluebell girls, who have to be at least 1.75m tall, in a continuous succession, of glamorous, yet minimal, costumes appearing in endless waves like an advancing army. In each scene there is a major special effect or stunt. The first, with a magical theme, features a carousel, with linear ram-assisted extending arms, which appears from under the stage and lifts the girls out over the audience. The second is a tribute to Las Vegas and uses numerous effects to create a fast moving 'casino' atmosphere.

The third features a video game which comes to life with a giant, animated, video-game monster belching smoke and eyes ablaze, which appears from the back of the house on a monorail and flies towards the stage ridden by one of the girls in the troupe. (Though by Yves Valente in our picture, and about which he became very animated during the course of the show when he discovered that someone had failed to replace the CO₂ bottle responsible for the lack of puff). Later, a water feature appears from backstage giving the dancers a good dowsing, but surely a missed opportunity for the lasers. The final tribute to showbiz incorporates an ice rink which arrives from below, an unfolding grand staircase, pyro and giant projections. Lowey was enjoying this

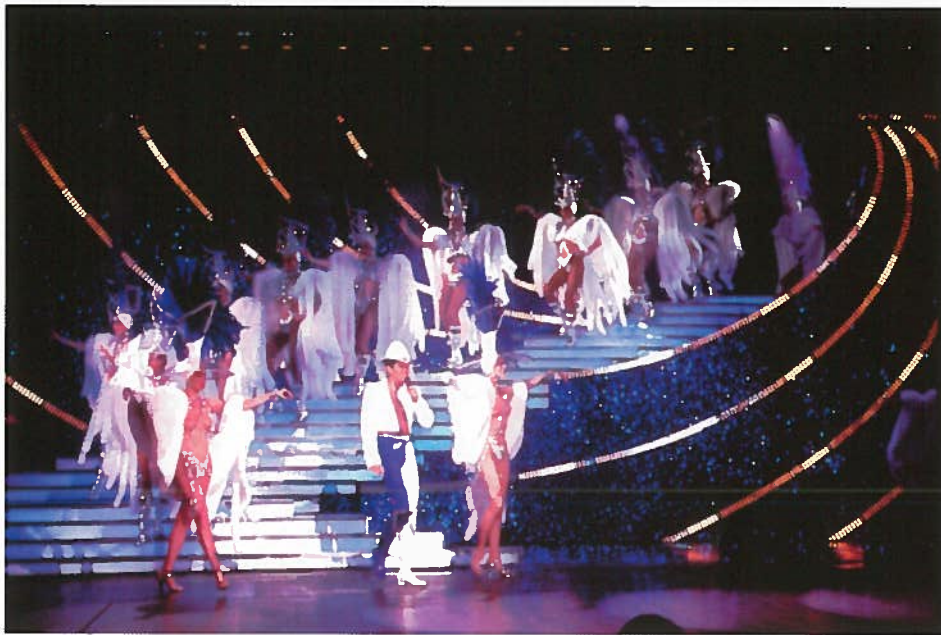


Lighting designer: **MARILYN LOWEY**
 project: LIDO DE PARIS light plot
 date: 6/28/94
 scale: 1/50

KEY

- 1W PARHEL
- #12 ALTHAM LEO
- #13 ALTHAM LEO WYBRON COLOR CHANGER
- #14 ALTHAM LEO
- #15 ALTHAM LEO WYBRON COLOR CHANGER
- #16 ALTHAM LEO
- #17 ALTHAM LEO WYBRON COLOR CHANGER
- PAR 54
- PAR 64 1/2 COLOR FADER
- PAR 64 1/2 WYBRON COLOR CHANGER
- LAFER HEPNER LIGHTING CHANGING TOWER
- DP 30 REEL 8FX SHOTS MACHINS WITH FAM
- DOWNSTAGE STRIPS
- 6 LITS 3 CIRCUIT STRIP
- 1 & 2 MINI STRIP, 3 COLOR CIRCUIT 75 W LOW VOLTAGE LAMP
- 4" BLACK LIGHT
- PRO-SPOT 600W
- 2W SHORT THROW SUPER TROOPER
- CYBERLIGHT 1200W

Marilyn Lowey's lighting plot for 'C'est Magnifique'.



The advancing waves of chorus girls, replete with feathers on this occasion.

spectacle as much as anyone, at one stage turning to me and saying, "Here come two of the best-looking butts on the planet." She wasn't wrong, either!

In between each tableaux, you get a little stunt act, one of which, much to Lowey's amusement, was tennis racket jugglers. One of the others, called Ming, balances huge and expensive looking vases on the front of his head. "He proved to be a pain to light," observed Marilyn. "Very fussy and always complaining, until one evening at a backstage party he showed me his secret, a metal plate inserted in his head! It was plain sailing from there on." I

didn't like to tell her, that from personal experience, I had never found such a device useful in a balancing act of any kind, let alone the preservation of Dynasty porcelain.

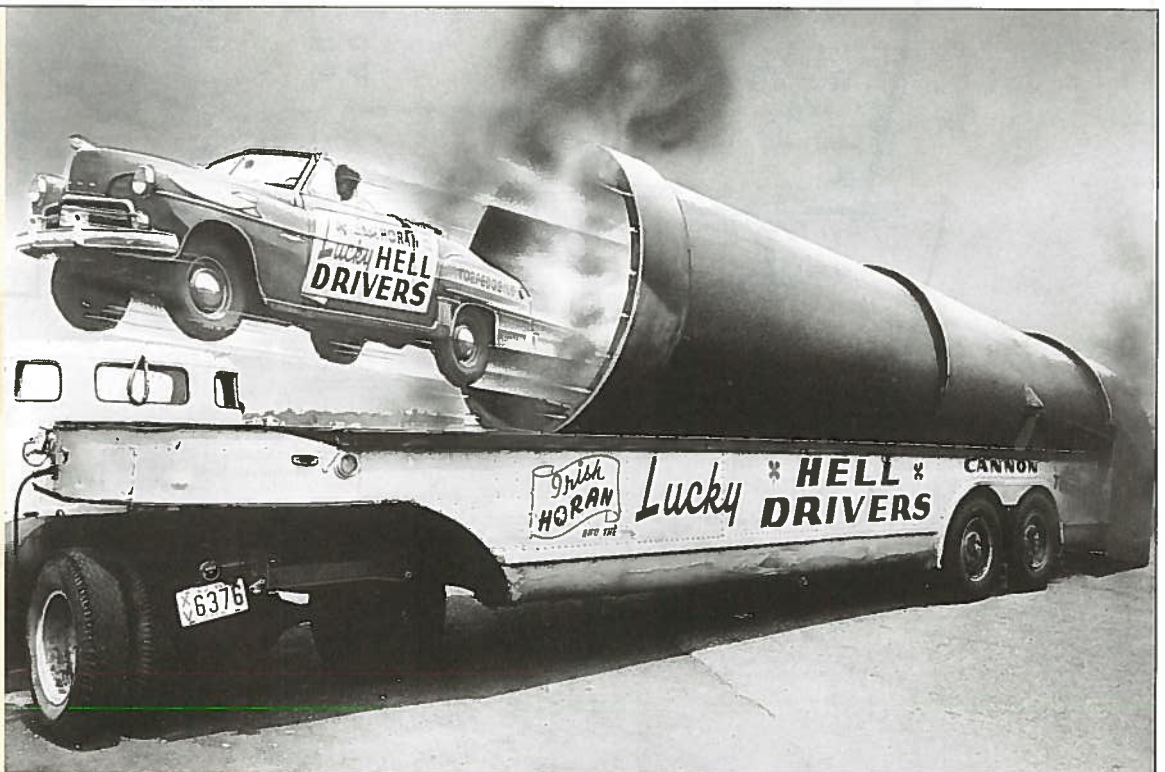
After dinner, I was privileged to tiptoe through the Bluebells, on their break between shows, to look at the computer-controlled stage machinery - the floats, trucks, and drops; the lifts for the ice rink using aircraft-carrier technology and for the carousel; the set with its elaborate waterfall and so on. We visited the wings where Valente has re-designed the mezzanines with flexible lifts which can create steps in either orientation, or a series of wider

and wider platforms. All of this is packed in with nothing to spare - a tin of sardines came to mind. We looked at the immense 'bobble' stage curtain which weighs one tonne and was made in England. Thence to the Gods to check out the flying video-games monster at close quarters and on to the lighting booth. Here, amongst all the expected paraphernalia, I was surprised to find an embryonic show-control system produced by a couple of local technicians, Fred Giacobbi and Pascal Lecot, and called Concept A6. Based around bits of assorted Dataton kit, a PC 486, two Roland SBX 1000 and their own software, everyone seemed to be pleased with its abilities. Marilyn told me: "I am absolutely delighted with it."

Valente has re-designed the whole interior also in warmer tones, with new decorative lighting, among which was the aforementioned rickety architectural, and including a splendid new circular, crystal chandelier in the lobby which, with the clever application of a mirror surface, looks at least twice as crystalline as it really is. There is also a splendid new carpet, which he designed himself, and which, he proudly told me, was made in Northern Ireland.

Having spent Christmas in Paris, Lowey has wend her wary way home to Aspen with the certain knowledge of a job well done as compensation, and leaving behind an ecstatic crew: "I told my guys that I had organised the gig of a lifetime for them," Lowey laughed. "And now one of them is shackled up with the lead, so he's a very happy bunny!" For Marilyn, who had arrived fresh from the 'Flinstones Live for Universal' (from the ridiculous to the divine you might say), it's on to the stage show for a new cruise ship launched on March 20th, and then back to the cold with the Olympic and World Figure-Skating Tour across 60 venues. Busy, busy.

There's
a big
launch
coming.



All will be revealed. Later.



CELCO AND THE M9 FACTOR

John Offord searches out the Dartford Secret

The pace of change can play tricks on the mind. It was in 1988 that I featured Celco in their old place - a group of small units behind and amongst the semi's mix of garages and outbuildings of thirties-built London suburbia that could provide a typical back-drop for the Arfur Daleys of this world. Of no earthly use or relevance to this piece is the fact that I was born in the self-same road in Catford. Not a lot of people know that.

In 1991 the company was bought by Electrosonic, famous for major AV, videowall, architectural lighting and conferencing set-ups, now part of the Finnish-owned Helvar group, and were transplanted in May of that year into the sumptuous surrounds of a purpose-built high-tech complex standing within its own landscaped grounds a few miles south of Dartford in Kent.

In the old place, once you'd managed to find somewhere to park, you entered straight into the car sales office, so to speak. Nowadays, you cross a neatly bridged river, and enter by a marble and koi carp-eted-water-featured entrance hall before signing up for your security pass.

So, how are our Celco rock and rollers with the whacky touch faring in the midst of all this? Were they still coming up with off-the-wall presentational methods or had they been firmly nailed to it? Had they been out-whacked with a bombardment of Flying Pigs?

The first thing to say is that Celco is now a company, or more correctly an autonomous division, with a profile that bears only a passing resemblance to the one I talked about back in 1988. Riding splendidly on the back of their famous 'Gold' and the rest of the family of R&R and concert lighting control desks, they were identified almost exclusively with that sector of the market.

In 1995 it's a completely different story. There are three boards in the Celco family now: Navigator, Pathfinder and Aviator, and charting their short history illustrates how the company has spread its wings and flown into different areas - sometimes under full control, at others happily taking the opportunities that have presented themselves.

Keith Dale, Celco's business manager, explained how their latest desks were brought to market: "Navigator was well on the way before we joined the Electrosonic Group, but we knew it would be seen by most people as the first fruits of a new relationship and it was duly launched in the autumn of 1991. Sales moved ahead very quickly, and it has been our biggest selling console to date.

"In February 1992 we launched Pathfinder, a conventional version of Navigator, and again, sales went up very quickly and have remained consistent from day one through to now. It is probably the closest lighting control desk we have that can be compared to other manufacturers' products, although it sits at the top of the price spectrum in its sector. Sales of Navigator are truly world-wide and Pathfinder is the same, bar the US where there is a lot of strong local competition.

"Navigator also established a new identity



The M9 - Celco's latest product is to be launched in Paris this month.

for Celco products, and was the first to use all-digital technology. It was a glimpse of what was to come with Aviator. In fact, the concepts of Navigator were conceived originally for Aviator, but because Navigator was a much simpler product, the time to market was greatly reduced."

After the early rush with Navigator and Pathfinder time had to be spent continuing the development of the far more involved work on the big fellow in the family, Aviator, which was officially launched at the PLASA Light & Sound Show in September 1992. "At that time, to be absolutely honest, we were confidently expecting the software to be finished within a matter of a few months," explained Keith. "Had I known then what I know now, I wouldn't have launched it then, or even in 1993. It would have been shown to the world in 1994!

"Aviator is a very radical product, and if I had the chance of putting the clock back I wouldn't have agreed to develop a product with so many new technologies at one time. Our industry just isn't big enough to warrant such a huge investment, both in components and overall concepts, all in one go."

And now Aviator has arrived, it has brought with it some surprises. "The markets we thought would be secondary, such as theatre and TV, have jumped right to the top. We now feel ourselves to be very competitive in the

television market, have picked up some very good business in the theatre market which in the past we weren't serving at all, and with the rock and roll market beginning to develop. We think this year will see Aviator get more and more into rock and roll as people start to see them on tour. We'd deliberately kept a low profile in R&R because it isn't worth going to see an LD with a half-finished product, whereas in TV and theatre you are talking much more in the long term."

The story of Aviator's immediate acceptance in the television market centres around a massive installation project for the Tokyo Broadcasting System in Japan. In parallel with the development of the product, Celco began discussions in Japan as the new studios came off the drawing board. "I couldn't believe it when engineering manager Masahiro Iijima produced a CAD drawing showing a control system which looked just like the product we were working on," continued Keith. "They were remarkably similar and had both come from 'clean sheet' concepts. It gave us a real confidence boost."

The discussions and negotiations continued and the general development of Aviator went in parallel with the systems required for TBS. Progressively, as the controls destined for Japan required more and more attention on various special requirements, it made commercial sense for Celco to give them priority over development of the standard product. Winning the contracts for the two biggest studios, A and B, carried a lot of prestige, and although TV practice in Japan is in some ways different to traditional Western practices, it gave the Celco team a very useful insight into the television market. On the back of this major installation they are now negotiating for further projects in the Far East, Australia and Europe.

"When we were designing Aviator, Matt Deakin (technical manager) and I spent a lot of



The custom Aviator console and geographic patch bay at Tokyo Broadcasting System's studios - the installation is identical in Studios A and B, apart from patch layout.



Pictured left at TBS in Tokyo are Masahiro Iijima, project leader and lighting designer, with a Celco trio of technical manager Matt Deakin, business manager Keith Dale and technical product manager Mike Rothon, and Takeshi Hayakawa, managing director of Celco Japan Inc. Above right, Keith Dale at the controls of a Navigator incorporating the M9 video control unit.



time at both the old TVS studios in Maidstone and with the BBC, and we took the view that the products they were using weren't ideally suited to the way they needed to work. We felt that if a slightly revolutionary control desk was made available, such as Aviator, they would warm to our view, because it seemed to us it would be that much more useful to them. This is now being borne out in reality, in that the desk is very easy to use and addresses all the things they need."

With Navigator happily reaching parts of the market Celco had hardly spoken to before, Pathfinder proving a consistent seller with rental companies and smaller theatre companies in particular, and Aviator sliding neatly into television, Keith Dale will accept that he was thrown just a little from the marketing standpoint. Another dimension also appeared, with Aviator planned to have the ability to address all markets equally, the bias has also moved towards installed systems.

"This made us think about other things," continued Keith, "and at PLASA last year we launched an installation dimmer. It employs Electrosonic technology and, uniquely for us, it's going into installation projects and marching in with the Aviators. I'm surprised we never thought about it before! We looked around us in this building and thought - wakey! wakey! - there is a choice of technology surrounding us."

So you will now see a progressive change in the way Celco market their products. There will be developments on the dealer network so that markets are widened, and the company will be looking for projects where they can gain larger overall sales by being able to offer more and more elements in the product chain. "The synergy is already starting to happen," said Keith.

But there is yet another angle, a hidden card, that Celco intend to play in the coming months, and if you are visiting SIEL in Paris this month, you'll have the opportunity of witnessing its first

outing. "Video techniques have little to do with the lighting side of our industry, but I suddenly thought that it would make sense to take a video controller, make use of its facilities, and hand it to the lighting operator. We showed the concept at PLASA and the response was fantastic. I don't think we had one visitor on the stand who couldn't understand the concept, and this caused us to think very seriously about it. It's now finished development and will be coming off the production line in February with an official launch in Paris at SIEL."

This new gizmo will live under the extremely un-whacky title of M9, but carry a new 'Celco Video' brand mark - no doubt an indication of where you will see some new products coming from in the future. "It will be running from DMX on the Navigator," continued Keith, "and we will be releasing a personality card so that other manufacturers can include it in their products if they wish to do so."

"In concept, what we've done is to make the controller operate from DMX and then we treat each monitor cube as a DMX channel. By raising or lowering the DMX level you can change the colour, magnification, position of the image and all the other usual video effects. The long and short of it is that when you use it for live shows, you can integrate and synchronise the videowall with the lighting without any complicated routings. Ideally, it should perhaps be based on MIDI Show Control, but because MSC hasn't taken off as much as we would have liked, we decided to use DMX and open it up to other manufacturers."

"It's a start, and a serious one, and I think I'm correct in saying that we are the only manufacturer in the world to have expert knowledge of both lighting and video under one roof. The future looks very rosy and looking ahead two years or so, I am sure you will see our product range widen considerably and have the ability to address a much broader market area."

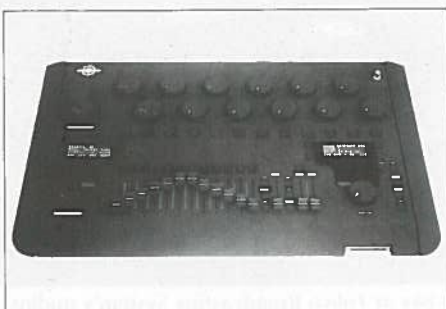
I couldn't close the interview without going into Paxman-mode and mentioning competitor companies in the traditional Celco area of rock and roll. "Avolites are our 'old' enemy," said Keith, smiling. "We've always had a lot of time and respect for them and they use their own ideas and approach things in the same independent way as we do. I think we've both pushed the technology on."

"Flying Pig Systems have immediately jumped into the same league and stamped their mark on the industry. Their Whole Hog provided a radical approach to something that was needed quickly - the market had matured extremely fast across two or three years in a way that warranted a huge number of channels at a much higher price bracket. They came in at the right time with a well-named product. Compulite also deserve acclaim with their Animator - in the US, in particular, they seem to be everywhere."

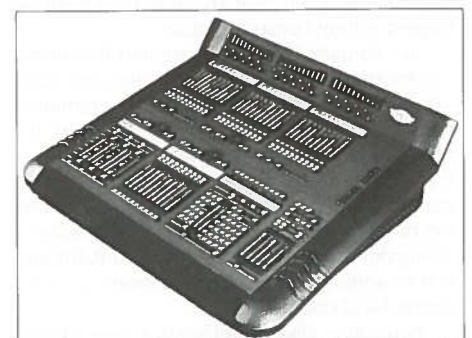
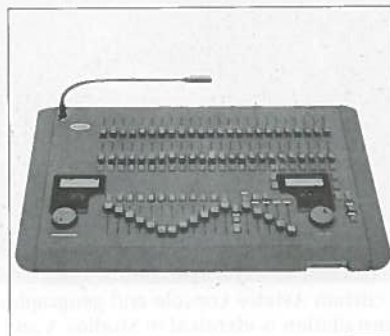
"There's a lot more competition around now, but then it's a much larger market-place. 80 per cent of our production is exported and we are making excellent inroads into the Far East - Electrosonic's Hong Kong regional office offers a useful advantage - and Eastern Europe. Things are looking very healthy for us and the prospect of special project work linked with Electrosonic will widen our chances even further."

I came away with the feeling that Celco have now got the real measure of their chances after living through a rather mixed series of 'happenings' across a four year period that has seen not only a recession, but great changes in the entertainment and presentation technological market-place. By accident and design they've landed the right way up.

And although I had the feeling Keith and his team will pay ever more attention now to what Electrosonic has up its sleeve, discount them in the rock and roll field at your peril. "Whatever happens there will always be something new in our industry," said Keith. "I just hope it comes our way!" There's a very fair chance it just might.



Nineties Celco: Navigator, Pathfinder and Aviator.



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FIRST AWAKENINGS

The new Gothenburg Opera House has just opened.

Ruth Rossington finds out more about the technical installation

Sweden's brand new opera house - Göteborgsoperan - was formally opened by the King of Sweden late last year. The fact that the King should be asked to 'do the honours' gives some indication of the importance of this venue in the country's arts make-up, for it is the region's first major new venue of its kind to be built this century.

Planning for the new Opera began in 1989 when initial discussions took place and outline plans were drawn up. At the time, the Stora Teatren was the only theatre in Gothenburg capable of staging musical drama, but its mid-nineteenth century heritage, and subsequent rebuilding and restoration programmes, couldn't prevent it from eventually becoming unequal to the task.

The first priority for the new Opera House was a suitable location, and the eventual choice of the Packhuskajen harbour area was originally fortified ground on the reedy shores of Göta Älv. Since the active part of the harbour had been moved further to the west of the city, the old inner harbour was considered to be a principal resource, and the municipality of Gothenburg, who had a major financial stake in the building, was keen to develop this area.

By 1991 work on the new Opera House had begun and just three years later the house lights went down on the opening night performance - 'Aniara', an opera by Karl Birger Blomdahl.

Functionalism has been the keyword behind all aspects of the Opera House's design. The sweeping modern lines of its architecture, with the now popular choice of great vistas of glass to lend air, light and space, have the look, appropriately, of a large steamer ship about to set sail. This ethos of functionality has filtered through all layers of the design, and the technical team are perhaps its biggest exponents. In fact, the logistics proposed by the technical team have been so fundamental that they, rather than the architect, have dictated the design of the theatre. Novoscen, the consultants for the entire technical specification set themselves one aim: to minimise the number of technicians needed and still meet the special artistic and technical demands made on a repertoire theatre.

The company's Maths Nyström and Ingemar Carlsson examined every aspect of technical provision, and optimised it. The fact that the



The main entrance towards Östra Hamngatan leads to the glazed foyer with a view of the harbour.

Opera House was purpose-built was obviously a boon, and facilitated such niceties as having all the workshops placed in a logical sequence, but with a main auditorium seating 1250, an experimental stage, an orchestra hall and several rehearsal rooms, technique was going to have to be married with expertise and that little something extra - innovation. What makes the Gothenburg Opera unique is that certain imaginative solutions have been introduced that have never been used in a performance venue before.

The main stage (25x20m) mechanisms are a feat of technical excellence in themselves. The pivotal stage (manufactured by Granges Metalock), is made of aluminium and is manoeuvred by a stage wagon developed by AGV Electronics AB. It allows quick scenery changes between performances, and its unique drive and steering technique is a useful asset to modern theatre. The 60 air cushions that lift the enormous wagon hiss slightly as it glides between the backstage and the wings, and

since it follows magnetic paths in the floor, the wagon can be automatically positioned to within 2mm accuracy.

Z-Systemdesign AB were responsible for defining the requirements of the hydraulic winch control systems and the complete automated flying systems. Foremost in their minds was the need to create a system that was not only safe, but easy to use, and the major part of it is run from seven panels with touch screens. Each contains a computer and TFT screen that communicates with a master computer and this then makes all the necessary calculations and synchronises the movements. These touch screens, developed by Mannesmann-Rexroth, are an excellent example of technology supporting the technicians, for they are much easier to use than traditional control boards.

Having sketched briefly the structural and mechanical framework of the Opera, let's dress it a little with the lighting and sound technology.



The lighting control set-up. To the left of the video monitor there are additional two work stations for work with the system on- and off-line.



The 48-input Cadac J-Type console, fitted with motorised faders and comprehensive automation facilities.

International lighting consultants and designers, Candela Design AB, led by Hans Sjöquist, were called in to address the needs in this area. AVAB's VLC system heads up the lighting inventory. It was first introduced at the Siel show in 1993, and since then a great deal has happened in a short time for the company. The desk has been specified in many theatres worldwide and even as we go to press, a large system is being installed at the Majjinskii Theatre in St. Petersburg, home of the Kirov Ballet. However, the system at Gothenburg is the largest to date, and perhaps best demonstrates its potential.

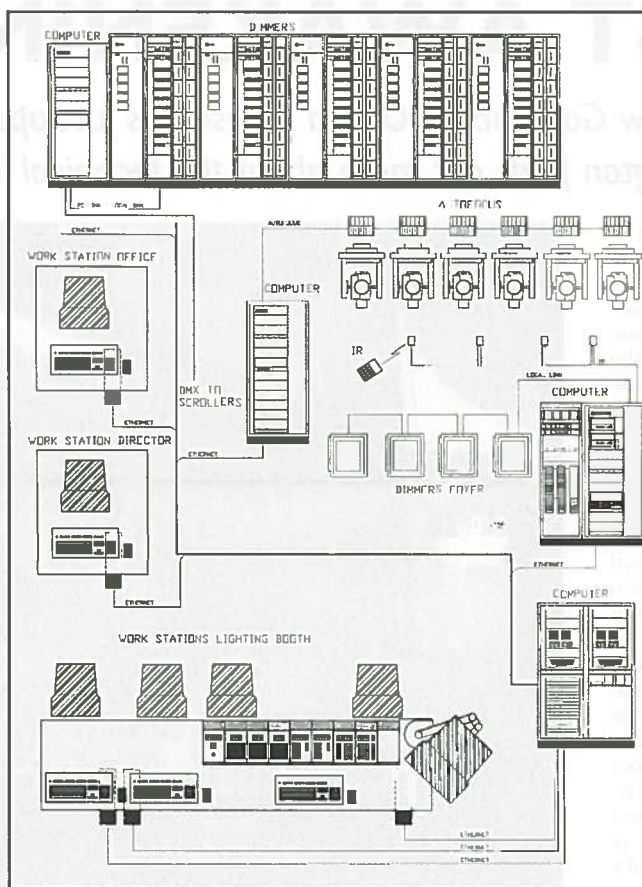
It is a sophisticated system which takes advantage of the latest computer hardware and software developments for control of a large number of simultaneous functions. The installation is network-based with a large number of work-stations and peripheral computers distributed throughout the theatre. A high speed network system (Ethernet) is used for rapid transmission of information between different areas of the theatre.

The present control capacity of the system is 2,048 control channels, and in addition to this, the system runs the 35 Auto-Focus motorised zoom profiles installed, using the equivalent of 700 further DMX channels.

Standard computers are used to take advantage of the fast development of control systems. Each work station is equipped with eight MB RAM which can be further expanded if required. Presets, sequences, macros and effects all share a large common memory and are not restricted to a set number each.

All the work stations use a Windows menu-based interface so that information can be edited on-screen using powerful screen editors. The system at Gothenburg handles six work stations running simultaneously, but can be expanded to handle more.

The VLC system allows association of scroller and scanner functions with luminaire channels, effectively negating the need to memorise a large number of channels for every scroller, scanner or AutoFocus unit in the system. For dimming, the Opera chose AVAB PDD-III dimmers, running with a PC-Link option for information feedback to the VLC system. This can give information about phase voltages to the individual dimmer cabinets, about temperature levels, whether a bulb is



AVAB's network diagram of the lighting control system.

disconnected or broken, if a breaker has tripped, and so on. There are four dimmer rooms in the theatre, each equipped with double peripheral computers which translate the information fed to them and re-transmit them as DMX512 data. The peripheral computers also handle the communication with the AutoFocus units and the PC-Link dimmer feedback system.

Performing the front line duties are an army of lighting effects and Parcans. The Opera is equipped with the largest number of AVAB AutoFocus luminaires installed to date. These are equipped with 2.5kW zoom profiles, with 25 units mounted on the stage luminaire bridges and 10 in front-of-house positions. In addition there are 150 Niethammer 2.5kW zoom profiles, 140 1.2kW zoom profiles, two 2.5kW MSR stage projectors, two 2.5kW halogen stage projectors, four 2.5kW MSR followspots, two 2.5kW halogen followspots, 25 Selecon 2.5kW fresnels and 25 Selecon 1.2kW fresnels. The highest number, however,

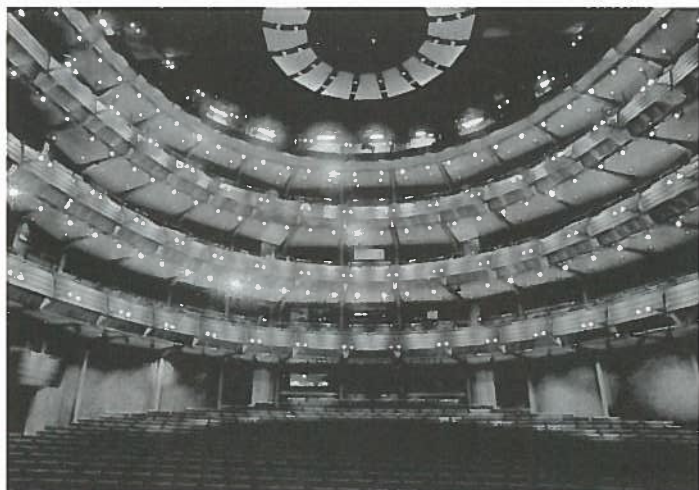
goes to the Rainbow scrollers, equipped with the new Rainbow Plus Card, of which there are 270. Unusually for a venue of this nature, but continuing the developing trend for intelligent effects lighting, there are also 12 Clay Paky Superscans. In addition, there are a number of Strand Altos, Thomas Par 64s, ADB 5000W fresnels and Svoboda light curtains, with a Strand Galaxy Nova in control.

The rehearsal stage is equipped with a 1,024 channel Expert VLC. This is connected on the same network as the lighting control system on the main stage, and information can be exchanged between the two. The system is also equipped with the new AVAB IR-100 infra-red remote control system which is divided into three different zones in the theatre. Added functions in the new IR system are full control of AutoFocus luminaires and scrollers. The main stage is equipped with three transmitters and 18 receivers, whilst the rehearsal stage has two of each.

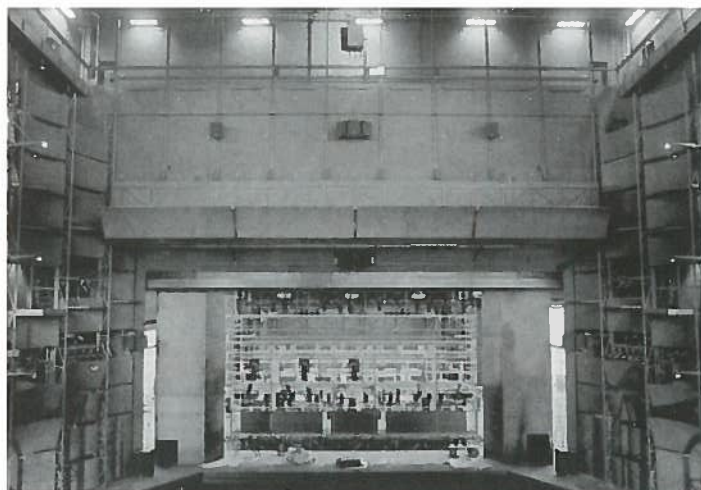
The developments on the all-important sound front follow a similar theme, and, again, functionality has been a predominant factor. When plans were first made for the Opera, the main goal was to create a sonorous theatre with first class acoustics. The second was to adapt the acoustics to the four forms of theatre - opera, operetta, ballet and musical. This made achieving the first goal a little harder, and in the end it was the acoustical needs of opera that eventually took priority.

The consultants, Akustikon AB, led by Jan-Inge Gustafsson, worked to no clear prototype, but were able to draw certain conclusions from a similar set-up at the Semper Opera in Dresden. Computerised radiation beam calculations were used to predetermine the acoustics in the auditorium. Based on the results, the balcony fronts, along with all the sound reflectors, were optimised, and angles were built into certain walls. Even the visible bearing steel construction in the balconies were used to give response reflexes to the singers on the stage.

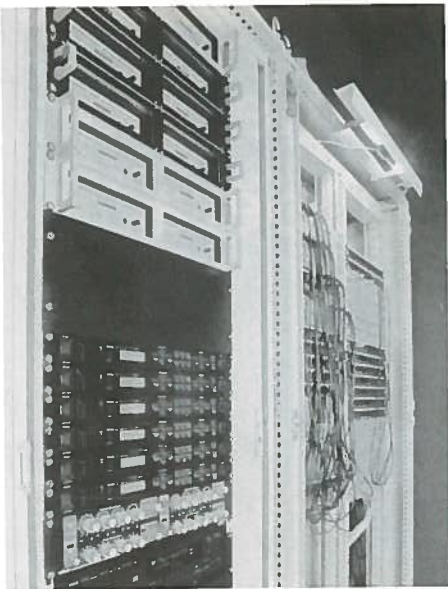
Since the Opera House was going to be used for things other than classical opera, it was quite natural that the casting vote went to a combination of flexible acoustics and a very good loudspeaker system. As a result, therefore, amongst the extremely well-equipped facilities to be formally commissioned, was a 48-input



The sweeping expanse of the main auditorium which has 1,250 seats - 760 in the stalls and 490 divided among the three circles.



The main stage, measuring some 25 x 20m. Above are the Meyer speakers and to either side the acoustic panels.



The Yamaha and Sennheiser racking.



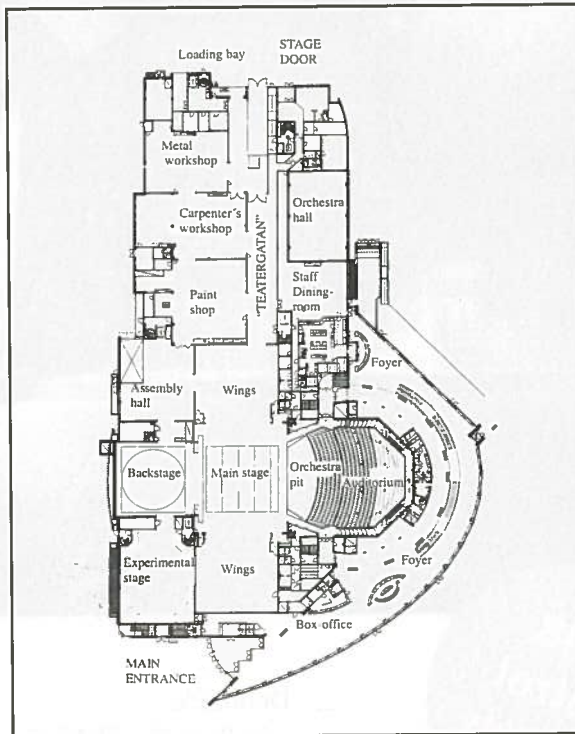
The recording studio, complete with Euphonics CSII mixer and monitoring provided by Genelec.

Cadac J-Type console, fitted with motorised faders and comprehensive automation facilities.

The sound system installation was handled by local company Tal & Ton AB. The console, sited at the rear of the auditorium, within the control room, was the first in the world to be fitted with Cadac's motorised fader system. Another innovation is the console's specially designed hydraulic table, allowing operators to adjust the desk's height quickly and easily.

The second part of the equation is a substantial Meyer Sound loudspeaker system, again installed by Tal & Ton AB, Meyer's local distributor. The system comprises the compact MSL-2A unit at its core, which is capable of handling high levels with clarity and without distortion. It is configured with an upper and lower left-centre-right arrangement, ensuring even coverage throughout the auditorium. In total, 14 MSL-2A units are used, with six MPS-355 speakers as front fills.

Low frequency handling is catered for by a mobile rig of 650-R2 subwoofers. Additional MSL-2As and 650-R2s are provided for special effects replay, and can be located either on the stage or within the auditorium, as required. The whole system is augmented by a pair of UPL-2 speakers, with the conical horn design providing a full 60 degree coverage to support demanding applications. Meyer's SIM System II acoustic analyser also features for final optimisation of the configuration.



Layout of the Opera's ground floor facilities.

For monitoring purposes there are a number of Fostex SPA 12 speakers, in addition to 50 JBL 8" broadband speakers for surround sound.

Lab Gruppen LAB1000 and LAB2000 units are used for amplification, whilst DSP technology from Yamaha and analogue units

from Urban provide the equalisation. The rehearsal rooms feature a pair of Wharfedale Force 9 dual-concentric speakers and each room has a mobile unit, equipped with a Spirit Folio mixing console, LAB1000 amplification and various signal sources including CD players, tape recorders, etc.

The Opera House also has its own recording studio which is put to various uses including the all-important training of sound engineers. The console which features here is a Euphonics CSII, and the multitracks in use are Fostex and Studer DAT recorders. All monitor speakers are Genelec, the main ones being 1037As, probably the first pair in Sweden, with nearfield monitoring provided by 1019s.

All the sound signals in the Opera House pass through one room - not surprisingly nicknamed 'The Crossroads'. For example, a microphone signal comes from one of the six Shure SM91 mics hidden away in the orchestra pit to a jack exchange at this location. It is then divided up and sent to several other places in the theatre. This simple approach has already proved itself to be very flexible in modern theatre where just about anything can, and does, happen.

From first reports, Sweden's prestigious new venue is already impressing audiences, and right now the theatre-going people of Gothenburg are settling back to enjoy Puccini's *Madame Butterfly*, probably blissfully (and rightfully) unaware of just how technology has allowed this old favourite to show its fine colours.

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Lighting Control System of the Year at the new Gothenburg Opera



Photo Jens Karlsson / Hasselblad

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Since then it has been installed in a number of highly prestigious international theatres. The Scandinavian installations include the Gothenburg Opera, the Royal Dramatic Theatre in Stockholm, the Hippodrome Theatre in Malmö, Sweden, Det Konglige Theater, Copenhagen and the Aarhus Theater in

Denmark.

In Paris the AVAB VLC system has been installed at the Theatre Chatelet, the Theatre de la Collin, the Theatre de la Ville and the Maison de la Culture in Bobigny.

It has also been installed at the new Music Hall theatre in Stuttgart,

built for the German production of Miss Saigon and at the Kirov Ballet at the Marinskij Theatre in St. Petersburg.



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CAPITOL INVESTMENT

The Capitol Theatre in Sydney has recently undergone a major refurbishment. Theatre consultant Denis Irving precludes a new chapter in the theatre's history



The main auditorium of the refurbished Capitol Theatre in Sydney.

Things seem to take a long time to come together in the Australian theatrical world - somewhere around 10 years or more is probably the average from 'serious consideration' to opening day. One would think that a re-furbishment job would be quicker, but my files and memory tell me that it is about 10 years ago that Tom Brown (who was the theatre consultant for the Victorian Arts Centre, Melbourne and the Adelaide Festival Centre) and I started discussing a possible re-work of the Capitol Theatre, or cinema as it then was.

Then, as now, for a city of over three million people, Sydney suffered from a lack of live theatre, especially as there was (is) nowhere for a major international company to perform. The only theatre of adequate seating capacity, i.e. the famous Opera House, has a grossly distorted stage house which can accommodate neither conventional flying over the whole area, nor adequate wing space for trucking.

Despite this well-publicised lack of facilities and many abortive attempts to persuade various developers to build theatres as part of major city projects, nothing much happened until the Sydney City Council (owners of the Capitol) commissioned Brown and architect Lawrence Nield to write a brief on conversion - no easy task, because, being a cinema (itself

converted from a hippodrome), it had a shallow stage with limited wing space and few backstage amenities, plus of course sight lines designed to suit the large screen.

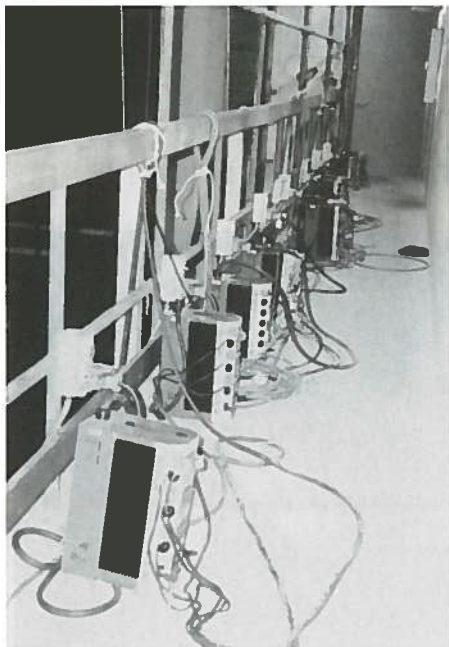
After acceptance of the Brown/Nield brief by the council, there ensued a period of the inevitable duck-shoving and argument over funding, planning permission and political responsibilities. This culminated in a search for a developer who would undertake conversion and operation of the theatre. The tender was won by Ipoh Garden Developments (Australia), who appointed architects Peddle Thorp to develop the redesign so that further tenders could be called for the actual work, hence (part of) the delay.

The contract terms were unusual in that the contractor was required to complete all design (using the same team), construction, re-furbishing and commissioning to a fixed price, including the acceptance of the risk factor when dealing with an old building, whilst simultaneously complying with rigorous review and acceptance procedures by the Council, Heritage Commission and various other authorities. To add insult to injury, we were all working to a new Building Code of Australia, which appears to be drawn up by a committee blissfully unaware of what goes on in a real theatre.

At this point, tribute is due to Fletcher Construction Australia, who took on the contract, and have maintained throughout a professional approach, with genuine regard for achieving a theatrically successful result, despite many setbacks.

The design brief required retention of the heritage auditorium interior, atmospheric roof, stars, statues, mock Italianate arches and all, adding extra foyer space down one side to create the essential bar and crush space. The 1928 stage was not quite nine metres deep, with limited wing space and height. Therefore, the old structure upstage of the proscenium wall was completely demolished, as was part of the adjoining commercial building, to make way for a new stage house with accompanying rehearsal room, dressing rooms, green room, wardrobe and offices.

The new stage is 17m deep behind the original, but has a slightly modified opening, with seven metres of clear wing on prompt side and 13m on the OP. The structural engineer had an interesting challenge, as the extended stage occupies half the adjacent street, under which an unthinking Water Authority had recently placed a large stormwater culvert which will not support significant loading. So, the painstakingly re-created solid masonry rear wall (none of your theme park replicas here)



Bytecraft dimmer racks on the fly gallery.

had to be supported by a complicated steel framework hung from the roof trusses.

The rest of the flytower and staging is conventional and straightforward, with a full set of single purchase counterweights, a few fixed speed winches, safety curtain and demountable main stage floor with three metres clear below. As the stage is about 1.8m below street level, a full size truck lift is provided to take a loaded semi down so the tray is at stage level. Sadly, the aforementioned BCA currently defines this as a goods lift, so that there are doors each end interlocked with lift action, which can't both be open at once. I apologise now to visiting techs, but bureaucracy ruled on that one.

Most interest of course is centred on the main auditorium. Obviously, all concerned were, and are, anxious to maintain or improve the dramatic environment created by the 'inside out' atmospheric design, which is no doubt familiar to many readers. But, it was designed by showmen as an accompaniment to film presentation - meant to be as much a part of the evening out as the programme itself. No-one reads programmes in a cinema, and darkness and excitement in the interval were advantageous at least to a goodly percentage of patrons, not all of whom were there to concentrate on Buster Keaton or Gone With the Wind. Films don't need FOH lighting positions either.

The general house lighting consisted of



The consulting team of Denis Irving of Entertech and Glantre's Derek Gilbert and Henry Lewis.

three-colour cove lighting above and amongst the decorative structures, supplemented by a few pseudo-exterior standards or brackets, and additional fittings under the circle. Plus the stars, which used the traditional 'lamp in a glorified jam tin' method, with twinkling effected by a piece of glass hung on a loose wire below a star-shaped hole in the bottom. Convection air currents through said hole did the rest - no new-fangled electronics needed!

All this was further embellished by projected clouds, courtesy of the US Brenograph company, before the great Eddie Biddle of early Strand days really got going. Incidentally, if I can be excused a side comment, it is curious that no-one connected with this project, including diligent historians, has yet been able to determine precisely how many projectors were used or where they were located.

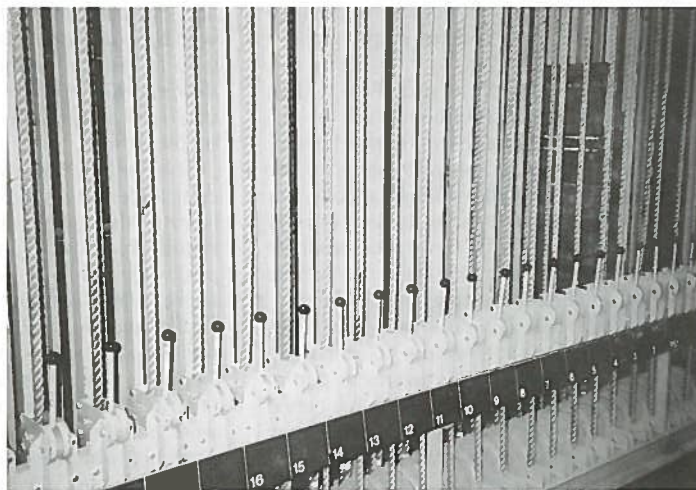
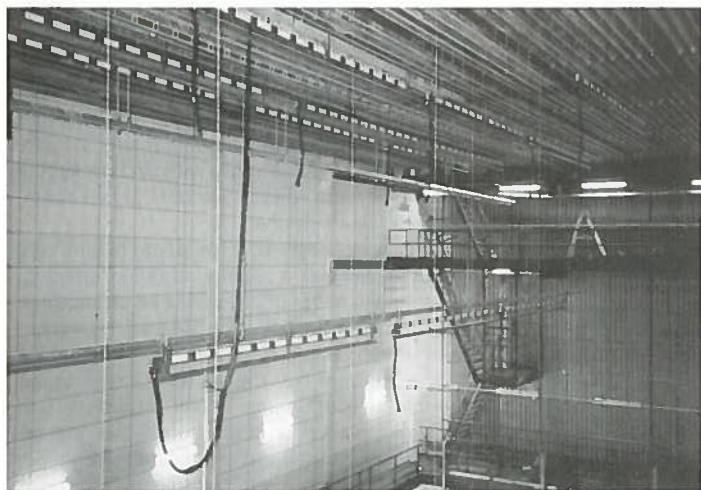
Similarly, we found no trace of what must have been a fair-sized grand master or equivalent resistance or auto transformer board to operate the many circuits of house lights. I would speculate from the date, and other factors that it would probably have been a Ward Leonard four shaft unit - maybe one of our US readers could help? Certainly, as the cloud projectors used 1000W B1 lamps with small reflectors, crude lenses and mica discs, the output would not have been very high compared with the CCT 2500W projectors, White Light glass discs (copied from the aforementioned Ed) and still crude projector

lenses used today. The ceiling colour is almost identical to chromakey blue, so the clouds are always a little dull.

The final design now features fibre optic stars (which will never look as good in my opinion, but won out, of all reasons, on maintenance costs) with their locations carefully CAD plotted on a reflected ceiling plan. Larger 'stars' of M16 dichroic reflector lamps help bring the average lighting level up to the regulation 10lux. House lights use up 43 dimmers in various locations, controlled by a New Zealand built Theatrelight Showmaster 48-channel desk with soft patch and DMX512 output. A further 44 dimmers, all Dynalite, operate similar, but starless decorative lighting in the foyer and FOH areas, using a separate control line and operating system.

DMX512 was deliberately chosen for the house lighting, partly to achieve soft patch, but more importantly because on some occasions designers will want to integrate the atmospheric house lighting with stage performances, hence patching into the stage DMX network is provided.

The showmaster has several submasters, each capable of driving either a simple preset or a timed sequence. A number of remote house light control stations, apart from the usual 'full', 'out' or 'half' preset states, can call up three sequences via these sub-masters. At the time of writing, the plan is to produce a recording of the original theatre organ which



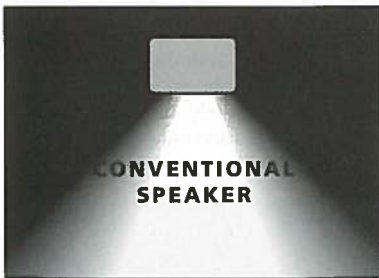
Above left, the interior of the new flytower on the south west side of the theatre, and the counterweight flying system and rope lock rail (right).

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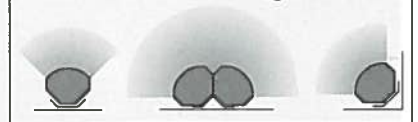
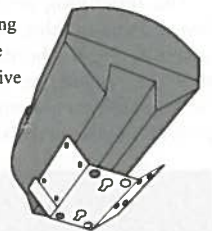
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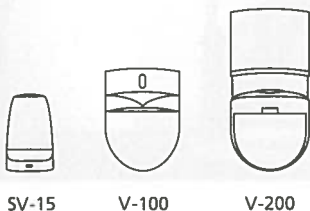
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will be run together with a lighting sequence for the delectation of daytime visitors.

Staying with electricians for a while, the theatre has no major complement of stage lighting, as most productions will bring their own or arrange hire as needed. To simplify the installation of production equipment, a 1400A 3-phase supply is fed to an industrial enclosed bus-duct system, which appears understage, each side of stage, grid level full width upstage and downstage, and centrally along the auditorium roof space. It has 300A take off at stage and understage, plus a considerable number of 40A 3-phase switched outlets at all levels. Further groups of similar outlets appear alongside local patch fields at box boom positions and each of the three lighting bridges. In an atmospheric ceiling? Yes - they are above the sky surface, the latter having large three-section traps which rise vertically to create openings after the house lights go down. Through these, spotlights shine, and air-conditioning wafts down during the show, only to be shut off and concealed when the lights come up in the interval, or so the theory goes.

An initial quantity of Bytecraft dimmers and a Strand GSX desk are provided. Operation is via a DMX512 network, which is essentially a triple parallel system, affording a range of control points driving a number of dimmer locations, via LSC splitter/amplifiers and patch rack in the technical room, situated behind the rear stalls.

Rigging of stage lighting, apart from the three bridges, is on four box booms; circle front, and on stage by 24 4500 long 12-way connector strips which fit on any counterweight batten. Each is fed via a multi-core cable hanging vertically from a 'reel-barrow'. These have a spring return cable reel and connectors to re-locatable dimmer racks, and can be moved anywhere on the grid floor. Apart from the 96 single-purchase counter-weighted battens over the stage, there are two panorama bars each side on counterweights, one each side on a one ton electric winch and two more winched sets on-stage.

The remaining technical provisions are an SM system and block cabling for visiting sound systems. Severe heritage restraints mean that the large speaker arrays now popular will only be tolerated on a temporary basis (but we have provided holes in the sky with suspension steels



Part of the main auditorium, showing the OP box boom locations top centre.

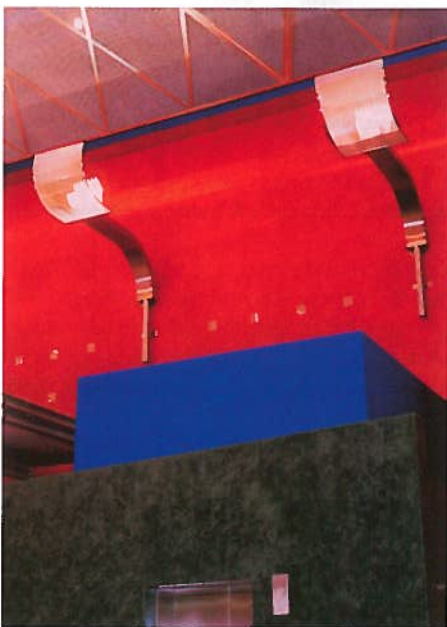
above), although a basic muzak or announcement sound system is included, which has to be invisible. Six JBL composite boxes are buried in the proscenium decoration, and four rows of Control 1s are hidden amongst plasterwork over the rear stalls, driven by a two-channel delay. (Cynics advise that by definition, no visiting sound designer will use these). That's it for sound, except for tie lines and speaker pairs run all round from a patch rack in the technical room, and a special series of separate power outlets with technical earth.

The stage manager's system has the usual facilities, including a real analogue clock with hands and clear numbers; paging to various zones and a Creative Audio four-channel talk-back master. The four outputs of this latter unit go to a special rack at stage level, which enables patching to a series of dual cable runs to all strategic points around all working areas, including FOH positions and a panel by the OB van location. The latter can, in fact, use this to patch through to various points independently from the house system. CCTV cameras are located under the forestage and on circle front,

cabled to VDAs and various outlets, as well as monitors on the SM console.

This has zone selection for paging, and master controls for the white/blue worklight system, all working via an AMX programmable control on the SM technical rack, although special care was taken to ensure the console itself used traditional controls - reassuring to visiting stage managers, who can plug themselves up either side of the stage. Speaking of plugging up, there are cable routes for temporary wiring from the OB point to on-stage, under the stalls to rehearsal point and tech room, and from upper fly galleries into the roof space. The seats can be removed from rear stalls, with under-floor ducts into the tech room - we don't want to see gaffertape in this house!

In the public areas, apart from slight changes to the stalls rake, no major alterations were permitted to seating layouts, which still show their cinema heritage and distances. Opera glasses at least will be obligatory for the dress circle rear, but completely new seating and carpets, ample bar areas and toilets, late-comers' video monitors and full air-conditioning will no



Some of the architectural design highlights that have become a feature of the restoration programme.

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doubt more than compensate.

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Project manager

Tim Tai

Design and build contractor

Fletcher Construction

Design manager

Cary Granger

Project manager

Barry Osmotherly

Architects

Peddle Thorp Architects

Principal architect

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THE HISTORY OF THE CAPITOL THEATRE

The site of the Capitol Theatre has been used for entertainment for over 100 years, originally being a market place where entertainment included circus, theatre and side shows. The site was converted from a market building by Sydney City Council and leased to Wirth's Circus as a Hippodrome, complete with hydraulic seal pit, opening in 1916 as the largest theatre in Australia.

It had a 13m dia ring that could be dropped 3.6m and filled with water for the aquatic events. There was a traditional ornamental proscenium and the building featured three levels of seating, as well as a small orchestra pit.

The next stage was brought about by Stuart Doyle, MD of Union Theatres, who in 1927, with the demise of the circus, acquired the lease from Wirths and converted the Capitol to a Picture Palace. In April 1928 the Capitol opened with a 2,999 seat auditorium, featuring an open-aired Florentine Garden surrounded by walls and balustrades, statues, trees and period furniture all beneath a blue sky, which darkened as session time approached. A sunset display above an imposing proscenium arch, when all was dark the stars began to twinkle in the night sky as fake clouds drifted overhead. Included in the ornamental redesign were replicas of famous European works of art, all being under the supervision of theatre designer Henry White.

In the 1930s the cinema gained a reputation for lesser quality films, in particular horrors and westerns. World War II produced an upturn in box office receipts but a downturn

in theatre maintenance. Lighting effects were not repaired, cloud machines stood motionless and the famous blue lighting effects around the walls were beginning to fade away. So in 1945 the theatre closed for repairs.

In March 1945 the Capitol reopened as a first release house, using Deanna Durbin as a drawcard. 1948 saw experiments with Jazz Concerts and Beach Girl contests, with the Capitol under threat of demolition to allow for construction of the Eastern Suburbs Railway. In the late forties Australian films premiered at the venue.

From the heavy attendance in the late 1940s the theatre's fortunes roller-coasted to falling admissions in the early 1960s after television was introduced. It wasn't until 1970 when the Australian Opera moved to the Capitol after fire destroyed Her Majesty's Theatre, that new aspects emerged from the picture palace; it had perfect acoustics, and the audience were discovering an amazing new visual experience in the theatre. Thus Greater Union were granted a three year lease extension, on the understanding that they spend not less than \$150,000 on repairs and renovations.

Greater Union vacated after 40 years as leasee in 1971 and Harry M Miller took over the lease for the production 'Jesus Christ Superstar' in February 1972, which ran until early 1975. (This was reported technically in 'TABS' December 1972, Vol 30 No 4)

Hoyts then leased the theatre for sexploitation films in the mid 1970s. In 1977 the Capitol was classified by the National Trust, and closed on December 8th 1983.

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ASLEEP IN THE STALLS

Is it you? Have you won the lottery yet? My first venture into the national numbers game wasn't a great success - the pink slip didn't have a single winning number on it, but as soon as I've saved up another pound I'm eager to have another go.

Maybe we're approaching the lottery from the wrong end. How about applying for a hand-out? The application forms are rather daunting, a bit more complicated than putting a line through six numbers, but your chances may be higher that way. Think of it: suppose you're planning to put on plays in a stately home (maybe one of those with an attached theme park) and suppose your organisation is - like most theatre companies - a registered charity. Now, you want to build a multi-purpose hall for your performances, to open in 2001. You could in theory apply to all five of the bodies charged with dishing out the small, but useful percentage of the lottery take that goes to good causes. The queue is fairly short at the moment, and as you know the receipts are almost twice as high as predicted. I'd say you're in with a good chance.

The lottery payout organisers have been firm that their hand-outs should go only to capital projects, but there is, or should be, scope for creative thinking about just what a capital project is. You can't use the money to pay your technicians a whopping bonus (shame about that) but there's no reason, as far as I can see, why you shouldn't put in to buy them a new control board or a super-duper mixing desk. That's capital, isn't it? So, I'd reckon, is a new flying system or a computer for the box office.

Nobody wants to let the Government off the hook of arts funding, even if they've managed to wriggle pretty clear in the last few years. Any civilised country has an obligation to its inhabitants to make the best of culture accessible to the majority of them, and never mind that they'd rather be sitting in front of *Blind Date* with a Budweiser and a biryani. The principle is understood even in the land of Sir Les Patterson - Paul Keating has just announced an enormous increase in Australia's arts funding, and he used to be the country's finance minister, hardly famous for generosity. "Tight as a kangaroo's sphincter" was an expression coined for (or probably by) the now-generous Mr Keating. Can it be that one day we'll hear Kenneth Clarke described as "open as the Notts Forest goalmouth"?

What the Chancellor grudgingly passes out to the arts world is one thing. The lottery is a different ball game altogether. If we take this idea of 'Government pays running costs, lottery pays capital costs', we can see some very interesting possibilities for real growth. Already some commentators are starting to worry: it's no use building smart new theatres, they say, if we can't afford to pay the people who work in them. I say let's build hundreds of smart new theatres, fill them, and force the government (of whatever colour) to find the money to pay for running them - if we can show a demand they might even begin to think of the arts as a vote-winner. And attractive theatres are more likely to bring in the punters than some of the tired old flea-pits they have to suffer at present.

Which brings me to another useful piece of lateral thinking from the Theatres Trust. Naturally, they're concerned that lottery money should go to repairing some of our finest theatres, which are very close to falling



The new improved Royal Opera House: an artist's impression of the view from Bow Street.

down from lack of maintenance. These will need to be near the front of the queue for capital. Once the real emergencies have been dealt with, however, we have a chance to protect our entire heritage for the future. Clever application of the capital-only principle could see many of our established buildings, flea-pits included, getting a capital sum in the form of an endowment. This would then be invested, with the income going towards the sheer maintenance of the fabric. At a stroke, theatre directors are relieved of much of their day-to-day worry about whether the next show will literally bring the house down. Instead, they can concentrate on producing shows that will do so figuratively. I don't know what the latest figure is, but not so long ago it cost a million pounds a year simply to open the doors of the National and let the staff and public in. Suppose Richard Eyre's successor didn't have to worry about that part of his budget? The benefits of endowment might be even greater in some of our splendid older theatres, which may look magnificent, but are beasts to heat and light. Here's a good way to tap the 'National Heritage' chunk of lottery income.

Someone else who's been doing a spot of lateral thinking is Lord Gowrie, arts minister turned Arts Council supremo. He's been putting forward a variation on the idea that started this piece: you may not be

able to put in for the cost of a set as capital, but how about commissioning a composer to write, say, a fanfare celebrating the reopening of your refurbished auditorium? Why not commission a new play for it? Or some paintings for the foyer - maybe even the designs for that set you've bought out of the running budget? That would be capital expenditure, wouldn't it? Since it's the Arts Council doing the handing out here, the idea should run.

Gowrie put forward this neat proposal in a speech to the Royal Society of Arts, and by coincidence the RSA themselves are working on another wheeze to get lottery money into more hands than those of the few big boys, who want £50 million here and there to rebuild Covent Garden or turn the Albert Hall and its precinct into a garden centre. Their plan is called Project 2001, and, like the Covent Garden application it's looking for money from the lottery's Millennium Fund pocket, rather than the arts pocket. They're being rather modest by comparison in asking for less than £10 million. The idea, I gather, is that this should be seed money for hundreds and hundreds of little local projects - well, 2001 projects to be exact. One of the Society's main aims is to regenerate a sense of community, perhaps by starting a community-based equivalent of the Open University. Another way of stimulating community, the Society explains, is rediscovering what William Morris called a sense of "proper human occupation", whether in work or play.

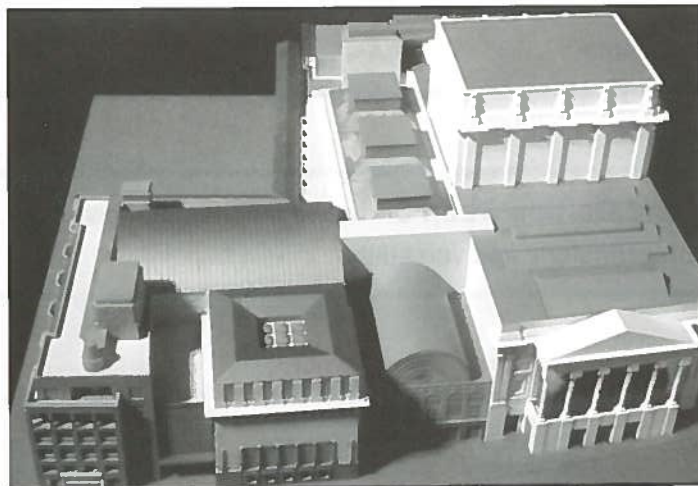
There's a pretty obvious role for the arts and entertainment world here, and there is also a specific area of interest in the project 'Unusual Partnerships in the Arts', which could start some of you lot thinking. The agents provocateurs for the whole plan will be the Society's 16,000 members, and since there's a strong design and technology core to the membership, it's quite possible that you're an FRSA and have already been drafted. If not, the man to talk to is Christopher Lucas, the project's director.

There you have it: thinking caps on, calculators out, application forms at the ready. What was that piece of kit you've always dreamed of? It could be yours . . .

Ian Herbert

Ian Herbert is the editor and publisher of the critical journal, *Theatre Record*.

"Any civilised country has an obligation to its inhabitants to make the best of culture accessible to the majority of them, and never mind that they'd rather be sitting in front of Blind Date with a Budweiser and a biryani."



A model of the Royal Opera House, Covent Garden, after the proposed development.

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WHEN WALLS HAVE EARS

Club 180 - Walter Mirauer reports on a Christmas turkey transformed into a golden goose

If rooms could speak, the basements of Earls Court could tell a tale or two, none more cautionary than this one from the cellars of what used to be Banana Mac's, then Harpo's and currently Earl's in Earls Court Road, which is now the home of Club 180.

Bass Taverns bought the premises for around £1.3 million earlier in the year, and clearly considered it enough of a snip to apportion a further £300,000 to lick it into shape and deck it out for its new role, despite the fact that the premises had a history of noise pollution problems.

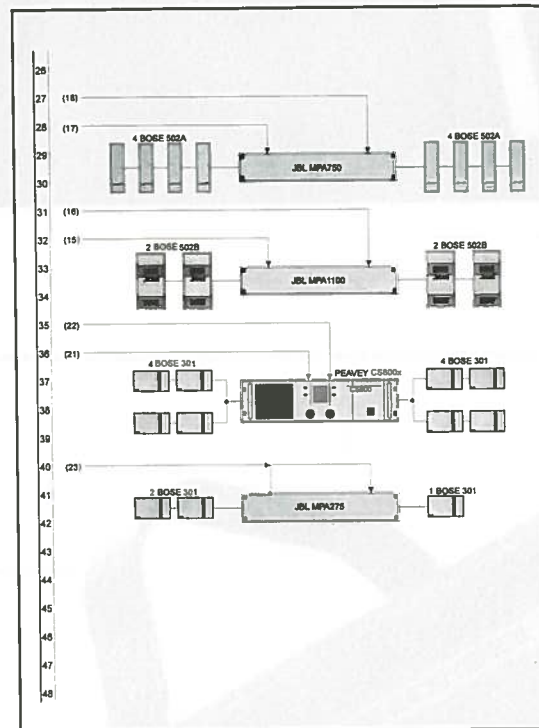
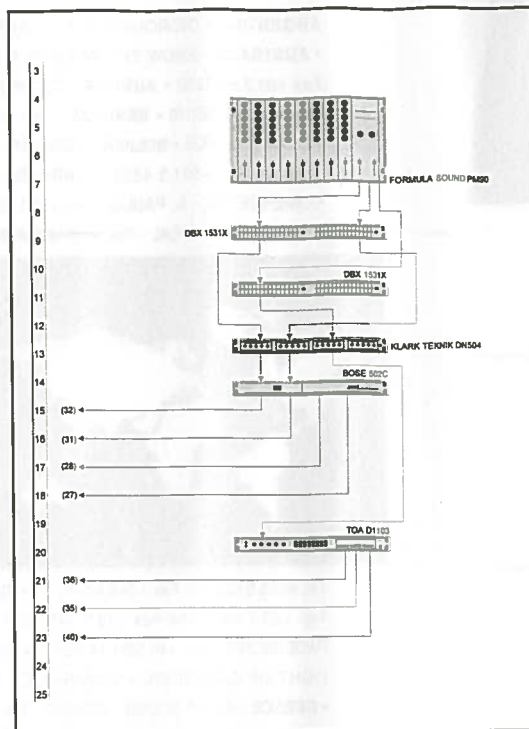
Accordingly, it should have surprised no-one that the granting of the necessary entertainments and liquor licences was made conditional upon there being no noise nuisance caused. Still blissfully unaware of the contents of their Pandora's Box, Bass called in consultants to quantify and hopefully solve their problems. Their subsequent report must have made depressing reading for them when it landed on the desk, since it stipulated sound pressure levels of 45dB in the bar area and 55-60dB in the club. For a less determined, less experienced or less wealthy operator at this point, it would quite simply have been game over.

The next stage was to take largely mechanical, and structural counter measures aimed at cutting down the sound leakage to adjoining premises. These involved no small expense and much cladding, cutting and insulating. The already restricted space within the venue was further reduced.

To place a perspective on this, the person whose property was most affected by noise breakthrough sleeps with his head just one metre above the DJ's mixing area. Given the propensity of bass notes with their long wavelengths to march unhindered through obstacles, achieving the desired result of decent dancefloor sound without disturbing the neighbours at all, was clearly not going to be easy, and a generous sound equipment budget was duly set.

Bearing in mind that we have here a cellar venue with very low ceiling height and a definable and serious noise problem, the next installer's choice of a JBL bin and horn system, placed immediately below the neighbour's bedroom and intended to 'diffuse' from this central point into the peripheral areas was pretty mind-boggling. Mr. Davies, the unlucky occupant of the aforementioned bedroom certainly thought so. He could probably have heard the system better than many of the paying customers inside the venue.

The complaints went in, closely followed by the environmental pollution squad who duly served closure notices, but did offer the helpful advice that it was probably the sound system that was causing the noise problem.



The Music Company specialises in the design and installation of sound reinforcement systems. Shown above are their recommendations for the signal processing (left) and amplification systems.

Panic seems to have set in at this point. The system LF was tweaked using a parametric EQ, and a Formula Sound AVC2 comp/limiter was installed into the DJ booth on the advice of some local yokel who told them that their Klark Teknik DN504 was no good and which, at the operating levels set, made it impossible for the DJ to talk over the music. For good measure, a Symmetrix comp/limiter was thrown into the mix for low end only via the crossover.

"If rooms could speak, the basements of Earls Court could tell a tale or two, none more cautionary than this one."

None of this was the least use, which is no reflection on the equipment specified, simply the manner in which it was employed. In went another complaint, and this time a Red Card from environmental health. Faced with the inability to trade and therefore the imminent closure of their 'snip' investment (now heading for £1.7 million and rising), Bass could have been forgiven for ringing the Samaritans. Instead, they opted for the audio equivalent and called Bose who took a look at the scenario and then decided to call in a consultant. They remembered that they'd heard on the grapevine of someone who just might be able to sort it out and put in a call to Bradford and Paul Smith from The Music Company.

The most relevant paragraph of Paul Smith's report, having visited the site, and couched within his subsequent list of recommendations is a masterpiece of understatement. "It could be said that the existing loudspeakers would perform more than adequately in a different environment, but they do not operate

sympathetically within this unit," he wrote, going on to recommend using a large number of small speakers throughout the venue.

In the event, no fewer than 24 additional speakers were used. During the key stages of installation, measurement and setting up, the neighbouring residents were despatched into a luxury hotel to be cosseted while the boys made their noise. The new speakers did the trick. There is now a maximum level of 96dB available at mid/high frequencies, and a respectable 82dB at 63Hz.

Any feeling that this is insufficient to generate the necessary excitement is dispelled by the proximity of the speakers, and the wash of sound throughout the venue creates an engaging atmosphere and ambience. Having persuaded the authorities that proper steps were being taken, Bass obtained a stay of execution on the notice of closure served on them for 31st October. Following the redesign, The Music Company had them up and running by November 11th.

The venue has traded well through the busy Christmas and New Year period and there have been no more complaints. What Bass now want to do is to create a live music venue on the upper floors. Guess whose number Alan Penfold from Bass Taverns dialled for that one.

Equipment List

Dancefloor: 8 Bose Panaray 502A, 4 Bose Panaray 502B, 1 Bose 502C controller, 8 WCB5-U wallbrackets, 1 JBL MPA1100 (existing), 1 JBL MPA750 (existing), 2 DBX 1531 31-band graphic EQs, 1 Klark Teknik DN 504 comp/limiter, 1 Denon DN2000F CD, 3 Security Covers.

Peripheral: 12 Bose 301 loudspeakers, 12 wallbrackets, 1 Toa D1103 time alignment unit, 1 Peavey CS 800 amplifier, 1 JBL MPA 275 amp (existing), 1 equipment rack.

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ON TOUR

by STEVE MOLES
AND PRODUCTION NEWS

Joe Cocker

Sheffield Arena

LD: John Malamazian

SD: Mark Deadman

Two years ago Joe Cocker played two (or was it three?) nights at the Town & Country Club in London. It was the end of a lengthy European tour, and his first tour with new manager Roger Davis. For those unfamiliar with the name, Davis rose to prominence as the man who re-launched Tina Turner's career in the eighties. He proposed to do the same for Joe, and judging by the evidence of a sell-out show at Wembley Arena as well as the NEC, SEC and Sheffield, he appears to have pulled it off in record time.

A unique performer, Cocker manages to combine a refreshing down to earth persona with a larger-than-life stage presence. Dining on shepherd's pie and pickled beets before each show may just be quirky, but the fact that he notices that the caterers give him a new jar of beets each show day, shows a refreshing interest in the minutiae of life ("Rory," he asked a bemused monitor man, "have you been eating the rest of my beets?") On stage, he epitomises the singing anti-hero - he is a voice laid bare. The bottom line is that people pay to hear Joe Cocker, they don't come to view a fashion icon or to glean some ego tan by basking in the reflected glory of an idol.

LIGHTING

John Malamazian has attuned his lighting show to exactly this credo - three cross-stage trusses and a small (48' x 8') rear box truss hold a minimal array of lamps. Each truss is swaged with a scalloped grey border and, with the exception of the box, each is cranked at the centre point to form an arch. With ascending trim heights (the downstage apex is at 36 feet), the stage resembles a large, but simple proscenium set-up. John has chosen predominantly dark colours, something Cocker noticed reading the gel numbers of John's original plots (I wonder how many stars have their own swatch books?), and certainly in his earliest concepts almost totally eschewed the use of followspots. "I didn't see him bathed in light," John said, "... a single truss spot from the rear was my original intention - that's not so much to do with him, it's more to do with the kind of venues we would be playing in Europe. The halls tend to be relatively low-roofed which makes front of house spots splash light all over the stage. In the end, I chose a single Trouper out front for him and two front truss spots." John uses these sparingly, often only one on Joe and both always used to pick out soloists, hence the front of house Trouper.

Some 32 Icons, run from an Icon desk, are dotted about the trusses and floor, with 200-odd Pars, all on truss, the vast majority of which are fitted with Color mags, as are the 17 Mole 8-lights. Joe's show is fundamentally blues and soul, and in many ways limits what John can reasonably be expected to do. At least two builds for the verse, a different scene for the chorus, plus all the necessary emphasis on the musicians seems limiting, but, in fact, using a Celco 90 control desk, he extracts maximum impact from minimum effect. Build cues on the on beat are used subtly - each one



a minor variant on its predecessor. A good example is putting two Icons into a rotating gobo pattern momentarily for the lift, and on the next beat using two lamps in different stage positions, with perhaps slightly different gobos. The effect keeps the eye amused and interested but not too overwhelmed - and that's not to say he can't bash it out on the big numbers: in fact he is able, because of the trim height and open truss configuration, to really work the lights out into the room and bring the whole audience into the song. This underlines the strength of the design - the dark colours, high trim, well-draped trusses and simple stage set all contrive to conceal the lamps. This means the stage can be lit in a variety of ways. For the heart-rending 'You're so Beautiful', all we are presented with is a frail man lit by single spots from front and rear - he could be in a tiny theatre somewhere. For 'Cry Me River', it's a full-on,

"He never sound checks. He never has in the seven years I've been doing monitors for him. When I first started I had to ask him what he'd like. 'No, that's all right love', he'd say . . ."

backdrop, big lights, flash and bang rock show. The point is, it's not the actual rig that achieves this variety, it's the well-positioned and thoughtful use of light.

A review of the lighting would not be complete without mention of Matt Druzvik, the Icon operator (will the women of England ever be safe again?) and the LSD crew, especially crew boss Joe Sherno, who is having to contend with a new lighting nightmare - a particularly obscure form of UV light. Despite the trusses being bordered, John still wanted to be able to light them occasionally to create a hood above stage. The lamp he chose is a remarkably bright nine volt UV lamp from Osram that can shine through the drapes. Resembling a domestic energy-saving type bulb, it's obscure because it was originally designed to harden specialist nail varnish to a titanium-tough, typewriter-resistant finish. How this lamp came to the attention of John Malamazian is a mystery, but Joe Sherno says that since the tour started they've played havoc with his cuticles!

SOUND

Sound was provided by Clair Brothers Audio, with 30 S4s per side. Front of house engineer Mark Deadman was able, when the occasion demanded, to blow the roof off with them. In truth, the Sheffield audience was somewhat staid and desperately needed an aural kick in the pants to get them on their feet. Perhaps they were overcome by the fact that a local hero could sell over 10,000 tickets.

The system was driven by Clair's traditional Carver amplifiers, unlike Roxette (see last month's On Tour), and again I was unable to discern an appreciable difference in performance between these amps and Crest's (no doubt this is why I was a crap sound man for the briefest of periods). However, on this occasion I was reliably informed (naming no names) that the newer amp is a much better performer. It now remains for Clair Brothers to develop a suitable successor to the weighty S4.

An interesting insight into Cocker was given by Rory Madden on monitors, an insight which also says a great deal about the diplomatic responsibilities that exist above and beyond the knob-twiddling required for this exacting role.

"He never sound checks. He never has in the seven years I've been doing monitors for him. When I first started, I had to ask him what he'd like. 'No, that's all right love' he'd say in that soft Yorkshire accent. I asked him 'Joe, if you don't say what you'd like, how can I do my job?' As it happens, he wants a really unusual mix - one I'd never have given him if I hadn't squeezed it out of him."

Cocker's performance style is certainly unique: his unorthodox monitor mix presumably reflects the impression he gives on stage of being totally, completely and utterly immersed in the music. He performed the Beatles ballad 'With a Little Help from My Friends' as he built towards the finale - a song he omitted on the last tour. It is the quintessential Joe Cocker song.

Were John Lennon to rise from the dead tomorrow he would be unable to wrest the song back from Joe's grasp. I suspect many of the crowd at Sheffield were seeing Joe for either the first time, or for the first time in a very long time, but they all left knowing they were his friends.

Status Quo

Sheffield Arena

LD: Pat Marks

SD: Andy Taylor

"They don't go home humming the lights, do they?" Just one example of the tongue-in-cheek humour that makes Francis Rossi such a thoroughly delightful chap to work for. And he has a point too - Status Quo's blank cheque to tour Europe and the UK in perpetuity, dolling out their mystic three chord wonders, is not due to a reputation for visual or theatrical extravaganzas. In fact, were they to attempt to do so they might endanger their unique position in the hearts and minds of all superannuated teenagers. As ever, their special brand of heads down, no nonsense, guitar boogey needs only the barest minimum in presentational terms. Quality yes, lavish indulgence, no. What they do is tight and nailed down, musically economical and great value for money. As the great clown said 'Show them what you're going to do, do it, and then tell them you've done it'. All who attend know exactly what they will get, and they get it in spades.

SOUND

Andy Taylor, well known for his work with the Eurythmics, Dave Stewart et al, runs the extensive Capital Sound F2 PA system from two Midas XL3s. Admittedly, 25 channels of the second desk are for the support band (The Outsiders; a band of surprising quality - catch them if you can), but the remaining 55 channels available are all used up by Quo. Despite the 'Guitars 'R' Us' imagery, there are some 42 stage sends, with the remainder of the channels used for effects. Reflecting Francis Rossi's earlier pronouncement, Andy goes to a great deal of trouble to make sure the flown PA is well arrayed, ensuring maximum sound coverage to all the seats in the Arena.

This is the most comprehensive spread I've seen in this venue; the 30 cabinets per side are flown at varying heights, with one cluster per side flown especially high for the people in the nose bleeds. (During the encores I invited Sherpa Tensing Norgay to accompany me up there and he agreed. Aurally, it was well worth the effort). Another nice, and intentional, aspect of Andy's flying configuration was that not a seat in the house had an interrupted view of the stage - the full breadth was clear for all to see. Just as well, with Rick and Francis making full use of every inch. That they could do so was made possible by the Garwood Radio Station In-Ear monitoring system they use. This system, now seemingly *de rigueur* for many artistes, did show one short-coming on this occasion. Francis indulges in a fair amount of banter with his audience, and so was obliged to



The band's first use of Vari*Lites, but, "they don't go home humming the lights, do they?"

remove what he referred to as "me new jewellery" in order to hear what they were yelling back. This has no bearing on the monitor set-up or the abilities of monitor man Tim Franklin, but will it mean an array of audience microphones need to be placed along the crash barrier?

LIGHTING

Pat Marks, assisted by Frazer Elisha on Vari*Lites, runs a similarly well thought out light show, with much attention to detail. (Apologies to Frazer - we mis-spelt his name in the October L+S). Pat's show is a great surprise - it is the first time the band have ever used Vari*Lites (hard to imagine) and he seems to have compensated for this by including very few conventional instruments. The 10 bars of Raylites are the only Parcans on the tour, and even then they are gelled in just two colours, and both shades of white at that. CTB and CTO are used for hot and cold, and the only other gel in the rig is for the eight four-lamp Moles which have Rainbow scrollers fitted, and even these are trained on the audience. Why? Pat explained: "The band feed off the audience - and so the audience lights are on for much of the time - Francis especially likes to see the crowd. The scrollers give some variety for everyone. As for the Raylites, I like the contrasting whites and find them very effective."

For control there is an Artisan for the Vari*Lites and an Avolites QM500 for the rest, whilst for the rig, Pat has a simple box truss with five finger trusses fanning out towards the audience. The trusses all have moving upstage points and all change height extensively throughout the show. This, without doubt, is the secret of Pat's success: surreptitious truss positioning keeps the limited

conventional lighting system interesting. To use the inevitable painter's metaphor, Pat uses the Raylites to project a variety of canvasses over which the Vari*Lites splash colour. Not always though: the occasional foray into a bare, starkly lit stage with perhaps just 30 lamps of CT blue in six-beam chunks made for a dramatic change.

Pat and Frazer, having worked together for two years, have an easy, relaxed approach to lighting operation, made noticeable by the fact that Pat feels no need to have Frazer on intercom during the show. No great shakes you might say, until you note that there are no followspots in this show. All pick-ups of the principals are done either by VL2Cs or by the 10 Lekos Pat has on the front truss, and the two casually swap this responsibility.

This is not a show of theatrical fireworks, but some nice little effects were squeezed in. The In-Ear system meant many of the back line cabinets were only present for visual continuity, and Pat had the speaker ports filled with DWEs and strobes. Although the Par 36s were revealed in the second number, the strobes were held back until late into the show for 'In the Army Now', and provided quite a surprise. 'Rock 'til You Drop' featured the world's fastest-spinning mirror ball, whilst 'Whatever You Want' saw Frazer aping Pat by putting the VL2Cs in contrasting hot and cold shades of white.

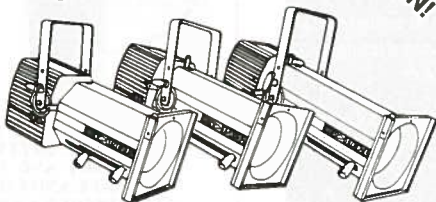
Towards the end of the show the band cranked into one of their many standards, 'Roadhouse Blues', for which long-time keyboard man Andy Bowen takes centre stage on harmonica. He dropped the little devil halfway through and was obliged to chase it around as Francis Rossi kicked it playfully along the front of stage. No red faces, no musical hiccups, just smiles and laughter all round, and we could all join in, and be lads.

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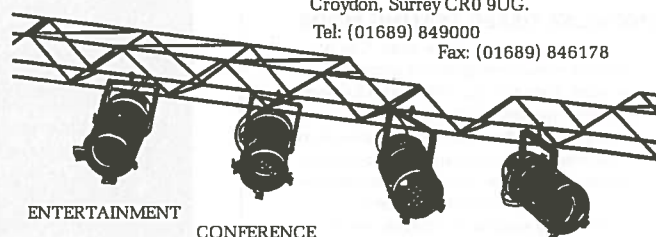
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SECOND TAKE

John Watt's view from beside the camera

● I guess there are a lot more design awards around for developing still further the subtlety of operation of moving lights, as opposed to conventional ones. These include upping the available range of colours, the number of gobos, the smoothness of movement (they aren't all that smooth!), the quietness of operation (not one is quiet!) etc etc. And then there's the mind-boggling variants on control systems that really are user friendly: can you grab a circuit without pushing three buttons first? Will it tell you if the lamp's blown?

However, I would like to make a request. Could we please go back to basics? The vast majority of TV lighting is still done with simple fresnels, which haven't changed much in design terms in the last 35 years, and probably not a great deal in the last 60 even. OK, they are lighter and the light source is considerably improved, which in turn has led to better beam angles. Granted, attempts have been made to improve the pan, tilt and focus adjustments; with an old style lamp, the sparks would bash it into position with a long stick; with the development of pole-operation they now bash it into position with a long stick with a hook on the end.

When I started in TV lighting I used to think that the main reason the barn doors didn't work was because of the abuse they got from the sullen breed of sparks which seemed to populate every studio. Working at a snail's pace, slowed down by the excessive weight of their wallets and the ETU rule book, they just could not revolve those doors. Out came the steps, with another bloke needed to foot them, and still they struggled. Imagine my chagrin 30 years later: now it's me up the steps, no one footing them and probably no insurance - and half the time I can't shift them either.

So, if someone wants the JW Award for real technical innovation and original thinking, please design some doors that revolve smoothly with a pole or by hand. For a Fellowship of the JW Institute, please make the doors open and close, and stay where they are put as well. We could (and do) argue at length about the shape of the doors and how many there should be. This gets even more interesting if it's an open face lamp (but then I guess most red head users don't know what doors are for anyway).

● Having got the doors right, would it be possible for most of the light to travel forwards out of the front of the lamp, rather than sideways between the lens and the doors? It's true that the random 'new moon' shapes on the cyc can sometimes be sold to fresh faced light entertainment directors as art, but it's my belief that I single-handedly keep the black wrap industry alive in getting rid of this spill.

So, dear manufacturer, solve these problems and life should get a little easier for you. But, don't get complacent yet. Just when you think it's safe

to go out and sell, think about colouring or diffusing the light. Conventionally, the colour frame sits just in front of the lens, and as the improvements in light (and therefore heat) output have kept one jump ahead of the gel manufacturers over the years, this has remained a perfect spot for melting expensive filters. Wire scrims do marginally better, but not much. The frames themselves do, however, present a serious design problem. Even I wonder as I fiddle with flimsy clips and twisted frames whether the problem is insoluble, but I would like to try and find an answer if only for sanity's sake.

So let's put the filter beyond the doors in an outrigger frame of some kind; those that are available resemble a deck chair on a windy day and are twice as hard to erect. Yes, they have to be big and cumbersome, so what's another inch or two to make the thing solid and big enough to use the lamp on full flood? The filter reflects quite a lot of light back the way it came, and this in turn needs baffling before it starts to light actors and set from interesting, but unintended, angles.

The spot/flood control should have a scale for repeat set ups. Some do - one spark's half flood is another's quarter spot, if you see what I mean. The lamp should remain on that setting even if it is tilted vertically down or up, and its innards should not run up and down like Smarties in a tube.

If the yoke must foul the lamp before it has revolved 360 degrees, then make it more compact so that it tilts say 60 degrees. Please remember though, that even pole-operated lamps get used on stands and so it's useful to be able to spin the yoke without taking the doors off. Well, enough of that or I won't get invited to the Cheap and Cheerful Lamp company's Christmas Party this year.

Come to think of it, I wasn't invited last year . . .

● Good lighting designers, of course, overcome difficulties presented by circumstance and equipment all the time - the majority of the latter is very good anyway. They also cope with those more ephemeral production problems on a daily basis, and this leads to their development as experienced lighting designers.

Nowadays, aesthetic considerations are always under pressure as less and less money is put into programming. For a freelancer these pressures can become insurmountable, and the only check on commercially-misled producers is the comparison of their work with others. Hence the need, as never before, for a strong BBC to keep the flag flying. Here, a dedicated group of lighting designers have produced more than their share of good photography over the years, guided always by an eminent lighting man - Head of Lighting, BBC. He, uniquely of late, has had a group of men (where are the women in TV lighting?) of varying talents, abilities, specialities and ages, with which to service the myriad output of this organisation. I learn that someone (presumably an accountant) has decreed this position unnecessary, and now, sadly, it no longer exists.

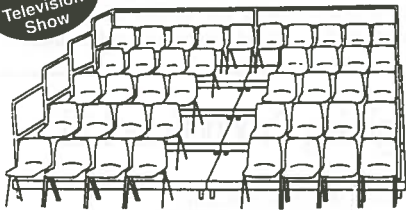
Well, if nothing else, it shows courage. I shall watch for the double nose shadows to start appearing.

" . . . with an old style lamp, the sparks would bash it into position with a long stick; with the development of pole-operation they now bash it into position with a long stick with a hook on the end . . . "

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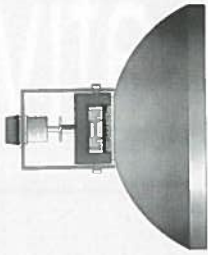


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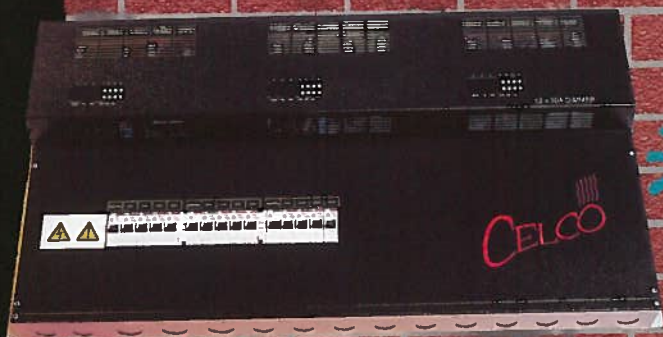
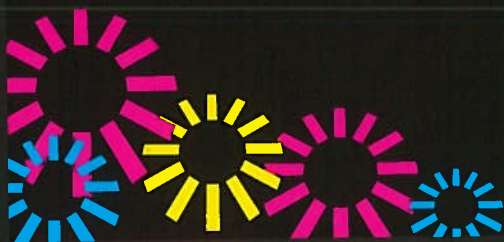
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FIVE GUYS HIT THE ROAD

Ruth Rossington reviews the sound set-up for a touring musical

Putting a modern musical on the road places large demands on all the departments involved - whether set, lighting, costume or sound. For most departments however, the changing venues of a tour are not a creative issue - costumes do not change style and a blue spot does not become a green one just because the show has arrived at a new theatre.

Sound, however, has a different story to tell. It has to cope with its own unique set of parameters and can suffer quite drastic "changes in appearance". Each new venue on a tour will have a direct and distinct effect on the behaviour of the sound. The numerous factors to take into account include the shape of the auditorium, its construction, the nature of the surfaces within it, the number of seats and whether these are occupied or empty. The latter aspect can obviously vary from night to night in the same venue, and audiences with dry clothes can have a different effect to those arriving in a downpour - a sound technician's worst nightmare you might imagine. However, most of these aspects, some of which can have a very marked effect on the sound, can be compensated for in varying degrees during each set-up. Nevertheless, the system has to be designed from the outset to cope with as many likely variations as possible.

The current tour of the musical 'Five Guys Named Moe' provided L+SI with an opportunity to examine a small, but state-of-the-art touring system in action. The tour began in Leeds in September '94, and we caught up with it at the Hexagon Theatre in Reading - a venue which provided an excellent example of the kind of situations that can be encountered. The venues on the tour range from the 900-seat Theatre Royal in Bath to the 1900-seat auditorium of the Kings Theatre in Edinburgh. The show is staged for approximately one week in each town on the tour, with just over 24 hours usually available to install the set, lighting rig and sound system. Normally opening on a Monday evening, the show runs through to the Saturday night, leaving Sunday for get-out, a chance to catch up with family, and the sometimes long drive to the next venue. And you thought you had it bad?

The sound design for the 'Five Guys' tour was handled by Bobby Aitken at Autograph Sound Recording, and followed the company's success with the sound for the West End version of the show. Aitken's current design credits include the West End production of 'Grease', plus the numerous international productions and UK tour of 'Return to the Forbidden Planet'. Written by Clarke Peters, 'Five Guys Named Moe' is yet another Cameron Mackintosh production and features the hits popularised by jazz singer Louis Jordan, mainly from the 1940s and 50s. The West End production has been running for four years and still plays to packed houses. It has won two Olivier Awards - for Best Entertainment and Best Choreographer (Charles Augins).

Nick Harris, technical manager for Cameron Mackintosh, outlined some of the background to the tour's sound: "Before one even starts to consider sound quality, there are some very basic problems to solve. It is the nature of the



tour that very fast get-ins and get-outs are essential. Any element of the production has to be assembled with this in mind. Secondly, transport costs are a major consideration, and therefore the packed size and weight of a system can have a large bearing on the overall budget for a tour.

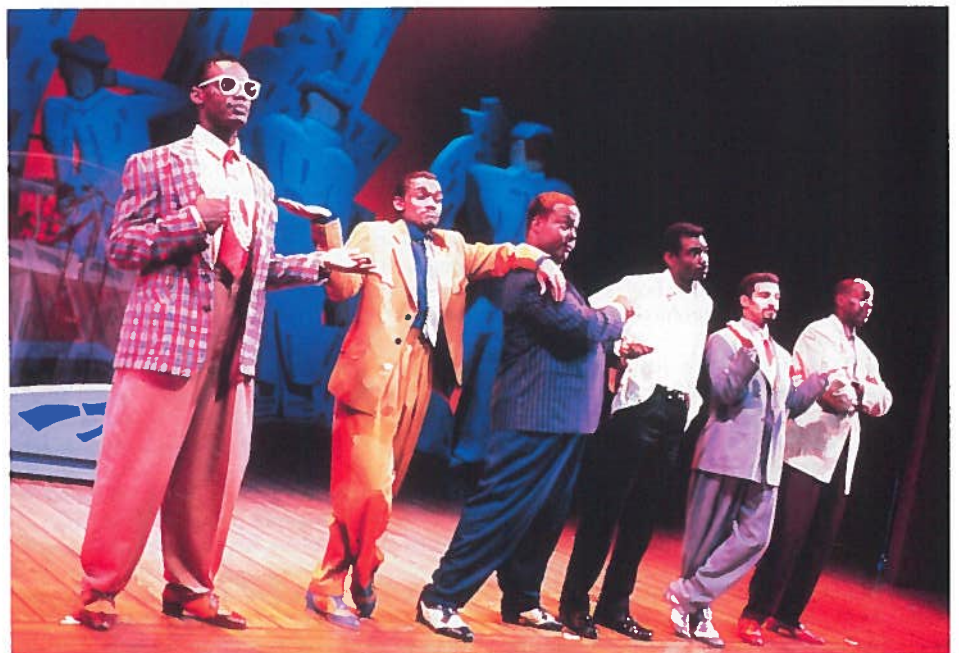
"The whole system on 'Five Guys' has been conceived after a great deal of thought - it is extremely compact and moves in and out of venues quickly and efficiently. It has performed well in all the theatres and has a very big sound - even for the largest venues on the tour. Having a live band on stage with the singers creates a difficult problem, which Bobby Aitken has solved successfully - every member of the audience can hear both the band and the singers, and we have never had a single complaint about the sound!"

In order to meet the requirements for speed, size and weight, a modular system was proposed, using the smallest loudspeakers that could achieve the desired levels of both volume and quality. The sound system is transported in a series of flight cases, which are arranged for rapid unpacking and deployment on arrival at a new venue. Four cases contain the mix position equipment, with one containing a 32-channel Midas XL3 console and the second housing a purpose-built aluminium anti-rake frame for the Midas. Autograph could have used steel, but whilst it might have been cheaper, it certainly wouldn't have met the objective for shipping weight.

This case also transports an instrument over-bridge, which sits across the top of the console. A third case contains equipment racks that slot into the frame below the console and house the mixer's power supplies, as well as the computer interface that controls the sound effects' triggering, reverbs and delay time changes. The final kit box for the mix position opens to reveal a Midas XL-88 matrix mixer, which handles the front-of-house output mix, together with a patch-bay and a radio receiver for the BSS Varicurve equaliser remote.

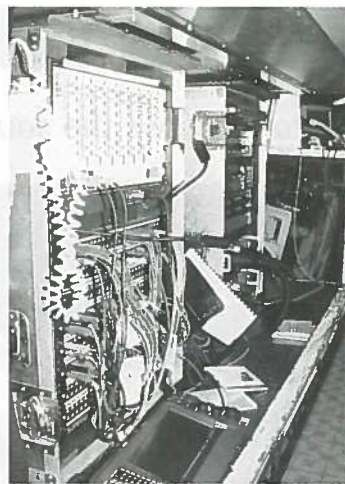
The overall objective is compactness and keeping the mix position's footprint as small as practicable equates directly with a theatre's potential revenue. Aitken explained: "We agreed early on in the project that we would keep as much equipment as possible out of the auditorium. Many of the items that would normally be at the mix position were therefore moved backstage. This involved MIDI links to and from the stage racks, controlling EQ and delay times. The remaining operational gear is installed in the equipment bridge over the console, directly in the operator's eyeline. It is important to ensure that the operator has all of the necessary visual information - and no more - within his line of sight.

"Two further cases house the stage racks,"

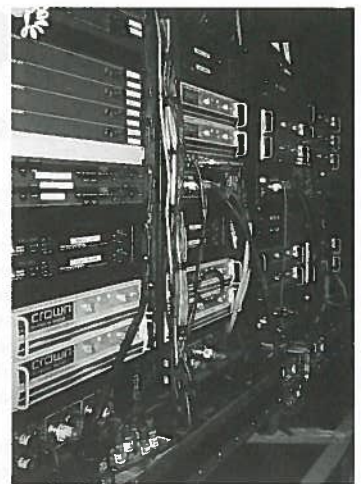




Sound operator Mark Karrie at the Midas XL3 console.



Equipment racks beneath the Midas.



The stage racks.

continued Aitken, "and contain amplifiers, 12 channels of BSS Varicurves, delay units, the radiomic receivers and the AC intake. These racks are simply wheeled into position backstage, their lids are removed and multicores can be instantly hooked-up to the built-in Socapex connectors. The whole system requires nine multicore signal lines and five speaker cables. It really is very fast to install - we can have sound coming out of the speakers within six hours of arrival and can be ready for the audience in just eight hours!"

The performance arrangements for 'Five Guys' consist of a six-piece jazz band on stage, with six singers - the five guys named Moe and the one who isn't. The rhythm section of conventional drum kit and double bass supports a grand piano, trumpet, trombone and saxophone/clarinet.

"Having brass and drums two metres upstage of the singers is obviously far from ideal," added Aitken. "The singers are highly mobile during the show, and quite acrobatic at times, making hairline-mounted radiomic capsules imperative. A further problem is that of hairstyles. Some of the cast have very close-cropped hair, making it difficult to conceal the capsules and using behind-the-ear positions are often the only option.

"Hairline mics do not tend to get on very well in close proximity to a loud band, neither can they achieve the impossible when used very near a loudspeaker system - and at times the singers can move precariously close to the speakers. Each singer naturally has the freedom to move their own head-mounted mic through a 360 degrees circle, with the potential to capture everything in its wake."

Part of these problems are solved by the mix itself and, on a day-to-day basis, are the responsibility of the show's sound operator Mark Karrie. The mix in the auditorium has to achieve a balance between the four variables of band sound, the singers' voices, the overall level of the system, and the feedback danger point. At the Hexagon production in Reading, the six guys spent part of the show extremely close to the speaker stacks on both sides of the stage with no discernible problems from where we were sitting.

The other part of the solution is the loudspeaker system, which is built up around four Meyer MSL-2A enclosures, with two Meyer USW-1 sub-bass units providing bottom-end support and two Meyer USH horns acting as stalls side fills in wide auditoria. The predictable coverage pattern of the Meyer units is a further contributing factor in controlling the show's sound. Depending on the venue, the system also incorporates a central cluster of three UM-1s, flown above the proscenium to cover the audience in the circle. Subsidiary

side clusters and under-balcony fills are also sometimes rigged, if a theatre's architecture demands it.

Mark Karrie commented on the view from the mix position: "It's a delightful system to work with. I've been especially impressed with the Meyer MSL-2 speakers - they may be relatively small and unassuming-looking, but the four enclosures can fill a theatre with extremely high quality sound. The close proximity of band and singers - and of singers and loudspeakers - certainly keeps you on your toes. You tend to ride the faders a lot, listening out for any sign of that tell-tale ringing which lets you know feedback is not far away. Provided that you catch it in time - and so far we have been lucky - the audience is never aware that it could even be a problem!"

Whilst Mark handles the mixing duties, the backstage tasks are managed by Alison Dale. Her role is to ensure that all microphones are working and positioned as they should be, especially the singers' radiomics, which Alison has concealed and camouflaged very successfully. She also mixes the show on some nights, allowing an exchange of duties between herself and Mark.

"There are a number of aspects of the 'Five Guys' system that contribute to its flexibility and ease of installation, including the console frame and the straightforward multicore arrangements," explained Bobby Aitken. "Our production sound engineer, Richard Sharratt, who is responsible for overseeing each new installation, also finds the radio remote unit for the BSS Varicurve equalisers a great time saver. It allows him to walk the auditorium, adjusting the system from the audience point of view.

"However, the Hexagon at Reading did give us a few headaches - as theatres go it is a rather strange multi-purpose building. It is basically a big open circle, without a proscenium arch or truss boom. Its shape caused a number of reflection problems, especially off the front of the circle, and its lack of solid proscenium - just a curtain was used - gave us nowhere to rig the main loudspeakers. We had to resort to stacking the loudspeakers on each side of the stage. This kind of compromise is typical of the problems that one has to accept on a week-by-week tour, and you have to be content with delivering a good quality sound to all seating areas, irrespective of whether in absolute terms the stereo image may be less than perfect.

"In contrast to the tour system, the sound for the West End production of 'Five Guys' - designed by Julian Beech - employs a split vocal/music system. Splitting the vocals and music works exceptionally well in London, but it does mean almost doubling the number of loudspeaker boxes. And, as anyone who has

ever toured in the UK will know, in some venues proscenium space is at an absolute premium - in Reading it was non-existent!"

Apart from the reflections off the front of the circle, the Hexagon has a generally rather dead acoustic. The singers depend on a certain amount of reflected ambience in order to gauge their own performances, which they have to adjust in order to suit each new acoustic of the tour. It is not just the sound operator who is affected by a change of venue. The singers are encouraged to forget that they are wearing microphones and just sing! It is part of the design approach that the sound system should be just as transparent to the artistes as it is to the audience.

This seems to be borne out in practice, as the show appears to have been enthusiastically received. Audience enjoyment can be witnessed in the form of standing ovations and participation in the sing-along number that precedes the interval (even I was stirred to a bit of foot-tapping). This song also ends in a long and lively conga line winding round the whole auditorium (cue for a graceful withdrawal at this point). One of the notable things about the tour has been its appeal to a wide audience - at Reading all ages were literally having the time of their lives!

The show has received rave reviews throughout the tour, with the sound being an important and integral part of the whole. The show provides a good example of how a relatively small and highly transportable sound system can provide the required quality of performance, and degree of excitement, in a variety of venues.

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Yamaha H-Series

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The H-series combines audio quality, efficiency, light weight and compact size with state-of-the-art computer networking capabilities to allow full remote control and monitoring.

The 2U high H7000, H5000 and H3000 amps deliver 750W, 500W and 350W per channel respectively, into 8ohms. This is the result of Yamaha's new High Efficiency Drive technology (the company have applied for a patent), which allows the amps to run at approximately twice the efficiency of conventional units, according to Yamaha. The amps run cooler and draw less power, which means that larger systems, comprising many units, may be configured without overloading the mains power supply.

All three models can be used in bridged mode for extra power delivery: 1900W for the H7000, 1400W for the H5000, and 900W for the H3000 (all into 4ohms). The new Dual Mono mode provides additional flexibility by allowing a single mono source to drive two independent speaker systems.

For further details on the company's range contact Yamaha-Kemble in Milton Keynes, telephone (01908) 369269.

Harfield Amplification

Harfield Amplification, the manufacturing arm of HW Audio, was set up only 18 months ago, and now boasts an impressive range of products available from selected distributors throughout Europe. The mainstay of the range is the 2U series of amplifiers, available in 150/150W, 300/300W and 500/500W versions.

The amps feature twin heatsink and twin two-speed fan cooling, Neutrik 'combo' input connectors, Speakon output connectors and a long service-life expectancy.

Due to be launched in March, the M2000 amp is aimed at larger PA and disco rigs, delivering up to 1100W into two ohms per side, and only 3U high. The company also offer a design and manufacturing service.

For further information contact Harfield in Bolton, telephone (01204) 366848.

SoundTech's Titan

SoundTech, a division of Washburn International, has introduced the Titan Monitor model TM2, a 12 inch, two-way professional stage monitor.

The unit features SoundTech's STS 400 series woofer, which has a rugged cast basket and special surround materials. According to the company, it is built to give superior mid/bass response and is ideally suited to vocal monitor applications.

For further information contact SoundTech in Vernon Hills, telephone + 1 (708) 913 5511.

XR from C Audio



C Audio have introduced two new power amplifiers, the XR 5001 and XR 3801. Each channel in the XR 5001 (1900Wpc) has its own conservatively rated power supply, thermal management system and 32 state-of-the-art power Mosfet devices mounted on force-cooled heatsinks. The XR 3801 (1200Wpc) has a large power supply, efficient output stage topology and effective cooling systems.

Also from C Audio, the RA 4001 is the latest addition to the company's RA range. Using the same 'mirrored' amplifier driver stage as the popular RA 3001, and an innovative Class H output stage, more power is delivered to the loudspeakers and less power is wasted as heat, enabling a power rating of 1000Wpc to be achieved within the same 2U package.

For further information contact Harman Audio in Borehamwood, telephone 0181-236 7220.

(The XR 5001 featured in L+SI's major amplifier survey and was fully evaluated in the October issue.)

ArriSun Addition

Arri GB have announced the availability of the latest Par fixture to the Arri range - the ArriSun 60. The new 600W HMI unit comes with the first ever 420mm diameter lenses, exclusive to Arri. The complete range of five lenses is enhanced by a beam angle of up to 50 percent, giving a virtually continuous range from spot to wide flood.

In common with other members of the ArriSun family, the 60 lamphead unit utilises a single headed lamp and is focusable. All three are constructed from lightweight aluminium and are dimmable to 50 percent with electric ballasts.

For further details, contact Arri GB in Heston, telephone 0181-848 8881.

Penguin Lite Arrives

Lite Smiffs Ltd have announced that the 'Penguin' flicker-free fluorescent lighting units, first seen at PLASA '94, are now available from stock. The Penguin units are of aluminium construction and the standard range includes the Baby 2 x 36W through to the Maxi 16 x 36W systems. The lights can be supplied in dimming or basic versions, the latter of which can be locally or remotely dimmed, controlled by a console with analogue outputs or digital DMX outputs using an optional DMX demultiplexer.

All features, including ballasts, are located internally. Penguin Lite systems can also be interlinked using conventional power cables.

For more information contact Lite Smiffs in Northolt, telephone 0181-845 9337.

Stardraw 3D

Starlite Systems' Stardraw 3D, which was launched last year, offers lighting designers the opportunity to create visually realistic stage sets and lighting plot layouts using a PC. Plans are now afoot to introduce an entire range of Stardraw packages. These will include Stardraw 2D, which will include reporting and bill of materials, Stardraw 4D - an innovative DMX control system featuring on-screen, real-time 3D beam images of the lighting equipment to be used on stage - and an Apple Mac version of the software.

A stand-alone 3D CAD package, Stardraw 3D provides a virtual world where objects such as lights, stage equipment and trusses can be quickly selected and positioned in 3D space up to an accuracy of one thousandth of an inch. The software allows the user to view designs from any angle, including from inside the design, and enables specific areas to be focused upon.

The package includes an extensive library of instruments, in addition to single and box truss configurations. A number of in-built tools also come as standard, including the ability to copy, cut and paste within designs, as well as to and from different files. Also included is a repeat facility allowing the accurate placement of multiple instruments at equidistant points in 3D space, such as four six-lamp bars across the back truss at an angle of 23 degrees.

Stardraw 3D is easy to use, and has been designed to run under Windows 3.1 and the new Windows NT. The package requires a minimum of four megabytes of RAM and one megabyte of free hard disk storage, although Stardraw 3D will automatically take advantage of any additional memory due to its use of virtual memory techniques. It has the ability to use any printer supported by Windows 3.1.

For further information on Stardraw contact Starlite Systems in London, telephone 0171-511 4400.

XTA - Audio Core



The new XTA DP100 is a two input, four output assignable audio delay processor featuring 11 micro-second minimum delay increments, 80 memories and compensation for ambient temperature change.

XTA's proprietary Audio Core digital signal processing technology is at the heart of the DP100, which, with its balanced analogue and digital inputs and outputs plus optical I/O option, will integrate into current and future systems. A choice of MIDI or open architecture port is provided for the external control options.

For further information contact Beyerdynamic in Lewes, telephone (01273) 479411.

OMC's Smokers

OMC Ltd, manufacturers of smoke machines for the entertainment and security industries, have launched the Maxismoke range, produced in conjunction with Wylam Hill Securities.

The Maxismoke Turbo is a remote controlled unit with a powerful centrifugal fan which acts in conjunction with the smoke output. A Portable version is also available measuring 250mm x 200mm x 340mm.

For further information, contact OMC in West Sussex, telephone (01444) 236632.

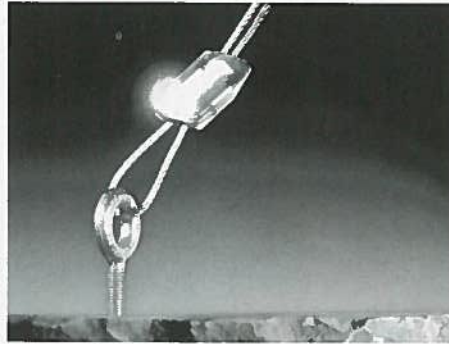
Stage FX Option

The latest introduction to the Jem product range is directed at existing users of Le Maitre pyrotechnics. Jem's Stage FX system, designed with a comprehensive package of safety and smart features is now available with an optional interface device that will link the system to Le Maitre flashboxes.

This addition to the Jem range offers major safety benefits, including full safety checking systems including testing of cartridges, power supplies, cables and circuitry. In addition, it offers auto cut-out in the event of a serious fault. It also features a keyswitch for safety isolation, system 'live' indicators, remote operation from 0-10V, mains voltage of 12V DC and is available in 4, 12 and 24 channel versions.

For further information contact Jem in Spilsby, telephone (01790) 754050.

The Gripple Arrives



The Gripple Terminator.

Rope Assemblies Ltd, has announced the launch of two new products for the lighting and sound industries.

The Black Wire Rope gives less reflection than standard galvanised wire rope, making it ideal for use as suspension ropes, stay ropes and safety bonds. The Gripple Terminator is a new method of securing wire ropes on site. There are two types in production: the Interlock Gripple is designed so that once attached, it cannot be undone, as recommended for use with safety bonds.

The Adjusta Gripple has a release mechanism and can be adjusted on site, making it ideal for use with display signs, speaker suspension and catenary wires. The largest Gripple currently in production will hold a 6mm diameter wire rope, and plans are under way to develop a 13mm version.

For further details, contact Rope Assemblies in Retford, on (01777) 700714.

Jands at the Messe

The Frankfurt Musik Messe has been chosen as the launchpad for a plethora of new products from Jands. The Event console has undergone some software surgery and all standard consoles can now be upgraded to 120 control channels (252 for Event-Plus) and will feature VGA and floppy drive options.

The HP12 digital dimmer will also be on show. This incorporates the patented Ferrodip chokes which Jands claim will virtually eliminate interference with sound equipment. The recently launched Jands-Hog, the product of a partnership between Jands and Flying Pig Systems, will also be at Frankfurt. Designed for the professional user who wishes to control moving lights and conventionals from the same console, it features theatre-style 'command line' programming, in addition to the labelled button Wholehog approach.

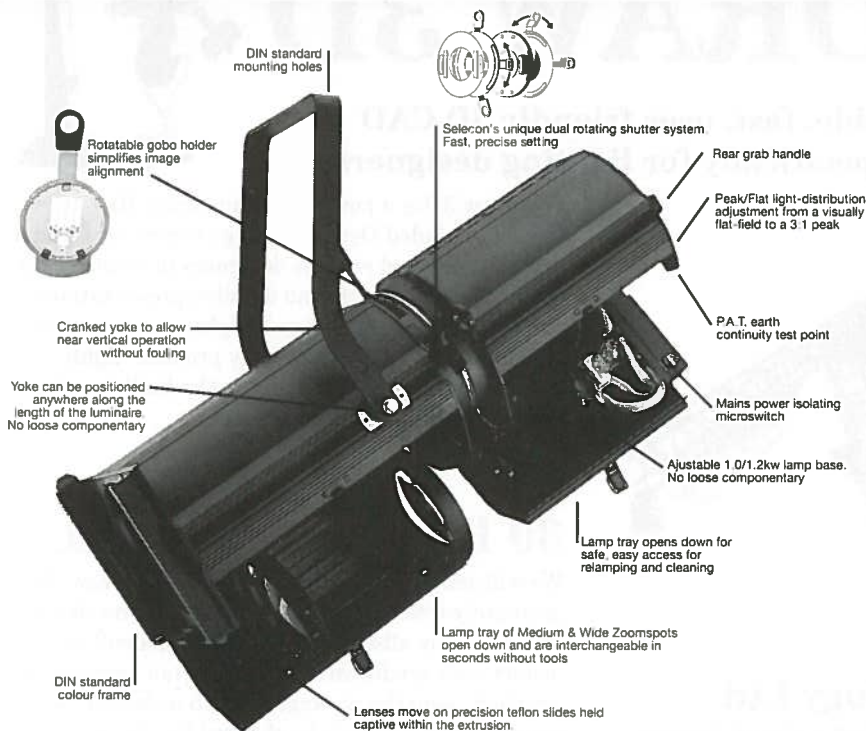
For further details contact AC Lighting in High Wycombe, telephone (01494) 446000.

The Light of Dawn

NitenDay Industries of Dallas, Texas, have announced the launch of a new lighting source for fibre optic applications.

The 'Dawn' is a compact 200W lamp, with a service life of up to 4000hrs. The lamp fits an aperture of 1.5", and the base model can be fitted with a dichroic filter (2" x 2") to provide a set colour. For further information contact either DLD in the UK, telephone 0171-613 3825 or NitenDay in Dallas, telephone 214-358 3511.

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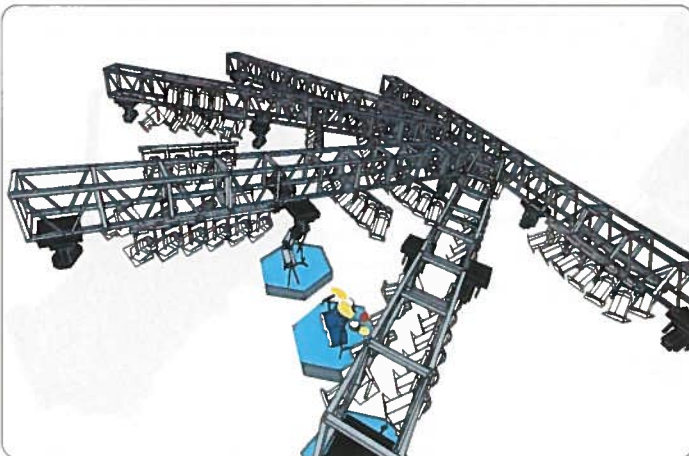
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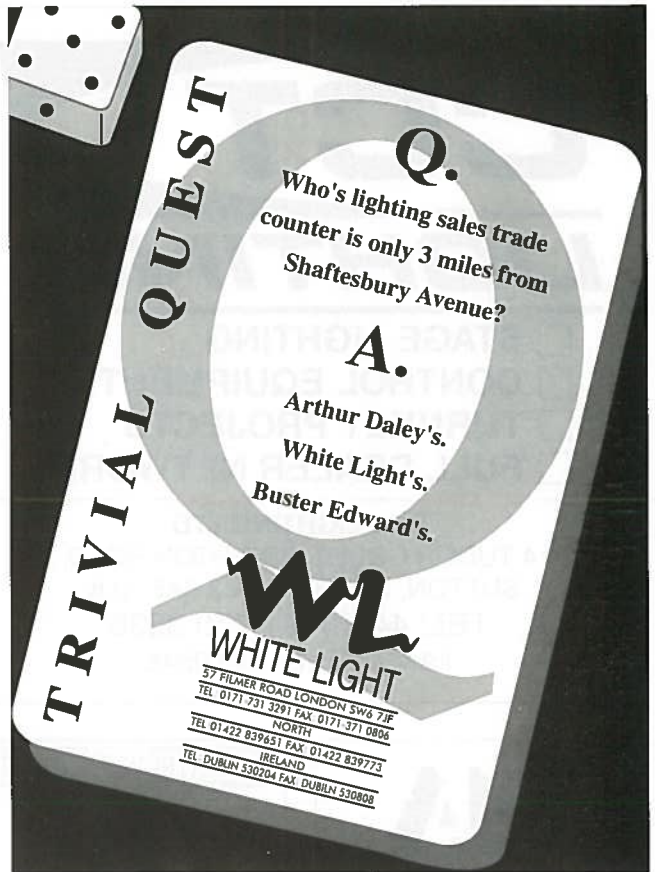


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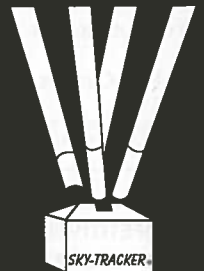
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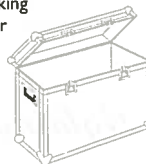
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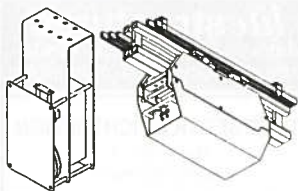
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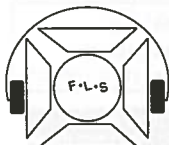
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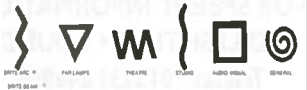
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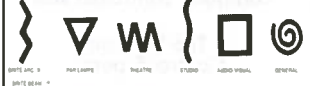


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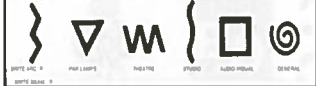
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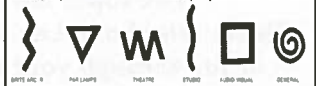
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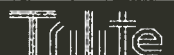
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VIEWPOINT

Matthew Griffiths offers

Ten Reasons to be a Member of PLASA

At a recent monthly executive meeting of the PLASA committee, a discussion was in progress dealing with ways to attract potential new members from a previously untapped area of our industry. Whenever this type of discussion takes place it inevitably ends up with the question "What reason is there for joining PLASA?" Having served on the committee for some years now, I have observed how the Association has blossomed and become a major player in the entertainment industry. To that end I feel it is vital that potential members, and the industry as a whole, understand what PLASA is about.

There are numerous benefits available on a day-to-day basis which can be quoted to potential members by the PLASA office and would give ample reason to join. However, I felt it would be useful to list 10 general reasons why PLASA is the most positive, innovative and worthwhile association currently operating.

1. Representation of the Industry. PLASA's membership covers the major areas of the technical side of the entertainment industry: from discotheque through theatre to live concert, encompassing lighting, sound effects, video and projection. Members are manufacturers, distributors, rental companies, retailers and installers. They range in size from privately-owned companies to multi-national corporations; from employing one or two people to hundreds. There are currently over 300 members covering all these sectors, so giving a truly representative view of our industry.

2. Financial Stability. PLASA has now established a firm, secure and safe financial base. As treasurer over the past four years I have worked closely with John Offord and our exhibition partners, P&O, to establish a regular profitable income. Within the next year we will sufficient reserves that will be a safeguard against PLASA being unduly affected in a recession. This gives us the confidence to plan ahead to the year 2000 and beyond, sure in the knowledge that we will be around as an association to implement those plans.

3. Wholly owned exhibition. PLASA is in the enviable position of owning the Light & Sound Show, and will continue to do so for the foreseeable future. The show has seen an incredible growth with phenomenal success. It has found a home that is well suited, and takes place at a time of year that is convenient to all our exhibitors and visitors. The 1995 Show will see the greatest number of exhibitors ever, and we expect to match the record-breaking number of visitors in '94, which included over 3,000 international visitors.

4. Lighting+Sound International. As with the Light & Sound Show, PLASA wholly owns the publication you are currently reading. The magazine has a quality reputation, as well as being respected and revered world-wide for its news and



Matthew Griffiths is chief executive of TSL (AV) which provide services to theatre, audio-visual and live concert touring markets. He started with TSL as a technician 16 years ago working through stage and production management. He has served on the PLASA committee for six years, having been treasurer for the past four.

features content. It also promotes the activities of its members in the magazine to an international readership.

5. International recognition. PLASA regularly exhibits at the major trade exhibitions throughout Europe, America and Asia. We also co-ordinate DTI trade missions on behalf of our members to areas of the world that are being developed commercially in our field of business. PLASA also has an international class of membership which is fast expanding, ensuring that the Association's name is spread worldwide.

6. Setting standards. PLASA has taken a very strong role in representing our members' views on numerous regulations being implemented by the European Community. PLASA currently employs a standards officer, and is looking to extend the services provided by the standards office. Wherever possible, we have taken the lead in vetting any proposed new standards before they are made law, ensuring that our members are fairly

treated. With new technology, PLASA has ensured that it has taken a lead role with the setting of new protocols, and has a policy of investing in research in these matters.

7. Forward thinking and development. PLASA's general direction is formulated by an executive committee. Made up of nine representatives of member companies who have been elected by the PLASA membership, the committee aim to represent the feelings and wishes of the membership. In all the time I have served on this committee, there has never been an occasion when it has not actively pursued the development of new ideas for the benefit of our members. With the input and dedication of John Offord and all at the PLASA office, various ideas and projects get translated into reality. All the members of the current committee give a lot of time and effort, and this is one of the reasons for the continued progress of the Association.

8. Dedication to investment in the industry. As an Association our main aim is not primarily to make profit for profit's sake. We aim to make profit in order to reinvest in our industry for the benefit of our members. The investment can take many forms, from training to research and development, and the investment areas are determined by the membership.

9. Worldwide partnerships. PLASA has established links with other trade associations such as VPLT in Germany and ESTA in the United States and takes a pro active role in developing international relationships. It is very important to PLASA to establish these partnerships in order to work together on a worldwide basis.

10. Participation in a world-class Association. One of the major benefits of being a member of PLASA is the opportunity to get involved with an Association that is a major force in the technical side of the entertainment industry. PLASA is a leader in every sense of the word, and the next few years will be an exciting time of growth for all its members.

I believe that these are 10 good reasons for joining PLASA. I also believe there are many more. If you are contemplating applying for membership, please do, and take an active role in the future development of our industry.

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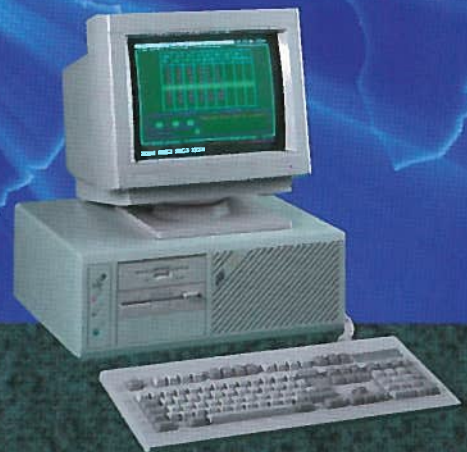
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