

# Lighting & Sound INTERNATIONAL

April 2000

The Entertainment Technology Monthly

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## Virtual Performance

- Virtual Elvis and Ladysmith

## Face the Music

- Fosse at the Prince of Wales

## Cause and FX

- Profile of the re-styled FX Group

## EnTech 2000

- All the news from Sydney

## Dome Zones

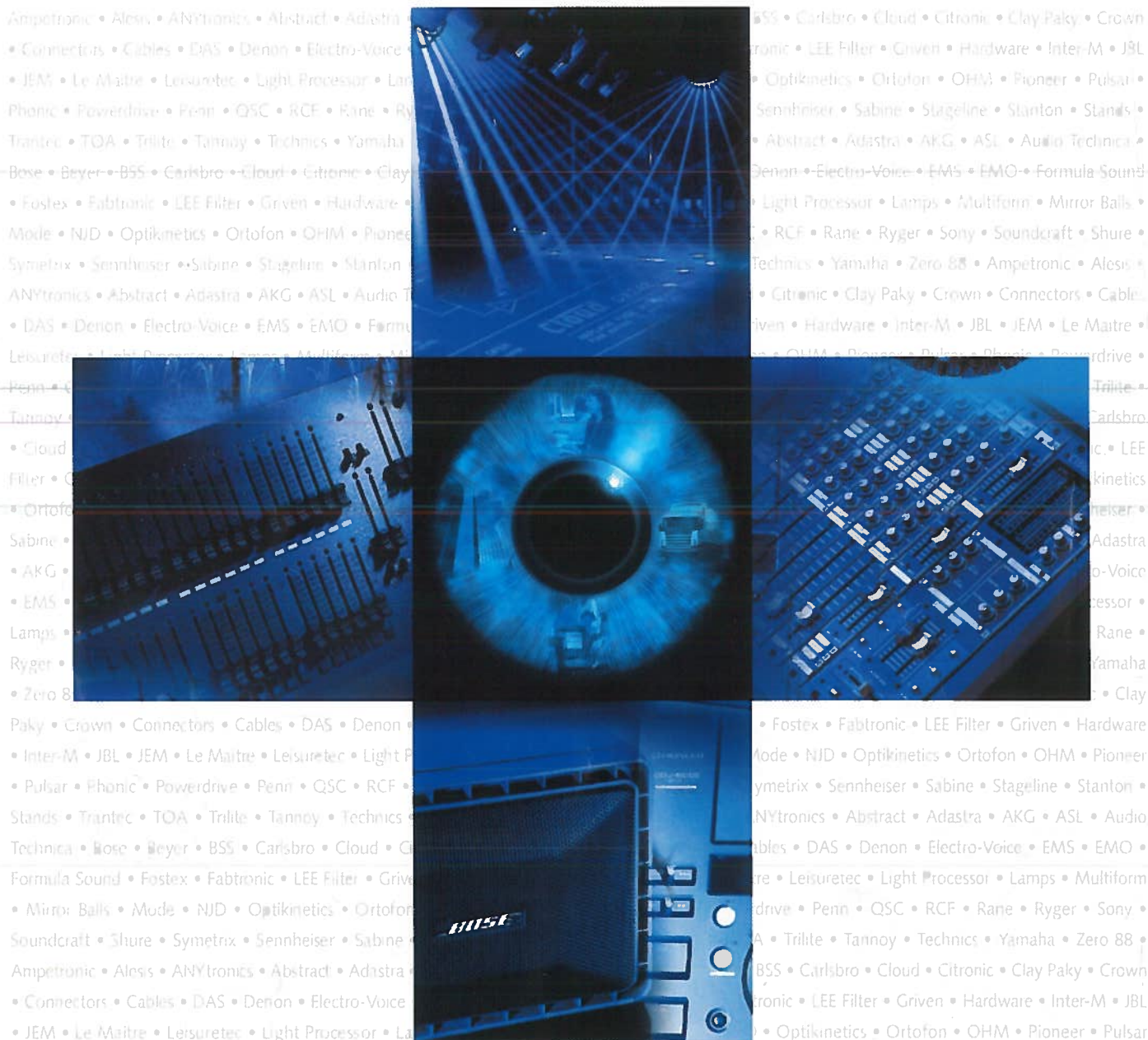
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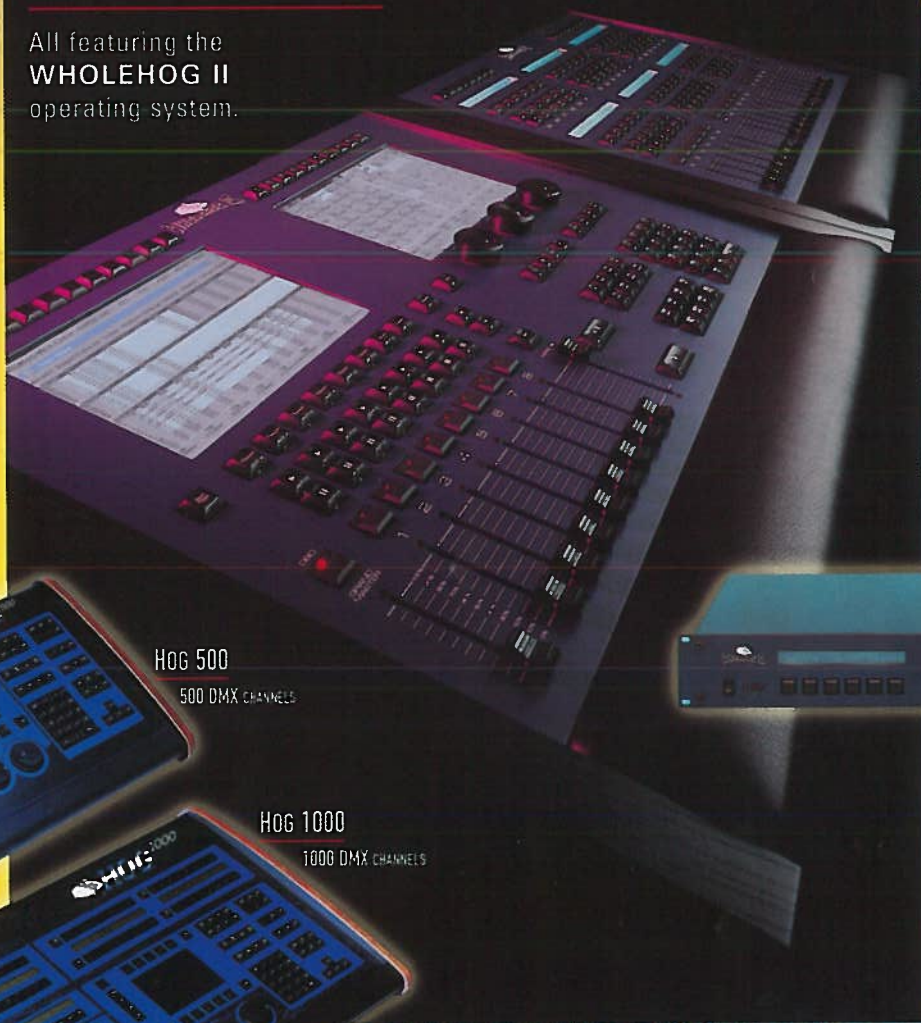


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# Lighting & Sound INTERNATIONAL

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There's an old truism in business that if you don't keep moving you'll soon be left behind, and two years after undergoing a complete management restructure it appears the FX Group of companies has taken this motto to heart

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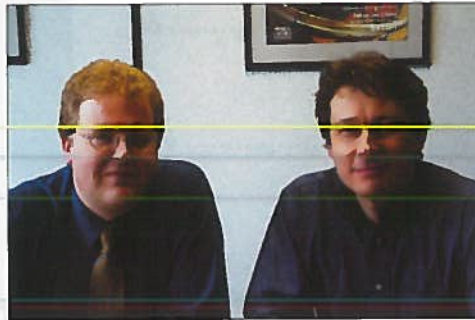
## APRS and PLASA in Talks

Leading members of the Association of Professional Recording Services (APRS) and the Professional Lighting & Sound Association (PLASA) have been working towards closer links between the two

### Associations.

Check out the PLASA news site for the latest industry news

PLASA MD Matthew Griffiths and APRS chief executive Mark Broad have identified a



PLASA MD Matthew Griffiths (left) with APRS chief executive Mark Broad at PLASA's Eastbourne HQ

www.plasa.org/news

raft of common interests which could result in the conversion of APRS membership into PLASA. Both Associations feel that the alliance will offer members a wider range of services and greater strength as a trade association in entertainment technology.

Meanwhile Broad has announced the postponement of the next APRS show until June 2001, in order to maximise the benefits of integrating APRS within the PLASA umbrella. With the support of the recording technology industry,

PLASA will now look at running the Recording Technology exhibition in 2001, building on the successes of '99.

For the full story on this and other Association News see page 36.

## Budget 2000 - Good for Business?

Following Chancellor Gordon Brown's budget in March, some have questioned whether this was a budget for business or not.

The CBI (Confederation of British Industry) in particular has been quick to highlight some of the main issues. "The Chancellor did announce a full year reduction in business taxes that we estimate at £200m. But with this Government raising at least an extra £5bn a year from business, this is only the smallest of steps in the right direction. This budget did nothing to ease our main concern - the strength of sterling which is destroying profit margins and delaying investment in manufacturing. Indeed, by adding over £4bn to demand for the coming fiscal year, it makes interest rate rises more likely, potentially sustaining the strength of the pound."

The Budget significantly tightened the tax treatment of British-based companies with overseas subsidiaries by altering the rules on relief from double taxation and controlled foreign companies. The CBI has protested that the changes were unexpected and too sudden to allow companies to restructure in an orderly manner. There is also concern that they are likely to be much more costly for business than the Government's predictions, making the UK a less attractive business location.

In general, the Budget was, however, positive for small-to-medium employers. 40% first year capital allowances for SMEs have now been made permanent and there is a new three year 100% allowance for investments in ICT by small firms with fewer than 50 employees.

## Lowry Opening

A weekend of celebrations at the end of April will mark the opening of the new Lowry Centre in Salford, the first purpose-built centre in the UK to integrate the visual and performing arts. A national millennium project costing £98million, it will host a 1650-seat lyric theatre and a 400-seat flexible theatre. Full story in July.

Copy Dates for May Issue + Editorial - April 20 + Advertising - April 24

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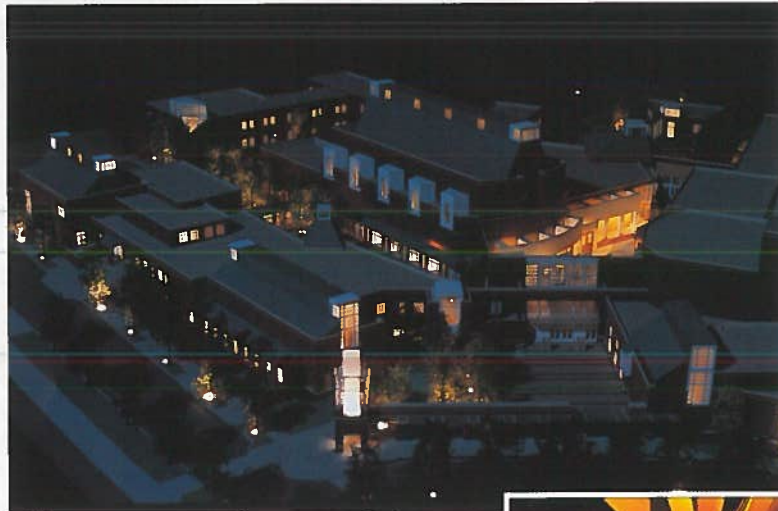
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## Clarice Smith Performing Arts Center

**The University of Maryland, located in College Park, Maryland, will be the home to a new \$110 million dollar multi-venue performing arts village. The Clarice Smith Performing Arts Center, which encompasses 318,000sq.ft on a 17-acre site, is scheduled to be open to the public in early 2001, although some of the office and studio wings are currently near completion.**



Photos: Moore, Rubel and Yudell Architects, California

The Center, named after philanthropist and UM contributor Clarice Smith, will include a 1,200-seat concert hall, a 300-seat recital hall, a 650-seat proscenium theatre, a 200-seat studio theatre, a 200-seat dance studio and a 100-seat acting/directing studio. "The sheer scale of the centre is daunting," comments Theatre Projects Consultants' project manager Eugene Leitermann. "A typical performing arts project might include three performance venues - there is a primary space, often a secondary space, and sometimes even a third space. Here we have three primary spaces - a concert hall for the School of Music, the Proscenium Theatre for the Theater Department, and a Dance Studio for the Dance Department. We also have two secondary spaces - the Recital Hall and Studio Theatre, as well as others, if we count the rehearsal studios."

The complex will also be the location of the University of Maryland Performing Arts Library,

30 classrooms, lecture and seminar rooms, 50 practice and rehearsal rooms, 100 faculty/staff offices for the Departments of Dance and Theater and the School of Music.

The Clarice Smith Center represents the work of a myriad of firms, including TPC of Ridgefield, Connecticut, design architects Moore, Rubel, Yudell of Santa Monica and local architects Ayers Saint Gross of Baltimore. The acoustician on the project is Kirkegaard and Associates of Boulder Colorado, and the performance sound contractor is Signal Perfection Limited of Baltimore, Maryland. Finally, Strand Lighting of Rancho Dominguez, California, will provide the performance lighting in the numerous theatres. The Center will feature a

total of six major performance areas, each one unique unto itself. The Concert Hall will be a cathedral-like space, featuring exposed steel trussing framing a vaulted ceiling.

The Proscenium Theatre features a classic American single balcony auditorium with step-down side boxes and ample backstage work areas. The Studio Theatre, meanwhile, is an aesthetically simple square room with circulation on all four sides with the audience seated on risers. Finally, the Dance Studio will do double-duty as both performance and rehearsal space, and will feature seating on telescopic risers which can be retracted to create almost double the floor space.



"Locating a diverse range of intimate theatres all within a village environment that seeks to create an informal, collegial atmosphere will make this an extraordinary place to learn and practice

the performing arts," Leitermann states. The size and the expanse of the project will certainly ensure that The Clarice Smith Performing Arts Center will be a unique venue in the United States. "I know of no other comparable facilities," states Leitermann. "I've never been involved in such a large and complex building completely and utterly dedicated to the performing arts," he concludes.

Sharon Stancavage

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## Brit Awards 2000

*This year's Brits has been and gone with the usual frenzy of headline grabbing antics. But for the boys backstage it's business as usual and for none more so than production manager Mick Kluczynski, who, with a production crew of 240, had just six days to build the stages, lighting rigs, camera platforms, dressing rooms, access gantries, walkways and offices inside the cavernous Earls Court Exhibition Centre.*



The entire set and supporting structures - including a dining area for 4,000 guests - used over 1,000 tons of steel scaffolding transported in on 21 heavy trucks, whilst the audio and lighting equipment arrived on another 20 truckloads.

Lighting designer Mike Sutcliffe and crew chief Dave Smith worked with a huge Vari\*Lite rig (486 fixtures in total) supplied by VLPS. The kit included 55 VL7s, 39 VL6s, 36 VL6Bs, 86 VL2C spot luminaires and 200 VL5 wash luminaires. The list of conventional equipment was equally extensive, headed by five Super Troupers, six Stark Lights and 12 Pani followspots, plus 30 4-cell groundrows; six Howie Battens; 50 bulkhead fittings; over 250 metres of festoon lights; 16 Molefays fitted with Wybron Scrollers, plus 12 Par 64s also with Wybron scrollers; 26

Coda Floods; 20 Par 64 lanterns; 30 6-lamp bars of Par 64 lanterns; one 70kW Lightning Strikes and four 40kW Lightning Strikes. All of this was controlled by two active Artisan consoles, a Celco Gold 90-way console and a Scan Commander. Also in the spec were 72-way Avolites dimmer racks; 192 metres of Tomcat stacking truss; 94 metres of Thomas pre rig truss; 30 metres of Telestage truss and 12 metres of Slick Mini Beam truss.

Britannia Row Productions was re-engaged to mastermind the audio production. The Wandsworth-based company worked with sound designer, Derek Zieba, for the event. Chris Coxhead and Bob Lopez controlled the front-of-house sound, with Vince Sharpe and Andy Ray covering monitoring world. For the loudspeaker reinforcement, Brit Row drew exclusively from its large Turbosound Flashlight inventory. The main system consisted of TFS-780 and 760 left/centre/right clusters, with left/centre/right delays and various audience and pit fills.

Managing director, Bryan Grant, described the system concept: "It is essential to use a highly-distributed system for this project as we have a mix of speech and high level music in a large space, with ambient audience noise levels in the high 90s. Many of the guest speakers don't have much experience of lectern mics and we need to have the ability to lift the levels in the room without affecting the broadcast sound. The precise focusing characteristics of the Flashlight enables us to do this better than any other system I have used."

### Elliot to Acquire ASC

Canford Audio founder Iain Elliott is to acquire the business of UK pro audio company Audio Systems Components (ASC). Elliott left Canford at the end of last year and said at the time that he was looking for a fresh challenge. The industry, though, has not yet seen the back of Len Lewis, ASC's founder, who will continue to work alongside Elliott for a while, bringing to a conclusion current contracts before gently easing into the back seat.



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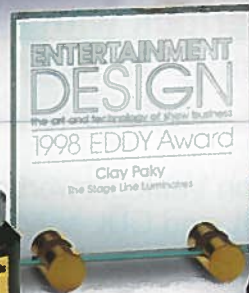


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## Mick Jagger Centre Rolls Out

*The new Mick Jagger Centre has opened in Dartford. The 355-seat performance area, with a 160-seat studio, has been built in the grounds of Mick Jagger's former school - the Dartford Grammar School for Boys.*

To create the new facility, parts of the Grammar School were redeveloped, including the existing school hall, old gymnasium and old school library, with the new spaces integrated into the existing buildings and incorporating a new foyer and administration areas. Theatre consultant Carr & Angier was responsible for all aspects of the stage technical equipment, with Stagetec handling the supply and installation of the performance lighting, control systems, sound reinforcement and communication systems.

The building features a 350-seat Main Theatre, 150-seat Drama Studio and a separate sound recording studio, together with practice rooms, a box office, and a foyer with bar and catering facilities. The lighting grid for the Main Theatre was custom manufactured and mounted through the new ceiling into specially constructed mounting brackets. The lighting system, itself, is predominantly Selecon and includes 14 of the company's 1kW Pacific zoom profiles complemented by 38 Acclaim profiles, fresnels, PCs and floods. In the control room is a Compulite Spark LX control desk, the outputs of which feed various DMX outlets around the building via a Compulite 6-way DMX splitter and custom patch.

A similar format lighting grid was installed in the Drama Studio, but on a smaller scale and included some custom manufactured boom bars mounted on custom brackets fixed to the wall. A Compulite Photon desk runs via a DMX patch mounted in the equipment rack in the Drama studio and a Compulite 3-way DMX splitter.

Martin Audio speakers were used throughout the venue. The Main Theatre incorporates two W3 mid/high speakers and two W3S sub-bass speakers for the front of the auditorium, two EM56 speakers as delays and four of the new Blackline F12 multi-angle speakers as monitors. All this is controlled through standard Martin Audio System controllers. The delay lines and EQ for the main speakers come from two Behringer DSP8024 Ultracurves, which have been set and locked so that the space remains configured. Three Crown K2 amplifiers drive the system.

Two equipment racks in the Main Theatre house the amplifiers and patch bays for all the sound and communication cabling in the building, which includes audio, video and data lines. A separate mobile equipment rack houses the source equipment, which includes a comprehensive range of equipment to cater for any theatre production, small band or concert. The Main Theatre mixing



desk is an Allen & Heath GL 3300 with Meter Bridge.

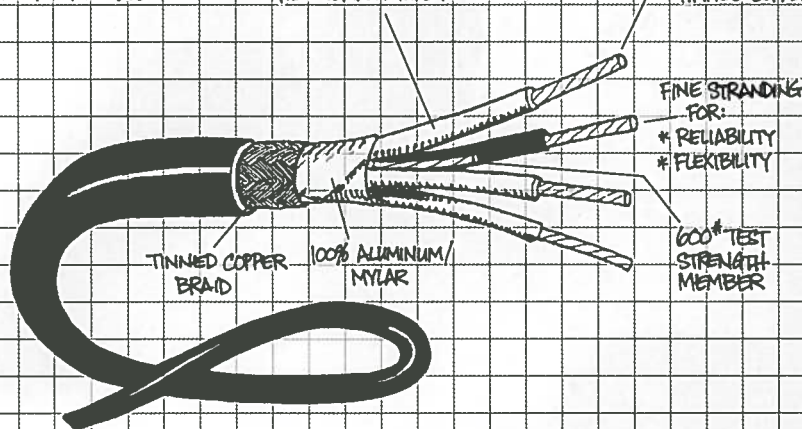
The sound system in the Drama Studio has two Martin Audio W1 speakers mounted in the grid powered by one Crown K2 amplifier with the mix provided by a Soundcraft Spirit LX7. The source equipment rack in this area is designed so that the rack can be used as a stand-alone unit. It incorporates two Crown CE2000 amplifiers, which can also be used as effects amplifiers in the Main Theatre for large productions.

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## Sysco Scores a Try with Sound Dept

*This season's Six Nations Rugby Union International series - which sees Italy joining the competition for the first time - coincides with further developments at the various stadia hosting the matches.*

The story of Cardiff's Millennium Stadium has been well chronicled and the much-admired Stade De France in Paris has a new pitch.

Meanwhile, at the English Rugby Football Union (RFU) headquarters at Twickenham, a completely new

entertainment sound system was installed in time for the opening England v Ireland match last month. Also at Twickenham, for this match and the following game against Wales, giant video screens were installed for the benefit of the 75,000-strong crowd.

Installer Sysco, which was formerly part of Shuttlesound, is no stranger to carrying out installations in sporting stadia and even larger facilities. "Our track record includes Glasgow



Rangers Ibrox Stadium and the system currently in use at Wembley Stadium," says Sysco's Hugo Roche.

The new Twickenham system features 44 EAW MQ 1366-WP weatherproof arrays, 22 EAW BV 525-WP enclosures, four Electro-Voice SX 80, 49 Crown K2 amplifiers, with processing via Peavey's Media Matrix DSP networking system.

Equipment racks are located in a central control room and in plant rooms in the East, North and West Stand roofs, and on the South Stand's Level 4 concourse.

The loudspeakers were supplied through EAW's UK distributor Sound Dept, where managing director Steve Smith commented: "From our point of view, securing the Twickenham contract was very good news in that it marks the first major EAW installation in a key UK sports stadium, and it is also one of the first venues in this country to boast the new MQ weather-proof loudspeakers."

## Numark Awarded UK Distribution of Celestion

DJ equipment manufacturer Numark has secured an exclusive partnership with UK loudspeaker manufacturer Celestion, which will enable both companies to expand their market potential and benefit from the increasing crossover between the MI and DJ markets.

The arrangement gives Numark the UK distribution rights to the DJ market for two key product lines from Celestion: the Road Series and OX Series loudspeakers - products that are designed specifically for high-quality music reproduction. Celestion director and general manager Richard Wear commented: "We are very excited to be teaming up with Numark at a time when the DJ market is one of the most rapidly-growing sectors in our business."

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## ILMC Breaks Conference Records

Left, ILMC organiser Martin Hopewell welcomes delegates to ILMC 2000. Inset, awards presenter Carl-Leighton Pope with Isabelle Primault, Paleo Festival Director and Elvis Presley (fresh from his recent tour).



The 12th International Live Music Conference (ILMC) - dubbed ILMC 2000 1/4 by co-organisers Martin Hopewell of Primary Talent International and production company True North - attracted a record total of over 600 delegates on March 9-12. The event was staged at the Royal Garden Hotel in Kensington, West London, with sponsors Carlsberg.

More than 40 countries and occupations spanning the entire spectrum of the business side of the live music industry were represented by the invitation-only attendance. Delegates took in four days of scheduled events covering issues

including event safety, emerging European markets, e-commerce, the rapid growth of downloadable music through MP3 and similar Internet formats, marketing and sponsorship, and a humorous reflection on the history of touring. Hopewell said afterwards: "Real initiatives were produced to tackle issues such as artist tax and a pan-European 'event safety guide'."

Saturday night's highlight was the annual Arthurs Awards, ILMC's light-hearted take on industry awards. Among the winners were Triple A (Promoters' Promoter), Wendy Dio (Most Strokeable Manager), Paradiso, Amsterdam (First Venue To Come Into Your Head), Lee Charteris (Plumber Of The Year - the production manager award), EMI (Most Supportive Record Company), Paleo Festival, Switzerland (Ligger's Favourite Festival), the late Louis Parker of Concorde Agency (Carlsberg 'Bottle' Award) and Bryan Adams (Most User-Friendly Artist).

## Black Box LED the Way

In what it believes to be a world first, Black Box-AV has just launched a CD listening post with a moving, dot matrix LED display. Installed in the new Virgin Megastore at Glasgow, the 3" wide by 3/4" high signs provide a welcome message prior to headphone pick up, together with a 'thank you' closing message when the headphones are replaced. Messages can be updated via PC or hand-held organisers such as Psion, although the post itself is not PC-based. Tel: +44 1639 767007



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Skyscape: photograph by Rob Brown; courtesy of Edwin Shirley Staging



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## Nocturne Europe

Below, Chris Mounsor (left), Richard Burford (centre) and Gerard Corry

**The newest player in the touring video production market is already making a splash - with three high-profile clients and brand new state-of-the-art systems.**

Nocturne Europe was formed to provide a UK-based tour support service in January of this year. Sales director Chris Mounsor explains the thinking behind the new venture: "We wanted to be able to specialise in touring - although there are several big players in the visual presentation field, none of them is dedicated to this market. By concentrating on one area we can provide highly experienced crew and exactly the right equipment for any music client."

The new company has invested heavily in digital equipment - in fact, the first two systems to be assembled at Nocturne's premises in Hertfordshire are unique in being fully digital - including the audio chain. "Even though clients aren't asking for SDI systems yet, we have chosen this route because we want to do what's best within a client's budget," explained Mounsor.

"Directors and crews will notice the difference straight away - SDI systems are more immune to interference from venue lighting or other sources."

The first Nocturne Europe contract to be signed was with teen act 5ive, who are currently touring the UK prior to a series of European dates. Although Nocturne Europe has close ties with Belgian LED screen specialists XL Video, the 5ive system is being used with a trio of Barco 9200 Reality projectors. At the heart of the Grass Valley-based system is a I200 SDI desk, which Mounsor specified for its live facilities. "So many systems go out with desks that belong in edit suites, not on the road," he pointed out. "The Grass Valley name has always been associated with the highest quality live work."



System engineer Richard Burford prepared both the 5ive system and the second Nocturne Europe rig, destined for Puff Daddy's European tour. "The SDI format gives us much more control over the image than we have ever had - including switchable formats, and memory settings for each camera. There's no drift over time and very little need to tweak cameras while they're on the road." Cameras are Sony DXC-D30WSPs, with DVcam recorders rather than the more common Beta machines.

Mounsor, who founded the Encore Group in the early eighties for a few thousand pounds, points out that the risks in today's video rental business are much greater: "A single, high-quality video system costs around £500,000 these days - and

there is often a big gap between what clients specify and what we have to put together as a workable system," he said.

"While a PA spec identifies everything down to the last microphone and piece of outboard, video riders are much less defined. One of the things that we are hoping to do is to work with the growing number of freelance directors to create a business where clients understand more clearly how they can achieve what they want."

Mounsor's team was faced with a seemingly impossible challenge when they were asked to supply a four-camera LED-screen system for Simply Red's current European tour. Having received a late-night call from the band's management after the first gig of the tour, Nocturne was able to prepare and ship the entire system in just 12 hours - with, as Mounsor puts it "a little help from our friends!"

Joining Mounsor and Burford at Nocturne Europe is Lee Spencer, who left Proquip Gearhouse LED Screens last month to assume the position of operations director. The trio are clear about their aims: "While profit is important to any company - without it you can't re-invest - it's not our driving force," stated Mounsor. "We are working to make Nocturne Europe as highly-respected as the name is in the States - and we're going to have a lot of fun getting there."

Mike Mann

## Application Solutions Appoints Peco

Application Solutions has appointed Peco Electronics as the exclusive UK distributor for the brand new Integra range of high performance amplifiers. The two companies worked together on the design of the new system, combining ASL's expertise in electronics with Peco's market intelligence. First to appear will be the Integra MA 6-120, a 120W mixer amplifier. This boasts a range of features, including six universal mic/line priority or mixing inputs, two or three note chime, single or double pips generator and a voice equaliser enabling tone controls to be set for music signals to be bypassed during announcements.

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## Gaveston Goes Underground

**Secreted below platform 13 of London Bridge Station is The Drome, an arched venue, currently operating as a multi-purpose arts space and hosting occasional underground parties.**

It's like the place that time forgot. Now owned by Railtrack, the arch, almost untouched since it was built in the 1830s, is steeped in history. It was one of the first arches to be constructed, shoring up the capital's early railway lines, and is in close proximity to Roman remains and the old banks of the river. The station was extended in the 1860s when more arches were added - these now hold up platforms 9 -16 of the modern day station.

Director Tania Lee appreciated the ephemeral and magical atmospheric qualities of the Drome as soon as she set foot in the space. She was looking for somewhere special and stumbled on the perfect site specific venue for this, the first stage production of *Gaveston* by Colin Haydn Evans. The emotionally charged and often violent story, which includes witches being burned and people being hacked to death onstage, was originally written for radio. It tells of a boy chosen to be a pagan figurehead for the old religion of England . . . and of the various individuals and organisations determined to thwart his ascendancy!

Lee was not daunted when a funding application for the show to the Millennium Lottery failed.

Instead she forged ahead, running on overdrafts to produce an arresting show on a shoestring budget, relying heavily on the imaginative resources of her 25-strong crew and cast.

The lighting designer was Martin Sapsed, who also works at the BBC. He and Lee have worked together previously on productions at the renowned Questors Theatre in Ealing. Sapsed was immediately attracted to the reflective qualities of the Drome's grubby whitewashed roof. The technical infrastructure of the space is currently primitive, requiring everything to be brought in. Three phase runs into the kitchen which is where they had to locate the dimmers. Cable runs from there were one of the most time-consuming elements of the get in, with an 150ft plus stretch to the centre of the lighting grid and over 200ft to reach the main lighting and sound control platform.

Sapsed lit the whole show in variations of white light. He used a minimal amount of lanterns, some of which were resident in the Drome and others which were hired in by himself and associate Terry Mummery. He used strong directional lightsources including the six well-preserved antique house Strand 828 2K fresnels. Apart from these, he hired

in two 1K Silhouettes, some 500W ARRI fresnels with barn doors and a couple of floods.

His embracing of the 'less is more' culture certainly paid off. As it was a promenade performance, intimacy was retained even though the performance space was proportionately large. Some scenes were lit to great dramatic effect with just one lamp. The ceiling bounce factor also helped flood the floor with incandescence for the more intense scenes.

Sound was designed by Nigel Worsley, a combination of live folk musicians and pre-recorded, the latter played back via minidisc. Again, it was not a complicated set-up, and the equipment, all apart from the Soundcraft Folio mixer, was Worsley's own. The acoustic of the venue is dry, so he had to add more reverb

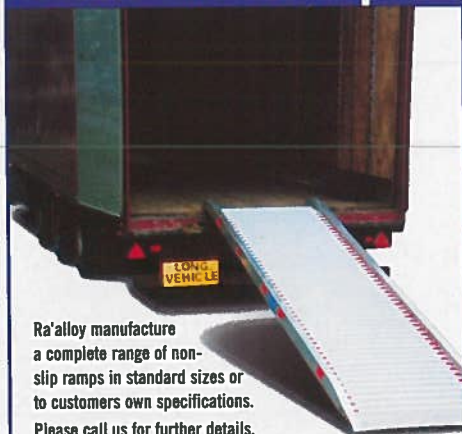
particularly to a voiceover at the end of the performance. Other than that, the main sonic challenge he encountered was loading the two 40kg speakers into the car on his own!!

Worsley is an electronics designer and spends most of his spare time involved in theatre-oriented activities. He also met Lee at The Questor's Theatre where he's head of sound and special effects. With the Drome being on Street level and minus any effective sound-proofing, ambient noise included passing vehicles along one side and trains overhead. However, once the performance kicked in, everything happening in the background faded into oblivion.

Louise Stickland



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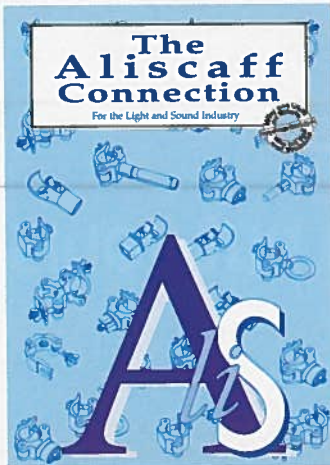


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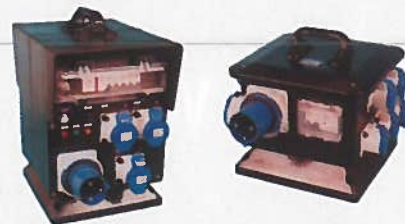


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## News Round-Up



# Single Specification for Mono

*R&W Sound Engineering has recently installed a complete audio system into the new London lounge bar, Mono. As customers would be unlikely to benefit from the advantages of a stereo image R&W specified a mono sound system, to maintain a uniform sound field, reduce unnecessary complications and provide greater sonic quality. The system, designed to be operated by staff with basic technical experience, is used for background music, DJ sets and live music sessions.*

Involvement in the project from the outset, R&W's recommendation of a mono audio system, led to the name and theme of the members-only bar. Mono's stylish interior combines large-scale graphics - enlarged details of sixties and seventies mono audio equipment - with modern, minimal décor, whilst the exterior retains its original shop façade, displaying three well-reserved Nagra reel-to-reel on individual plinths.

The audio system's main source is a Marantz CC38/Pro 5-disc CD player, which feeds the system via a Cloud SX133 two-zone mixer and ARX EQ30 graphic equaliser. A separate Mackie



1402-VLz Pro mixer, connected via a recessed wall socket to the main system is used for live events. An ARX Microdrive three-channel amplifier drives four ARX Micromax loudspeakers and a hidden ARX sub-woofer.

## Meyer in Melbourne

*The Victorian Arts Centre has recently completed Australia's largest permanent theatre system installation in its Melbourne Concert Hall.*

Totalling more than 35 self-powered loudspeakers systems, provided by Meyer Sound Australia, the system design was no small feat. The new system in the 2,600-seat hall comprises a central cluster of three Meyer MSL-4s over two CQ-1s with UPA-1P and UPA-2P on either side. The balcony downfills include a L/C/R configuration of CQ-2s over DS-4Ps for the left and right and a CQ-1 over a DS-4P for the centre downfill with 24 UPM-1Ps making up the under balcony fills. Also included in the system is a PSW-6 per side, located above the stage and a L/R array of two DS-4Ps, 4 MSL-4s and a CQ-1 flown over two PSW-6s. "I can't imagine using amplifiers and cable runs here," John O'Donnell, head of the sound department at the Victorian Arts Centre, told L&S. "First, there's no space for an amp room and it would be difficult running cable. It's a lot easier to design a system using self-powered loudspeakers."

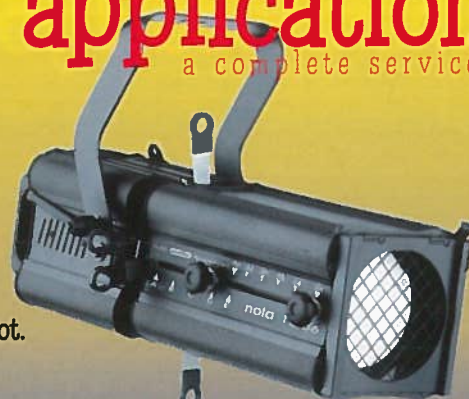
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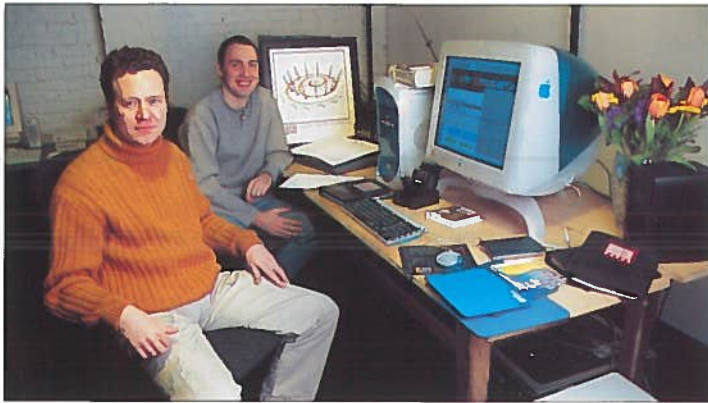
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Nick Potter and Tim Clark at work in Orbital's ProTools editing suite

## Orbital Delivers Sound for Dick Whittington

**London-based Orbital Sound has supplied the new Sadler's Wells with a sophisticated audio system for its production of Dick Whittington. Produced by Sadler's Wells' chief executive, Ian Albery, and directed and choreographed by Gillian Lynne, has been renamed - 'Dick Whittington: London's Musical'.**

Christmas shows, renowned for very short lead-in schedules, are a particular challenge from an audio supply and design perspective. "The sound quality needs to be more than perfect," explained sound designer Mick Potter who specified the system from Orbital.

A variety of d&b cabinets and amplifiers were selected, including the new C690; a specialist application loudspeaker aimed at wide dispersion vocal use. A 40-channel Amek Recall mixing console with Rupert Neve input modules was used for the principal radio mics, with two expanded Yamaha 02R digital consoles sub-mixing the orchestra and sound effects. An Akai S6000 sampler provides instant access to the source material and two Denon mini-disc players were also used for some quad-panning effects.

The combination of the Amek Recall desks and the Yamaha 02R digital consoles, were specified and supplied by Orbital to allow for all console settings to be stored onto a floppy disk and archived until the show re-opens in December 2000. On an Amek Recall, every single switch and potentiometer setting can be precisely recreated from a floppy disc master, even years after the event. The detailed sound effects were created in Orbital's newly-expanded ProTools editing suite, enabling Mick Potter and Orbital to work closely together meeting the tight production deadlines more efficiently.

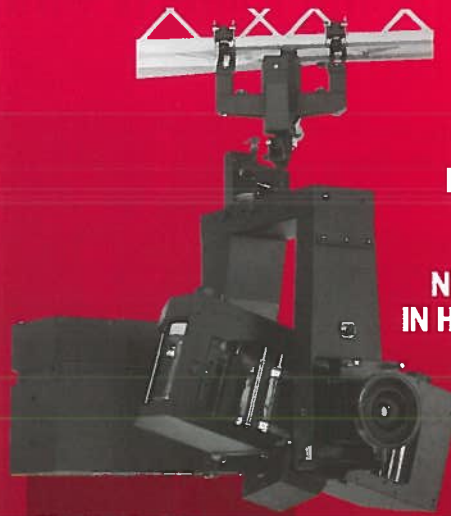
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## HW International Collects Shure International Distributor of the Year

HW International, sole UK distributor for Shure, has been awarded the title of International Distributor of the Year.

Each year, Shure honours one international distribution centre for its contribution to the company's global sales and marketing efforts. This year the award was presented to HW's managing director Dennis Harburn at a Shure celebration dinner held during the recent Winter NAMM in Los Angeles.



Pictured back row are Jim Furst, Rose Shure, Sandy Lamantia and Jane Wilkie of Shure Inc with Mike Gibson and Dennis Harburn of HW International seated front.

## ABTT Lectures in the North

The ABTT is launching a series of lectures by people who are known for their contribution to the technical aspects of the Entertainment Industry.

Organised by the North Region Committee of the ABTT, the lectures will be held in major venues across the North. The first of the lectures will be held at the Royal Exchange Theatre in Manchester on Thursday April 27th. The first speaker in the series will be LD Howard Eaton. Eaton has worked on several large shows with David Hersey including Cats, Song and Dance, Starlight Express and Nicholas Nickleby. As a LD, he lit the first tour of Jesus Christ Superstar, and went on to work on productions in the West End and at the National Theatre. He started making lighting equipment for shows like Phantom and all the motor control gear for the fledgling Unusual Rigging. From this work he started Howard Eaton Lighting which manufactures a range of standard equipment and specials for the entertainment industry.

ABTT: +44 (0)1204 304479



## Pulsar Light Jockey Contest

Following on from the success of previous years, the DI UK Light Jockey Contest 2000 - sponsored by Clay Paky and Pulsar - has attracted a large number of contestants and is now underway.

Pulsar has organised a number of seminars for contestants at all levels. The preliminary heats - first introduced last year and aimed at Light

Jockeys new to the Clay Paky and Pulsar range of products - have proved popular. During the month of March these took place at Pulsar's headquarters in Cambridge, making use of its recently refitted showroom.

The three highest scoring contestants will go through to the main heats which will be hosted at the famous Limelight club in London.

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VI 5n VI 6n VI 7n Ibeam Stuc



Operations Cue Sheet Board Cue Sheet Plan View 3D Graphic Luminaire Status Snapshot Filter VL Color System

Gate Control

Submaster Control

Submasters

Test of Control

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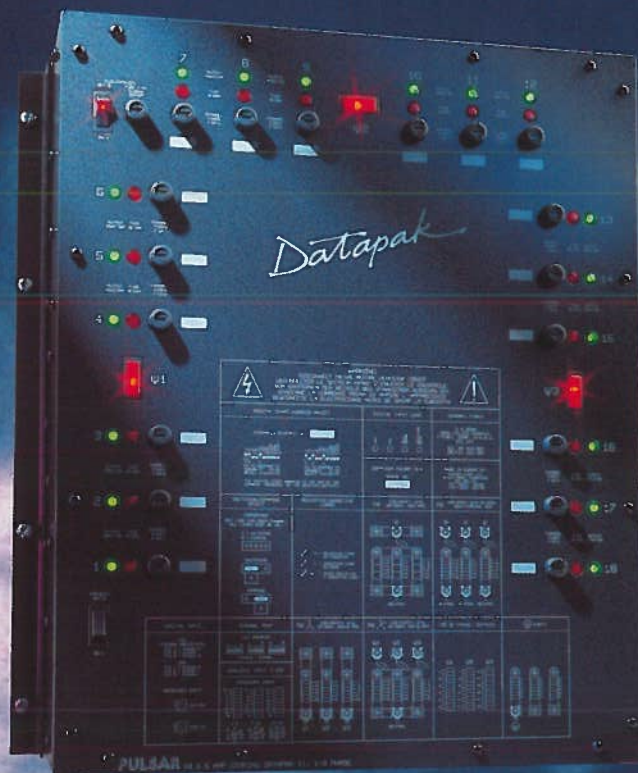
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## Mackie Fussion Debuts at The Venue

*The first ever club installation of Mackie and RCF's brand new Fussion Series loudspeakers has been carried out by Envotech at The Venue nightclub in St Helier on the Channel Island of Jersey. The new system, which has been four years in development, is due for a world press launch next month, but the Jersey installation provided an early preview for L&SI in mid-March.*



Envotech's Paul Trask (left) and Brian Puckey (right) line up with Phil Price and Andy Austin-Brown of RCF

The Fussion system was first demonstrated to Envotech's Brian Puckey during a trip to RCF in November 1999, and he was so impressed that he ordered four stacks there and then. Puckey said of the system: "I have been in the sound industry for more years than I care to mention, both in America and Europe. When I was asked to visit RCF last year to hear a new type of sound system, I thought that we would be introduced to 'yet another' variation of a speaker - which is what usually happens. But for once I was wrong, and what RCF have produced is a state-of-the-art system that is unique. It is the best sound reproduction I have heard - without exception."

RCF's Andy Austin-Brown is equally enthusiastic about the system and the step forward in sound quality that it represents. He told L&SI: "I believe that what we now have with the Fussion system is studio monitor quality sound at PA levels."

The system, a joint development incorporating RCF's expertise in transducer manufacture and Mackie's state-of-the-art electronics, comprises the Fussion 3000 and the Fussion 1800SA /A subwoofer. The 3000 is an active, wide dispersion (80 x 70 degree), three-way system utilising four high precision 12" drivers, a horn-loaded 8" mid-range and a 3" titanium diaphragm compression driver. The mid-range driver incorporates a double voice coil, and has a frequency response of 500Hz - 2500Hz - thereby eliminating the need for a crossover in the vocal frequencies.

The woofers are driven by a 1500W high-efficiency, high-current amplifier, the mid-range is driven by a 300W Trans-Fet amplifier, while a 150W version looks after the HF. Mackie's Trans-Fet technology used in the amplifiers emulates the warmth and transparency of vacuum tube amps. Overall frequency response of the Fussion 3000 cabinet is linear from 55Hz to 18kHz, and output is rated at 133dB peak. The 1800SA/A is a dual 18" subwoofer system driven by a 2500W high efficiency, high current amplifier.

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## Lighting Technology Newcastle Open Day



**Lighting Technology Newcastle, growing out of the newly-merged but long-established company Sound Electronics, launched itself into the new Millennium with a major Open Day event at its premises on Tyneside on Friday 3rd March.**

The event marked the formal launch of Lighting Technology Group's Newcastle offices, which will act as a centre for expansion for sales in the region. It will also provide the base for the resources of the Northern region of LTP, the Group's project business. Over 30 manufacturers lined up to support the mini-expo which included a special architectural lighting area, the Strand Lighting's 45' exhibition trailer and Pioneer's DJ display truck.

## Gearhouse Merger

**Gearhouse plc have set up one of the most powerful lighting production companies in the events industry with the merging of two of their subsidiaries, Lighting Unlimited (UK) and Kent-based Gearhouse XTC.** The operation, headed by Nick Whitehead, will be known as Lighting Unlimited UK and will be based at the company's existing facility in north-west London. In anticipation of the increased workload, and as we reported earlier, Lighting Unlimited has already responded by recruiting three senior personnel from the Spot Co, including former sales and operation director Mick 'Jaggie' Scullion who becomes sales director. He is joined by project managers Tony Fagan and Theo Cox.

## Expotus Expands with LA Audio

**LA Audio has announced a new partnership with Expotus which aims to increase sales in major worldwide territories.** LA Audio, owned by the SCV International Group, has coupled the change in distribution with the re-engineering of the British-based signal processing range, which will be on show at the Frankfurt Musik Messe. Martin Capp, MD of Expotus told L&S: "Adding LA Audio to our portfolio enables us to strengthen our distribution network and offer project solutions."

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# Association NEWS

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## APRS and PLASA in Talks

Leading members of the Association of Professional Recording Services (APRS) and the Professional Lighting & Sound Association (PLASA) have been working towards closer links between the two Associations.



PLASA MD Matthew Griffiths (pictured left) and APRS chief executive Mark Broad (right) have identified a raft of common interests which could result in the conversion of APRS membership into PLASA. Both Associations feel that the alliance will offer members a wider range of services and greater strength as a trade association in entertainment technology.

"The two associations have enjoyed a communicative relationship over the last few years," states Griffiths, "and during that time APRS approached PLASA with a view to working closer on areas such as trade mission support and publishing. This proved to be successful, and a conversation was then started as to how this relationship could be expanded to the benefit of all concerned. As an association representing all types of companies within the entertainment technology industry, PLASA will invite the entire membership of the APRS to join PLASA to

maintain an effective voice for the recording technology industry."

Mark Broad added: "What matters to industry professionals is that their interests are represented effectively in every relevant forum

and that, overall, the value of association membership, in terms of services and benefits, exceeds the direct cost.

"Trade associations have been duplicating efforts in certain areas, as well as having some dual memberships, and we should rationalise this,"

Broad continues, pointing out that response to the UK Government's Music Industry Forum is producing a cohesion of trade associations which should result in more powerful lobbying for audio professionals."

Meanwhile Broad has announced the postponement of the next APRS show until June 2001, in order to maximise the benefits of integrating APRS within the PLASA umbrella.

"Recording Technology, the APRS show, has a future as an exhibition and convention for audio recording professionals," he says. "This year we're talking to manufacturers about running sessions and demonstrations under the Education and Training banner."

With the support of the recording technology industry, PLASA will now look at running the Recording Technology exhibition in 2001, building on the successes of '99.

## Theatrical LONDON

DATES: SEPTEMBER 13-15, 2000

These are exciting times for London's seven million inhabitants and London is fast becoming the cultural capital of the world - just ask any Londoner. PLASA is offering participants in Theatrical London an insider's view of the

London entertainment scene and a rare opportunity to go backstage in some of the capital's key landmarks. The proposed itinerary takes in The Dome at Greenwich - the centrepiece of the UK's millennium celebrations. Here delegates will have the opportunity to participate in panel discussions with members of the design and technical teams, chaired by Simon Brophy, head of lighting for the NMEC.

During the course of Theatrical London, delegates will also have the chance to see two of the most talked-about shows in London - Disney's highly acclaimed adaptation of The Lion King, featuring music by Elton John and Tim Rice, and the Witches of Eastwick, based on the novel by John Updike. Following both these performances, delegates will go backstage to meet with members of the creative teams, including the lighting designer for the Lion King, Don Holder.

After 20 years of planning, and following the largest performing arts development in the nation's history, the Royal Opera House opened in time for the New Millennium. Technical consultant Mark White and members of the ROH technical crew, will guide delegates on a tour of the House - one of Europe's most technologically advanced 'state-of-the-art' theatres. The ROH is just one of the many venues for the performing arts that are enjoying a renaissance and participants will also have the opportunity to tour both Sadlers Wells and The Royal Court, both the subject of recent extensive refurbishment programmes.

Theatrical London costs just £350 (\$595) and you can register today . . .



News as it HAPPENS . . .  
[www.plasa.org/news](http://www.plasa.org/news)

### PLASA

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### New MEMBERS

The following Companies have recently joined PLASA.

**PEL Services Ltd** was formed in 1986, as a manufacturer of voice alarm/PA systems. It also imports, distributes and designs PA equipment and fire alarm systems.

**Programmi & Sistemi Luce SRL** was founded in 1992 as a manufacturer of lighting equipment and lighting effects for disco, theatre and architectural applications.

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## News Round-Up



After more than three years in development, the new £10.6million 200-seat Soho Theatre and Writers' Centre has opened in Dean Street, London.



## Soho Theatre Opens

It becomes the West End's first ever purpose-built theatre for new work. The new building includes a comfortable, air-conditioned theatre, a studio, rehearsal room and also, uniquely, space for writers and facilities for seminars and workshops.

The main 200-seat auditorium features Strand lantern, control and dimming systems, provided by London-based trading partners White Light.

The Theatre is also the first English home for Strand's newly-launched 300 Series control desk. The lighting specification was prepared by Jason Taylor, the consultant who designed the system. The Oxford Sound Company installed the complete audio and show control system, as well as installing the DMX cable infrastructure for lighting control.

Oxford Sound Company's Richard Eliot was project manager and the equipment included d&b E3 and E9 loudspeakers, Yamaha 02R digital mixing consoles with an array of outboard music sources and a comprehensive audio patching system. **More details next issue.**

## AVR Colourmaster on Bluetones Tour

When Bluetones tour LD Mark 'Video' was looking for a way to colour change the white belisha beacons that were a feature of the set for the group's performance at Shepherds Bush Empire, he turned to tour lighting supplier Brian Leitch of Art of Darkness for an answer.

He, in turn, called in Tony Kingsley of Ambient Lighting to demonstrate the AVR Colourmaster. Following the demo, AOD subsequently purchased a number of CM50 heads for the tour which were then mounted to the globes projecting upwards from the base with the 40 degree lamp providing full coverage. The fact that the AVR central colour changer motor control accepts DMX meant that programming into the show was easy.



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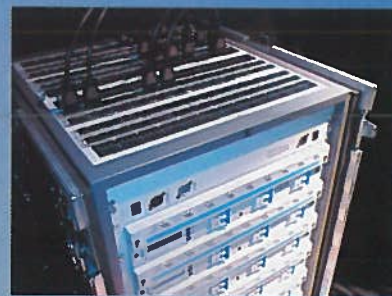
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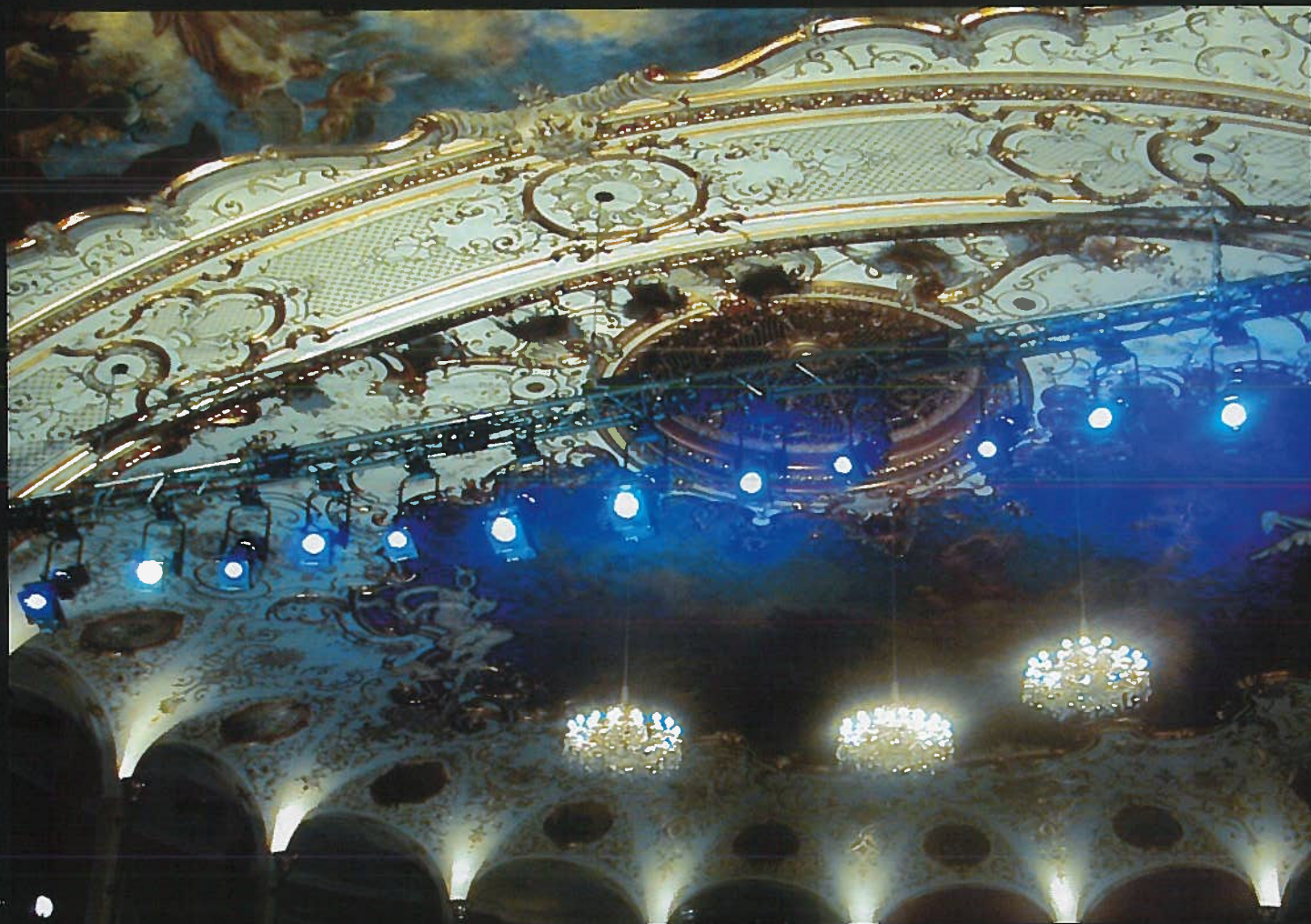
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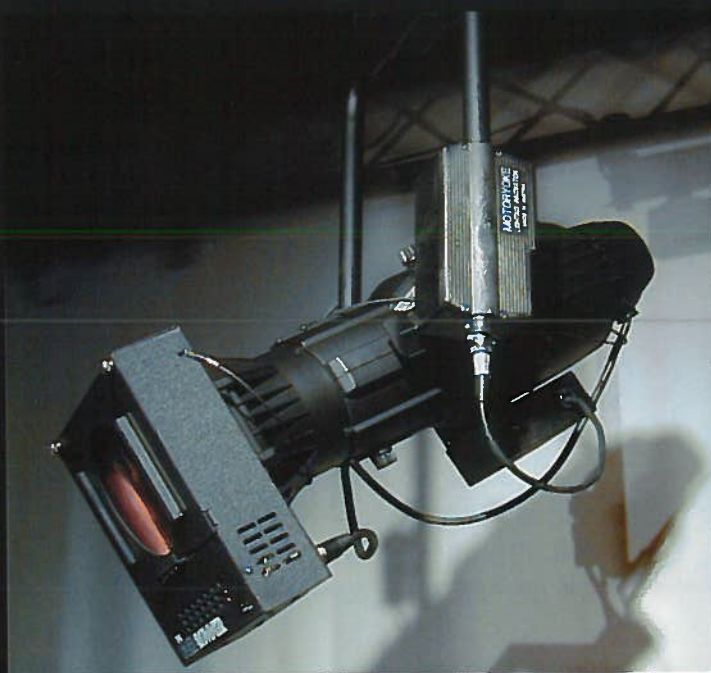


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- ▶ If the programmed position of the spotlight is accidentally shifted the MOTORYOKE automatically returns back to position
- ▶ Reproducible precision of horizontal and vertical position < 0,1°
- ▶ All functions of the MY- spotlight are remote controlled: Iris, Color Changer and Focus
- ▶ Total weight without spotlight: 4,2 kg







## First Rigging School of 2000

PCM has completed its first five-day intense Rigging School of two planned for 2000. This was attended by 54 individuals from all sectors of the professional rigging and entertainment industry.



Vertigo Rigging's Ken Mehmed, Ian Lamb and John Teahan ran the rigging section with aluminium trussing specialists James Thomas Engineering conducting a section on trussing and ground support systems led by John 'Jig' Higginbotham. MAN Flying Systems' redoubtable Mick Nash de Villiers and Tony Matthews taught the basics of PA rigging, Rope Assemblies provided a selection of equipment for inspection, whilst health and safety expert Mike Curtis hacked away the official verbiage of the LOLER regulations. Also Integral to the course was a standard Lodestar Motor School, tutored by Tony Dickson of PCM and Wally Blount from Columbus McKinnon. PCM's next rigging school is scheduled for July 2000.

## Change of Picture for Major Screen Players

There must be something in the air this month, for there have been several major developments on the screen technology front. No sooner had we learnt that Screenco and parent company Avesco PLC had acquired Unitek Displays' rental operation, than the news came in that Lighthouse Technologies, the Hong Kong-based giant screen specialists, had acquired Pixelite from Avesco plc.

Unitek, of course, introduced the Megascreeen to the entertainment market in 1997 and since that time have established a growing rental business from its Gerards Cross base. With immediate effect all Unitek's rental equipment will transfer to Screenco and the business will be integrated into Screenco's existing European rental operations located in the UK and Holland. The deal includes the purchase of 120sq.m of existing modular LED equipment and a commitment to purchase a further 164sq.m of Unitek's latest LED system for delivery during the summer months. The addition of an additional 280sq.m of rental inventory will reinforce Screenco's position as one of the world's largest rental operator. Unitek, meanwhile, will now concentrate on the production and sale of screens and other display products and services.

The Lighthouse Technologies deal will create the world's most broadly-based giant screen sales and installation operation with core offices in Hong Kong, Europe and North America, and associated offices in Australia, Africa and Asia. For both Lighthouse Technologies and Pixelite, the move is a natural fit and opens a host of possibilities for the enlarged organisation. Lighthouse is already a major player in the giant video screen market, whilst Pixelite, headed by Graham Burgess, Dave Gunn and Simon Taylor has an outstanding track record in the giant screen business in the UK and Europe. The entire Pixelite team will be joined at their Isleworth offices in west London by the current European Lighthouse staff. Pixelite only opened its doors 18 months ago and has already scored a memorable success with its first installation - the huge curved portrait-format screen on the face of London mega-club 'home'.

## Hayden Twin CD Player

The Denon DN-1800F is the latest in Hayden's constantly expanding array of tools available for DJs. The system uses the technique of 'Dual Velocity Capacity' to aid data storage in preventing shock damage during CD playback. New functions include Stutter Start - for immediate playback from any cue point, Platter H - for pitch bend and altering the tempo, and Platter S to create similar stopping and starting effects to an analogue machine.

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## News Round-Up



# £97m at Bristol

*Bristol has a long heritage associated with science and natural history. From next spring, the city's visitors and residents will have access to one of the most sophisticated learning and leisure destinations in the world.*



An imaginative mix of science, nature and art, the £97 million at-Bristol landmark millennium project makes extensive use of advanced media techniques. The centre is home to two major attractions - the scientifically-biased Explore-at-Bristol and Wildscreen-at-Bristol which will reveal the diversity of the natural world. The centre also includes an Imax large-format cinema and planetarium.

As principal AV partner, Sony will provide a broad range of professional display solutions, including its PFM-500 professional flat screen monitors, VPL-S900 and VPL-X2000E LCD projectors, together with a range of monitors and LCD

panels. Richard Turnidge, head of multi-media, told L&SI: "We have numerous different display requirements from individual screens to large video theatre projection systems."

As well as the Sony display systems, at-Bristol equipped its content development teams with Sony DSR-PD1 DVCAM palmcoders. These have been used throughout the project to record the development of exhibits and visits to other attractions. In Explore-at-Bristol, a Sony LCD projector will be used to show a variety of show-reels, whilst in Wildscreen, Sony monitors are at the heart of a news gallery intended to keep visitors-up-to-date with the latest events.

## Fulcrum is Launched

*A new company, set up to provide lighting and power solutions for design agencies, production companies, event organisers and theming specialists, has started operating from offices in Bristol and London.*

The company has been established by Richard Cross, Mike Matthews and Elise Tregaskis - all former SLX employees - who bring to the company over 40 years' experience in the theatre, entertainment and conference industries. Fulcrum will provide creative design, development and project management, including equipment sourcing, co-ordination of equipment hire and sales, transport, personnel, travel and accommodation for both permanent and temporary projects.

Tel: +44 117 905 8747

# Cyrano wins it by a nose...

The Cyrano produces 50% more light than other followspots from Robert Juliat.

Designed to combine high power with ease of use, Cyrano is designed as an operators followspot. Offering precision control of the fade through a rotary 'throttle' style handle mounted close to the colour changer and variable soft glass diffuser.

With its high power 2500w HMI source, it is suitable for medium to large venues. With virtually silent operation, it is at home either in the auditorium or the followspot box.

- Highly ergonomic 'easy to use' design.
- Variable 'Soft glass' beam softener.
- Dichroic glass correction system(3 way).
- Centrally mounted 6 way colour changer.
- New high performance followspot stand.
- Easy two man lift for touring.
- Lots of pretty pink writing.

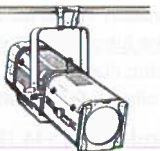


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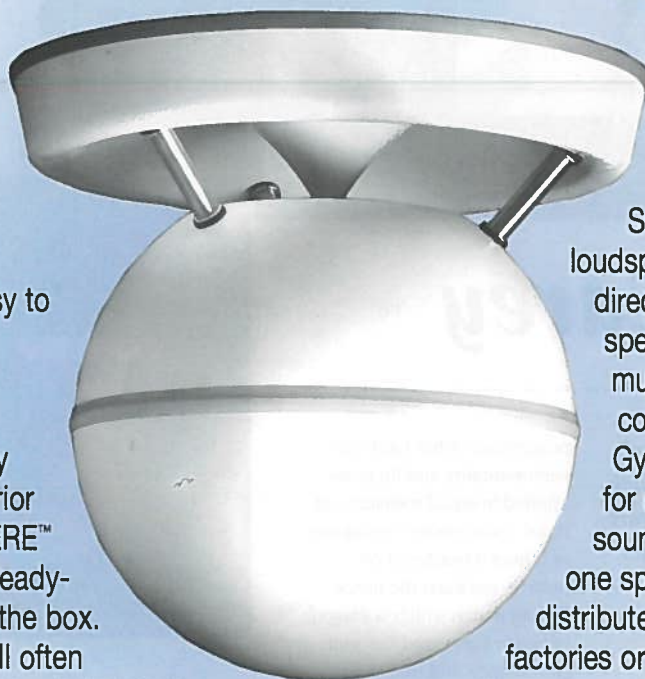
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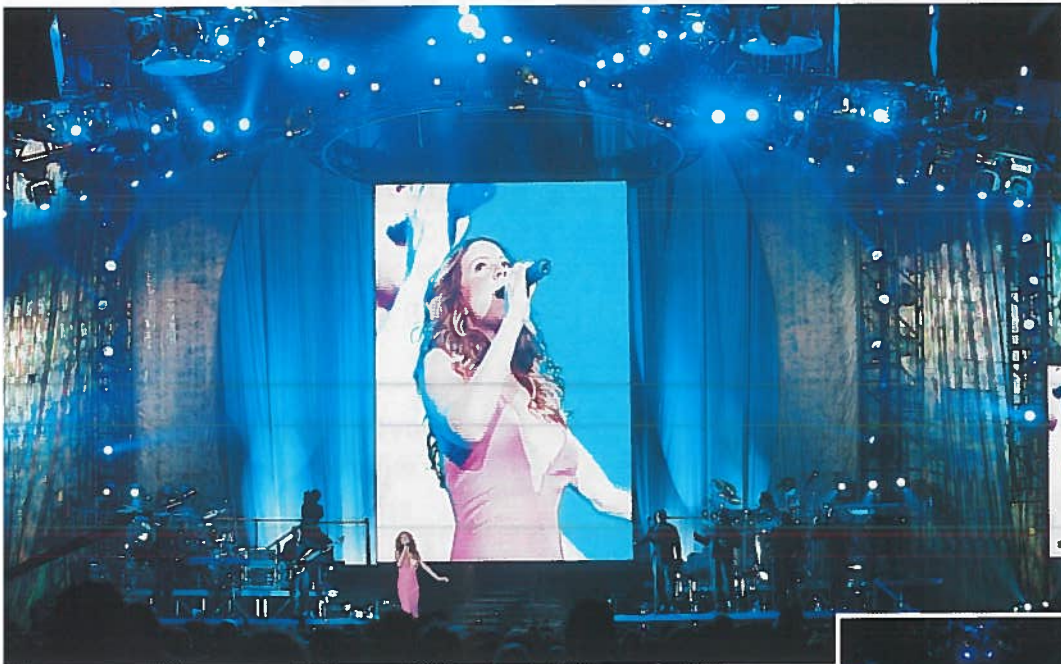


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PHOTOS: PHIL DENT

Steve Cohen, the lighting designer for the tour, was actually working with Elton John in Hawaii when the call came from tour manager Michael Richardson. Within days Cohen met with set designer Bruce Rogers and production manager Chris Lamb who mapped out a rough brief for him. Timing was the key element since there wasn't much of it; fortunately for Cohen, he was able to call on the services of long-time associate Joel Young and, using Studio Max

software, the pair set about translating Rogers' set designs into 3D environments, overlaying them with lighting. Within 24 hours Cohen had 'knocked out' (his words, not mine) a lighting design.

It can't have been too far off the mark, because he got the contract but there was less than a week before rehearsals were to start. Lighting suppliers Vari-Lite and the Obie



Company had just days to pull together the entire inventory. Working on a pair of Wholehog II desks with wings - Cohen programming, Young setting up the scenes and matrixes between the two desks - the two raced the clock refining the initial designs and had actually programmed 85% of the show when he met with Mariah Carey to discuss the tour. Oh dear, she had ideas of her own and they didn't match Cohen's - she was adamant that there should be no backlight, no sidelight, no gobos and, curiously, no colour. It was only when Cohen suggested she "hire a house painter" that she deferred to his experience and allowed him to reclaim much of the programming he and Young had already done.

Despite the time constraints, Cohen and Young have a massive rig at their disposal - some 260 moving lights, but then Cohen has a rather large canvas to light. Bruce Rogers' set design is based around a halo rig positioned over a central video screen with a standard box truss dominated by a 120ft by 30ft high wall of fabric. The central screen is complemented by two satellite screens stage

## Mariah Carey

*I wasn't really too sure what to expect of Mariah Carey when I headed to Wembley Arena in late February for one of her rare performances in the UK (it's eight years since she last hit these shores). As an artist, she's not given to touring much, preferring the medium of video as her connection with her fans, which is a shame since she can really sing.*

Judging by the vehicle in which she presented herself, however, she's none too confident of this and seemed to prefer to hide her voice behind a series of girl next door set pieces that required shorter and shorter outfits as the evening

progressed. What I got was sentimentality and lip gloss applied in equal measure - at times it was entire fromagerie, at others it bordered on bizarre, not least the mock boxing match which is staged between Carey and her 'evil' twin Bianca and there were times when I thought we were all in danger of losing it.

Anyway the fans lapped it up and whatever one might have to say about the integrity of the presentation, the execution was near flawless thanks to the technical teams working behind the scenes.

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left and right. On the central circle of the rig, Cohen has gone for Coemar 1200 HEs. Running from this central area are seven 20ft long spokes with 10ft caps, each carrying a combination of Coemar CF1200 washes and Vari-Lite VL6Bs - the main corona of the system. At the rear of the stage, 30ft vertical sections feature VL5 Arcs, VL6Bs, CF1200 washes and above them a bunch of VL5 Arcs for the stage and scenic lighting.



Both the front and back trusses are stacked with VL5s used for general lighting and to dress the enormous cyc, with the final sting provided by 36 VL6s on the floor, together with a couple of Strong followspots. Since Ms Carey is a creature of video, the key to Cohen's design is to make her look beautiful at all times (which he does) hence the effective but sparing use of the followspots. If the show were to become a TV special, Cohen wouldn't have many refinements to make.

The result is 'pretty' - there's just no other word for it - the lines are crisp and clean, the colours strong and effective and it's almost certainly what Ms Carey intended. It probably also owes something to the fact that the one stipulation Ms Carey did stand her ground on was that of smoke, banned at the outset, and still banned at the offset.

Sound designer Trip Khalaf knows a thing or two about sound - he's been in the business 28 years, including a stint as senior engineer at Clair Bros Audio. Not surprising then, that his system of choice is the Clair Bros S4, although there might be a few raised eyebrows that he didn't opt for Clair's lighter 14 system, which he's been out with recently. His reasons are clear: he was keen to return to a system he'd worked with for 10 years and one which would give him the 'heavier' sound that he was looking for.

The FOH system has 72 Clair Brothers S4 cabinets arrayed above the stage in four main clusters per side and is driven by Clair's own analogue processors, with TC Electronics TC1128 programmable graphics inserted across the six feeds. Khalaf takes his position at a Midas XL4 desk and also calls on a Yamaha 02R with Opcode's MAX software organising the cues and controls for both these and the rather lightly stacked outboard racks.

Right, the lighting team of Steve Cohen (left) and Joel Young. Inset, sound designer Trip Khalaf



Carey has eschewed in favour of more traditional monitoring methods.

Working alongside Khalaf is Glen Collett, Carey's monitor engineer, who manages the stage mixes through a Yamaha PM4000M. The band themselves are on Garwood in-ear systems, which

elicit from him that he hated the venue, that the acoustics were shite and that the kindest thing anybody could do for Wembley Arena was blow it up. But then this was once a swimming pool which was simply covered over, so perhaps not the best starting point for an international touring venue.

As I said at the beginning, Carey can sing and unlike most of the groups I see these days, I could actually tell what she was saying.

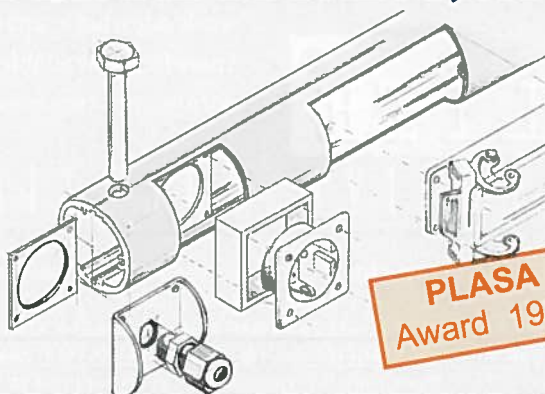
Ruth Rossington

However, one of the most interesting elements of Khalaf's kit is a small hand-held device from US company Handi Systems Inc. Based on a 3Com Palm III palmtop computer, the company's HandiQ Software effectively mimics a traditional sound system set-up. By simply dragging on-screen faders with a pen, Khalaf can quickly optimise sound system performance from almost anywhere in the venue.

A key plus point of the new software is that it is able to work simultaneously with equipment from a wide range of manufacturers, communicating with all MIDI devices in a non-proprietary fashion. If you check out their website you'll find that Handi Systems is now in the late stages of testing a newly-developed wireless networking solution. And Khalaf can't wait.

Although a man of few words, it wasn't hard to

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## New Headquarters for Screenco

Giant outdoor screen specialist Screenco is celebrating its 15th anniversary this Spring . . . with brand new, much larger premises at Eastleigh, UK. The company, which was founded in 1985, has grown to become one of the world's leading suppliers of giant CRT and LED outdoor screens and screen mobiles, with offices and associated companies based in the UK, Holland, Germany, Australia and the USA.

The new HQ is at Fareham in Hampshire, around 10 miles from the former Eastleigh base. The 13,000sq.ft facility gives the company more than double the warehouse space of the old building and greatly improved office and workshop space. Screenco has also unveiled a brand new website which includes full details of the company's range of rental video screen, camera and portable production unit (PPU) services, equipment and key team members @ [www.screenco.com](http://www.screenco.com)

## Spirit 324 for Sutton



Sutton Coldfield College secured the first Spirit 324 Live mixer from the Birmingham branch of LMC Audio Systems, having attended one of the successful Spirit 324 workshops hosted by LMC at the Live! Show.

The desk will be principally used as a training tool for students attending the Theatre Technicians Course. However, as the hub of the theatre's sound system, it will handle a diverse range of activities and will also be interfacing via MIDI with

## Coldfield College

the lighting desk enabling one operator to control an entire show from the FOH position. Pictured left are students from Sutton Coldfield College with the first Spirit 324.

## THX Approval for RCF

The RCF CSS (Cinema Sound System) 3003TX and 2008FX have both been THX approved for use in medium-sized cinema auditoriums.

Both products are part of the CSS range - the 3003TX being a three-way screen system requiring three channels of amplification for full THX performance, the 2008FX being a two-way speaker using a 250mm speaker and a 1" high frequency unit used in conjunction with a logarithmic designed wave-guide.



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## Hippodrome Installs Masterpiece

*The London Hippodrome has recently installed a new Pulsar control system.*

The console features four new Masterpiece 216s and is capable of controlling the vast 1,500 channel Clay Paky and generic lighting rig. Each Masterpiece has a specific section of the lighting linked to it making programming extremely logical and structured. A MIDI keyboard and MIDI enabled PC communicate with the Masterpieces to synchronise lightshows that can be programmed and recalled instantly.

The rig houses seven motorised satellites, each with six moving petal arms. The control of these has been integrated into the new system via five Masterpiece Replay Units. The complex articulation of the moving rig is accessed through a Touch Screen PC, that commands and mimics the massive structure.



## Gainsborough Prepares for Almeida

*The first week in April sees the opening of an ambitious new project by The Almeida Theatre Company who are in the process of converting the derelict Gainsborough Studios in London.*

The Studios, home to many a famous Hitchcock movie, are due for total demolition later in the year, but not before the Almeida completes a 22 week programme. The two storey high building has undergone radical internal restructuring to create a theatre-sized hall hosting as its first production, Shakespeare's Richard II. To accommodate three tiers of seating, the mid-floor of the Studios has been removed and a temporary lighting grid has been installed above the stage by Summit Steel. The show's design makes full use of the building, including a fissure that has been cut into the back wall from floor to ceiling. For this reason the lighting and all its rigging had to be fitted within the existing roof trusses, rather than hung from them in the conventional manner. The complete catwalk system was assembled within the roof trusses with the help of climbing riggers and access machinery.

We will run a special feature on this in a future issue.

## TMB UK Heads to Pastures New

*TMB Associates is about to move its London operations to a 12,000sq.ft facility in Brentford's dockland.*

Paul Hartley, general manager of TMB UK told PLASA Publishing: "Over the past couple of years our sales have really grown in the British, European and World markets. The new building has lots of room for extra stock and more people, to help us serve both our existing and new customers better." The new UK office is open for business from April 3 at 2 Commerce Road, Brentford, Middlesex TW8 8LR. Tel: +44 (0) 20 8560 9652

## Why be coy about our success?

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## Music and Movement, The Modern Way

To address the growing fitness market, Cloud has developed a new multi-source audio distribution system.



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equipment and allows the user to select from a choice of up to eight programme sources and to set a preferred volume level. The audio is delivered via a pair of customised Sennheiser headphones

Cloud (UK) - Tel +44 114 244 7051

## MAVCO Contracts

MAVCO has been awarded the contract to design, supply and provide project engineering services for the complete entertainment, shipwide broadcast and PA/BGM systems for AMC's Project America programme for two 1,900-passenger cruise ships.

The contract, which includes the complete engineering specifications for lighting, audio, video, rigging and show control systems for 15 venues, is being undertaken at MAVCO's recently opened Design and Engineering office in the UK under the direction of Rob Shuard.

[www.plasa.org](http://www.plasa.org)  
for industry news

## E\T\C UK to Hold Projection Demo

E\T\C UK Ltd is planning a large scale demo of its new Rotating Double Scrollers which will be held on the 3rd May 2000. (Time and venue still to be confirmed).

The PIGI 7kW Xenon Rotating Double Scroller is the latest of the PIGI projectors and is fitted with two scrolling films, a programmable 360 degree rotating head and programmable lens mount and rear foot.

The demo is aimed at conference producers, lighting designers, set designers, event designers, rock and roll promoters, party planners... indeed anyone who needs new ideas for scenic projection and would like to fill large areas of set with bright imagery. If you are interested in attending the demonstration, e-mail Ross Ashton at [info@projecting.co.uk](mailto:info@projecting.co.uk) or call +44 20 8893 8232 and full details will be sent by return.

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# 324

## Live Performance - Digital Control



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### EFFECTS

324 boasts 2 powerful Lexicon Multi-FX units, providing on-board Reverbs, Delays. In addition, the sends to these units may be assigned to separate console outputs, giving a maximum of 6 analogue Auxiliary sends from the console.

### SECURITY

In a Live environment it might be necessary to leave the desk unattended. While away simply enable the "Surface Lock" preventing unauthorised tampering. Use this "Lock Out" to varying degrees and regain control at a single touch.



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324's intuitive scene storage and recall system makes light work of complex reconfiguration.

### 324 - INNOVATION

The E-Strip offers a class-leading operator interface. Offering a conventional channel strip rotated through 90 degrees, 324's operation is instantly recognisable to anyone familiar with analogue console operation.

Live sound demands fast channel access, and the E-Strip delivers.

**digital live**

three two four

### 324 - INS & OUTS

#### ANALOGUE

- 16 Mic/Line inputs, with insert point, Gain control and 100Hz HPF.
- "Stereo 1" (1/4" Jack)
- Talkback Mic (XLR)
- 4x Auxs (1/4" Imped. bal. Jacks)
- 2x Floating Outputs (bal. XLR)
- 4x Matrix Busses (bal. XLR)
- Mix left / Right (bal. XLR)
- Monitors (1/4" Jack)

#### ONBOARD PROCESSING

- 2x stereo multi-FX Units
- 2x stereo dynamic processors

#### DIGITAL

- 2x 8-way T-DIF Ins & Outs
- 5 PDIF Ins & Outs
- AES IN/OUT
- Wordclock Output
- MIDI IN/OUT THRU
- "Stereo 2" input (via S/PDIF or AES EBU)

#### INTERNAL BUSSING

- 4x Groups
- 4x Matrices
- 4x Auxes
- 2x "FX Sends"
- L/R and Mono busses

#### OPTIONAL INTERFACES

- Analogue Interface
- AES EBU Interface
- Mic/Line Interface

### FLEXIBILITY

324 can grow as the sound system around it expands. 16 Mic (XLR) or Line (1/4" TRS Jack) inputs + 1 Stereo Input are available in the analogue domain. An additional 16 fully-featured inputs are available via the pair of TDIF ports on the rear of the console, for playback from DTRS or connection of a pair of 8-way analogue to TDIF interfaces. With all expansion options attached, the console will support upto 34 analogue inputs.

### MIDI CONTROL

In addition to MIDI Program Changes, each snapshot can be configured to send Note On, with programmable Duration and Velocity - ideal for controlling external samples for FX replay. The console faders may also be switched to act as configurable MIDI Continuous Controller masters.



For more information

<http://www.spirit-by-soundcraft.co.uk>

Email: [spirit@dfial.pipex.com](mailto:spirit@dfial.pipex.com)

SPIRIT BY SOUNDCRAFT TEL: +44 (0)1707 665000, FAX: +44 (0)1707 665461

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## People . . .

### Lots of people on the move this month.

Autograph Sound Recording has just expanded its engineering support team to include **David Ffitch** as hire manager. Ffitch will be using his theatrical management skills to lead the busy and developing hire department. He started his career in 1979 at the Reading Hexagon Theatre and went on to be the stage manager for a variety of West End shows. Autograph plan to recruit engineering support staff over the coming months following several new sound design and supply contracts recently won for West End theatre shows.

Global Entertainment Technology (G-E-T.com), has added two new recruits - **Ian Brown** and **Stuart Fenwick** both formerly of Martin Professional UK. The appointments coincide with a move to larger offices - 2nd Floor, Norman House, Beaver Industrial Estate, Ashford, Kent, TN23 7SH. Tel: +44 (0) 1233 646 871

Following four years in the product manager's chair, **Bryan Waters** has left Allen & Heath to pursue his own business interests. He has founded Audace Technologies, specialists in control solutions for installed systems and audio web authoring. The new company will be based in Redruth, Cornwall.

ProMix, a member of the PRG Audio Group, has promoted **Stephanie DiDonato** to manager,



industrial operations. In her new capacity, she works for Bob Rendon, vice president of the Audio Group at ProMix's Mount Vernon, NY, office.

**Richard Belliveau**, who for many years was the driving force behind High End Systems' R&D efforts, has finalised an exclusive agreement as an external consultant to the Austin, Texas-based automated lighting manufacturer. Belliveau left High End in 1998 and has spent the last year and a half developing new ideas. The agreement formalises his new role.

Lightfactor Sales has expanded its sales team. **David Hartley** joins as Northern Area sales manager. He is widely experienced on the

installation and sales front, having supplied audio and lighting equipment to all areas of the industry. **Nathan Marsh** joins the team as Southern Area sales manager. He has been in the professional entertainment industry for 12 months, working with one of the UK's leading lighting distribution companies.

**Mervyn Thomas** has been promoted to the position of general manager at James Thomas Engineering. Thomas has already been actively engaged at the company in his role as sales director, a position he's held for the last four years. The appointment coincides with the company's founding owners **Graham Thomas** and **John Walters** retiring from active service.



Stagetec has recently appointed **Gary Herwing** to the post of hire manager.

He has been in the business for many years, most recently as production manager for Paul Daniels. He will take control of all aspects of the hire business of the company with an emphasis on developing existing and new markets.

Zero 88 Lighting has appointed **Graham Eales** as sales and marketing manager. He joins from Selecon New Zealand, where he has been instrumental in raising its profile and performance throughout Europe. Eales has over ten years' experience in the production and theatrical environments having run a hire company in South Africa and held responsibility for Selecon NZ's sales in the Pacific Rim, Europe and North America. His takes on his new role in May. The company has also welcomed the return of **Claire House** who will work with Eales in the marketing department. She returns to Zero 88 following a short 'sabbatical' at a PR and marketing agency.

AC Lighting has appointed the appropriately named **Paul Biggerstaff** to its growing UK sales force. He has been with the company for three years and was previously, managing the UK

Goods Out department of the company's warehouse facility in High Wycombe, Buckinghamshire. Biggerstaff will be reporting directly to AC's recently-promoted sales manager, Kevin Coker.

Rosco has appointed **Andreas Dessloch** as its new development manager for German-speaking and former Eastern-bloc countries. Previously sales

manager with Lightpower in Germany, Dessloch has extensive experience of Rosco and ETC products, and of the German marketplace. Other recent changes at Rosco include the appointments of **Kirsty Thlrd** to the UK sales team and **Zoe Castle**, previously scenic product specialist, taking overall responsibility for Rosco's sales in France and Benelux.

Lighting Unlimited has appointed industry veteran **Mick 'Jaggie' Scullion** as sales director, following his six years as sales and operations director with Spot Co. Scullion will be responsible for the company's new business development programme, as well as account handling and management. At the same time, LU has also appointed two new project managers - **Tony Fagan** and **Theo Cox** - both also ex-Spot Co employees.

**Colin Jones**, one time director of Chameleon Lighting Ltd, and freelance lighting designer, is launching a web design service, called rather originally 'Colin Jones Design'. The service is aimed at entertainment-based business on the web - [www.cjonesdesign.co.uk](http://www.cjonesdesign.co.uk)

Overt Light to Sound - a new distribution company, handling both lighting and sound equipment - has been launched by **Malcolm Burlow**. Burlow has been in the industry for more than 15 years, most recently working with Electrovision, but prior to that with DJ2000 which had the sole UK distributor rights to Numark.

Top and centre Dave Hartley and Nathan Marsh of Lightfactor Sales  
Bottom, Claire House of Zero 88

Lightfactor Sales

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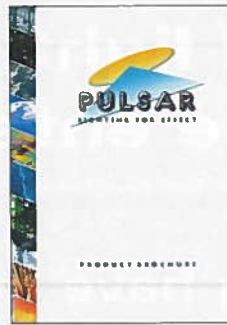


# CATALOGUE COLLECTION

To obtain the latest catalogues and product literature from any of the companies advertising on these pages simply post or fax the slip, indicating your choice(s) by ticking the relevant numbers.

A number of these catalogues also appear on PLASA's website. For direct ordering visit [www.plasa.org](http://www.plasa.org)

## 1. Pulsar Light of Cambridge



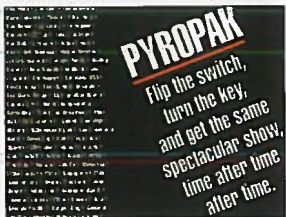
Contact: Derrick Saunders  
Tel: +44 (0)1223 366798  
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## 2. Orbital Sound



Sound equipment hire and services for the theatre, exhibition and corporate event industries.  
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Fax: +44 (0)20 7501 6869  
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## 3. Luna Tech



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Fax: +49 4353 997799

## 4. DHA



DHA's full product catalogue, including Digital Beamlight 2, Digital Light Curtains, Moving Effects, Glass & Metal Gobo Services and Fibre Optics, is accompanied by a swatch book of over 800 stock gobo designs. It is also available on the DHA website.

Tel: +44 (0)20 7771 2900 Fax: +44 (0)20 7771 2901  
E-mail: [sales@dhalighting.co.uk](mailto:sales@dhalighting.co.uk)  
Website: [www.dhalighting.co.uk](http://www.dhalighting.co.uk)

## 5. Clay Paky



These three catalogues feature the Stage Line range of moving body projectors. Available in English, French, German, Italian and Spanish, the catalogues present detailed information about each product including technical data, diagrams, weight, measurements, tables and pictures

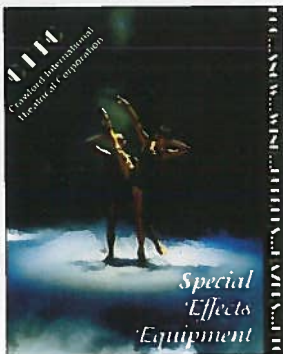
UK Distributor: Pulsar Light of Cambridge  
Henley Road, Cambridge, CB1 3EA, UK.  
Tel: +44 (0)1223 366798 Fax: +44 (0)1223 460708  
E-mail: [sales@pulsarlight.com](mailto:sales@pulsarlight.com)

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## 9. Lighting Technology



New fully-illustrated 80-page catalogue including studio and theatre lighting, lamps and special effects

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E-mail: [sales@ryger.co.uk](mailto:sales@ryger.co.uk) Website: [www.ryger.co.uk](http://www.ryger.co.uk)

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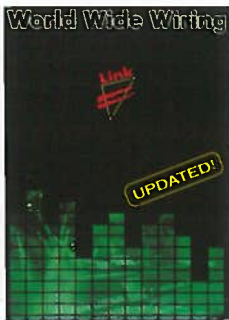


**15. HW International**



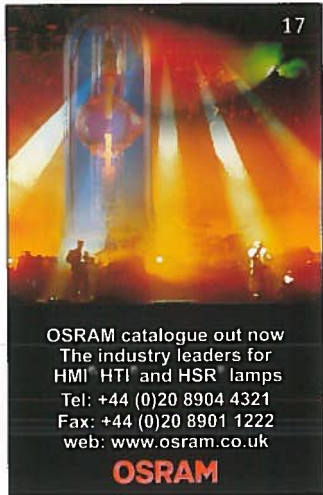
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**17**



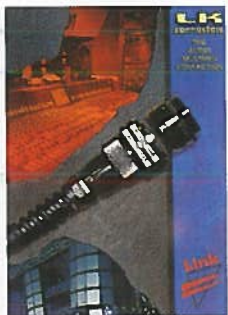
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 For further information contact Selecon UK customer support -  
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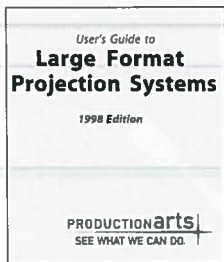
**19. Link**



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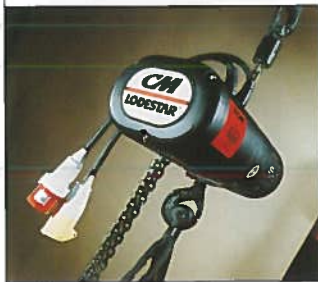
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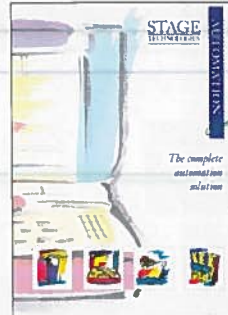
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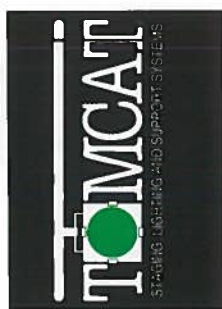
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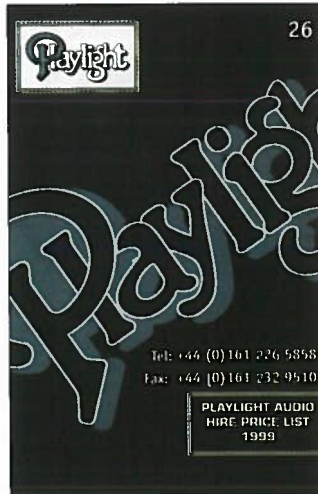


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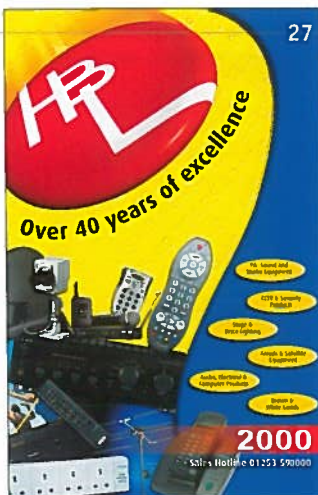
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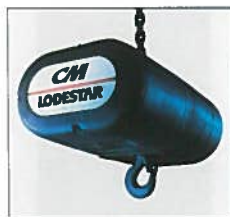
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**27**

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**28. Columbus McKinnon**



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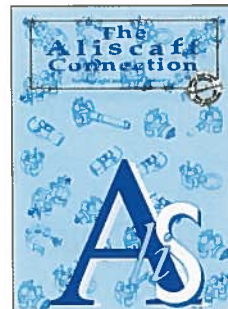
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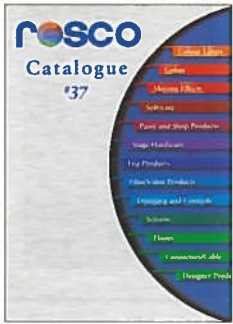
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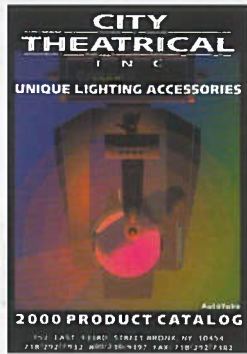


**31. Rosco**



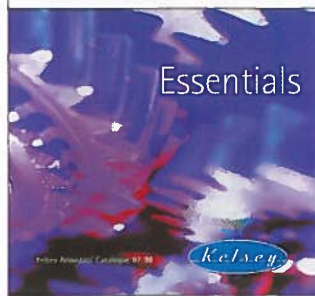
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Total Lighting Control

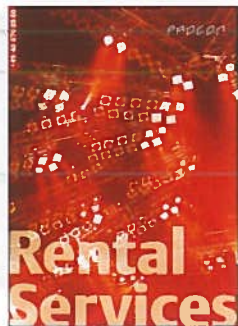
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**37. Link**



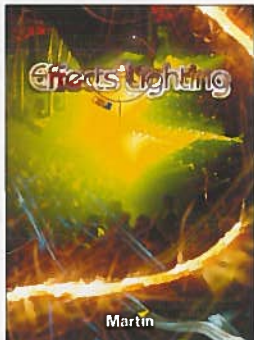
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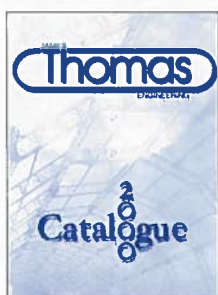
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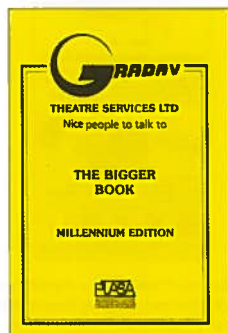
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Fax: +44 (0)1702 617168  
E-mail: mail@adamhall.co.uk

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**44. Gradav**



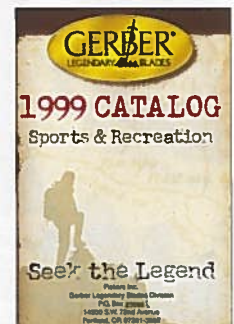
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**46. ELX**



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**48. Wybron**



Wybron is the world leader in innovative entertainment lighting accessories, including colour and gobo changers, 3D tracking systems, mechanical dowers and diagnostic software.

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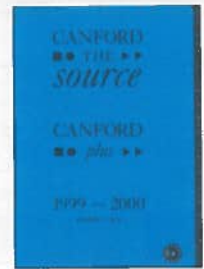
**49. Multiform**



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**50. Canford Audio**



The FREE Canford catalogue continues to expand and now contains more than 14,000 products. At more than 1,000 pages it can truly be said to be the most comprehensive of its kind available.

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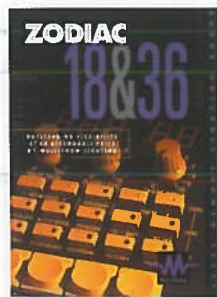
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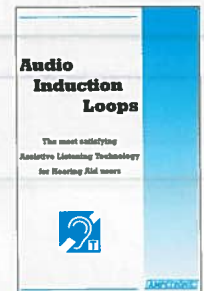
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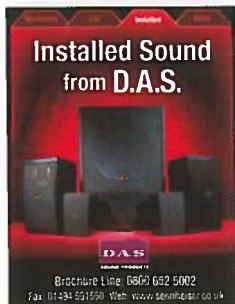
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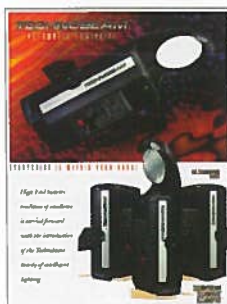
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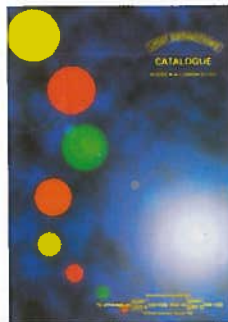
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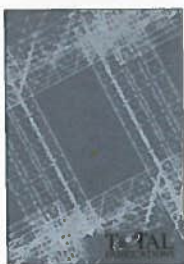
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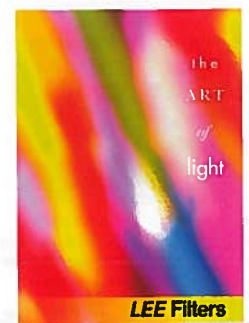
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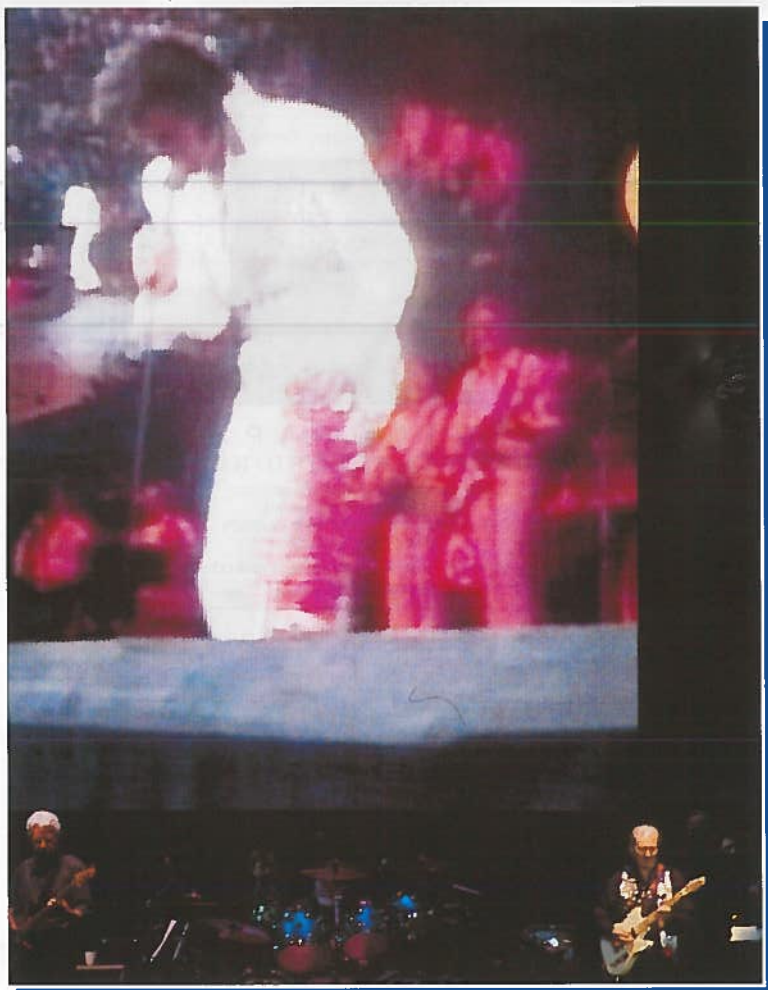
# Virtual — Performance

*Steve Moles finds that a group of guys from a South African Township have a great deal in common with the King of rock and roll?*



TOURING

*Elvis - despite the slight inconvenience of death - is managing a more successful tour than some others we could mention*



**C**lair Brothers Audio lose biggest act in the world to Eighth Day Sound. Had Elvis still been alive that might have been a shocking headline, but as this is a tour by a 'virtual artist' it's just a bit of harmless fun. (Simon Rickman, see letters p16, L&SI February 2000, please take note). The King would have been 65 last year, but whether he'd have ever broken free from that bastard Parker and actually got around to touring Europe for real is open to conjecture.

With that question permanently unresolved, this tour is as good as it gets for all his millions of fans over here. Does it staunch their unrequited thirst? Well ponder this. The UK is now saturated with tribute bands of every kind, bands that fill a gap opened up by record companies' inability to nurture new talent. Thus Joe Public regularly fills

the pockets of bands that have never had a hit in their life, but make a good fist of playing other people's. The pinnacle of this phenomenon must be Elvis. I don't see even the Bootleg Beatles selling into the arena circuit, but following a brief dip of the toe last year at Wembley, Elvis is back, and big time. "We've just played all the main arenas in Europe," said production manager Pete Edmonds. "Stockholm, Berlin, Paris, half a dozen others. The only soft city was Copenhagen." Even so, that's no mean achievement when you consider what's on sale here: 30-year-old video footage and a band of geriatrics that make The Who look rebellious. Edmonds had an even more startling revelation: "This production has been out for two years now, touring extensively in the US, Far East and Australia. Everywhere we've been we're asked back."

Video is the key to this show. 'His' image is fundamental. In some of the more remote locations visited by the tour, they've had to use projection and RP screens, for Europe Screenco is

providing its high-definition Saco LED screens. Everyone I spoke to from production confirmed the LED image is more potent: "You can even get the audience cheering certain things from the video," said director Kevin Williams, "and that can really lift the band. Just like a proper live show." The brighter, sharper screens do highlight one weakness - quality. A large portrait screen dominates centre stage, while two lesser screens flank it, landscape orientation, either side. Although there is occasional deviation, 99% of the time Elvis fills the centre screen, while live cameras feed footage of the band for the sides. Although the old seventies footage of the King on stage has been digitally enhanced, and reformatted to suit the screen shape, it still looks coarse and grainy in comparison to the live stuff each side.

Williams is new to the tour, and has brought a fresh approach to the presentation. "What they had in the early days was fairly static, just focused in on the band members. ➤



I've made it more rock and roll. I do pick ups on the orchestra - quick cuts that give the show more dynamic." Even so, he doesn't have that much to play with. Two hand-helds, a rostrum in the pit and two minicams fixed to backing vocalists and drums, gives him plenty of angles, but by dint of the material, lots of modern effects would be entirely inappropriate. And, of course, unlike any other live show, what he has of the main artist is immutable. Do his lively cuts detract from the main focus? No, and his assertion that they can give a lift to the audience was borne out by what I saw and heard.

The weakness alluded to in the video is also apparent in the audio. "The recordings are inconsistent," said FOH engineer Mark Brnich. "Lots of different mics were used in the various recordings, generally they all sound a bit thin." Luckily for Brnich, he has plenty of other sources to use for cover and to compensate. Stig Edgren, who masterminded the whole concept of touring Elvis, is not shy in spending money where it's needed to make for a quality show. The orchestra features a seven-piece string section, nine horns and percussion: I counted eight backing vocalists (the original Sweet Inspirations and the Stamps - minus the bass voice, JD Sumner, who passed away last year) and Elvis's band, TCB. "I've got 62 inputs to my Recall," said Brnich. "Essentially 'His' voice comes from the video, with a click track added by the band, and the original music's there as well. Ronnie, the drummer, has all that in his headphones and he's the one who keeps the band together. Mark Ballard runs monitors, providing a standard instrument mix and a little of Elvis for everyone else."

It is one of the ironies of this show that for Brnich his Star's performance is identical every night, and identically flawed. "That can catch me out sometimes. I'll be concentrating on getting something from the strings, and forget." But he has help in other ways. "TCB are really consistent; I can count on them every night," which is presumably why Elvis put so much stock by them.

"And although I do have cues set up for every song, all the effects are subordinated to a Yamaha 03D, which takes time code from the video to trigger it." Naturally, they are always right on the money. A bit like a Steps show.

The PA is a d&b C4 system. The boxes do actually belong to Eighth Day in the US, with control, effects and touring support coming from Wigwam. Although this is an example of the ever-closer ties between these two companies, what's more scary is that at the time of the tour, when many other PA companies are lightly becalmed, Wigwam did not have enough gear to service the tour themselves.



Setting the tone for this show falls entirely at the feet of lighting designer Greg Hamm, and he sets the seventies idiom perfectly. If there are any old lampies out there who hanker for days before digital and moving lights, this is the show for you. "Originally, the show used a design by Marilyn Lowey," Hamm explained, "containing High End Cybers and Studio Colors. But there came a point in the tour where circumstance forced a change and I went for a big Par look as a substitute. After a couple of shows Stig decided he loved it," though one could imagine cost might have influenced him somewhat.

Hamm has been toying with lights since he was 14, when hanging out at the Playhouse

Theatre in Cape Cod. By 1976 he was LD for Chicago (the band, not the city), so he's no stranger to steam lighting. Three trusses of LSD's finest Par cans span the stage, there is the odd Source Four tucked in there, and a battery of them across the front to make for a very beamy audience blinder: "Something typical of his big Vegas shows," said Hamm. But

there's not a 'wobbly' or colour-changer in sight. The most high tech' piece of gear is the desk - a Celco Gold. "Still a great desk, just so easy to use and programme, and still no one's come up with anything to match the dial out pots on each channel to deal with a hot dimmer."

The video dominance is a slight frustration for Hamm: "I do prefer to use saturated colours, but obviously this needs something lighter for the cameras." And the intensity of the LED outputs does tend to overwhelm what the lighting is doing on stage. "The screens are just 14ft from front of stage, so there's no space for back light, and because of sight lines I can't put

much to the sides." Thus, he's left to tease out band and vocalists with a small battery of profiles, and set mood with big, powerful washes. However, he is obviously being stimulated by Williams' new video direction: "Kevin does a different show each night, and although we do discuss things I still have to watch closely and try and anticipate where the cameramen are going." A challenge he rarely fails to meet.

Does it all work? Well, punters do rush down the front during the second half, just like a real show. And yes, as I alluded to earlier, it's certainly as valid as any boy/girl band presentation. If you like Elvis's music, and that doesn't mean you have to be a fan - I never was - this is a good night out.

*Video is the key to this show. 'His' image is fundamental. In some of the more remote locations visited by the tour, they've had to use projection and RP screens, for Europe Screenco is providing its high-definition Saco LED screens.*

**Who'd have thought a bunch of guys from a South African Township would have so much in common with the King of rock and roll? No idle jest: in terms of live performance there is much they share, not least the lighting, where both shows eschew the rigours of modern automation for the more serene world of static incandescence.**

Likewise, in terms of sound reproduction, the voice is everything, both audiences come to hear nothing less. Even their differences bind them: Ladysmith is an unaccompanied a capella performance, while for Elvis, it's the band that's unaccompanied. In either case it's something genuinely live that's absent from the show. But there the comparisons end - Ladysmith have one other peculiarity that sets them apart. It must now be approaching 20 years since Paul Simon graciously introduced them to the world, yet here, this night, it's still abundantly clear that they delight in playing to an audience. There is no mistaking the pleasure they take in receiving applause, and how that in turn lifts their performance. Watching Ladysmith is, if nothing else, a happy occasion.

Jon Picciano counts himself lucky to have been mixing the band for the past 18 months. Having previously excused himself road duty for a few years, he felt his time at SIR studios in New





Left, Ladysmith - the show is one of understatement

York was drawing to a natural close when Paul Simon's guitar tech, John Scofield, suggested he punt for the job. "I knew Mark Sileg and Right Side Management (who manage Ladysmith) and knew them to be a good organisation," he says. So without qualm, Picciano leapt. Although when touring the US he's often using house systems, here he has Richard Knowles as supplier throughout the tour. "Richard has been providing Ladysmith with PA for several years now. We use a small system of Meyer - MSL3s, 2s and 650 subs," a system he's obviously comfortable with. "The harder you push it, the better it sounds."

Truth is, in the confines of rooms like Sheffield City Hall, built for vocal recital, he could almost get away with no system, but then punters have become accustomed to something different. "I've been here twice now, using a Midas XL200 out front last time, a board I really like for its EQ, but Richard had some bad news for me this time around - he didn't have one available for the tour." So it was that Picciano was stuck with a brand new Heritage 3000: "Tough break, huh?" He was not disappointed, though you have to say, it's a lot of car for a short drive. Monitors are run by Dave Ross, who impressed Picciano by electing to run his whole system (six UM1s) from a Yamaha O2R: "He convinced me that this would work. He'd need no outboard gear, using just the on-board dynamics, mainly a touch of overall compression." Which made for a nice neat stage look, though Ross took a good minute to eliminate a ring off the lead vocal mic at the show opening. Whether that's down to not being set for that all-important instant accessibility, or because it just genuinely caught him off-guard, we'll never know. However, the following 74 minutes were flawless.

new idea," he explained. "The images are all provided by the band - shots of their families, home, and country - which have been thoughtfully woven into the text of the songs." But like Elvis, the screen massively affects how he runs the show. "I have to focus everything off the screen to avoid washing it out," he says. Shelley has an all Par 64 rig from Neg Earth, a smattering of Source Four sils, and six Colorams on up-lighters for the backdrop that surrounds the screen. "No fan noise was part of the brief when I took this job on last year: they find it very distracting. It's a challenge really, having to go back to the old days, constantly trying to find the right thing for the mood." But Shelley is more than anything fighting to overcome his natural instinct to 'do something'.

Truth is, a two-colour wash, a touch of side light when the guys start to dance, and two followspots for lead pick-ups, does just nicely. This is a not a 'light show' act, just an act that needs to be lit sympathetically - which Shelley manages perfectly. That's not to say he can just throw up a master on his Avolites Rolacue Pearl at the start of each song and retire to the bar. "Although they do stick fairly rigidly to a song list, they also do songs as the mood takes them. I have to keep my eyes on them. If nothing else, they try and put one another off and they play around on stage - they need watching." Not that this is an onerous task: "It's very gentle, but it's great fun."

And that's the lasting image from this show. Here's a bunch of guys who look like they can't believe their luck at being on stage. It's natural, genuine and - as Shelley said - great fun.

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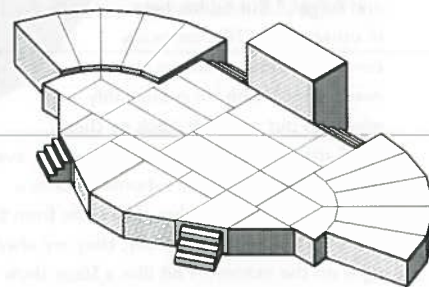
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# John Watt

## Second Take...

John Watt's view from beside the camera

I know it's a matter of who you know, rather than what you know, but now this old maxim is getting out of hand. Since Christmas there have been two possible jobs that didn't run and two regulars that have

"So I'm currently shopping for a 600W profile with 'fluorescent light operation', 'large sized barn doors for easy focusing' and 'cables, filters, attachments and mounts, one set required'. Plenty of scope there."

gone to other lighting directors. Nothing new there, but the latest non-starter has got under my skin. The call from a producer, who I've worked with a number of times, was full of enthusiasm for his latest project and full of praise for my work. He hoped I was available.

HOWEVER, my enthusiasm for the job was short-lived; I got a call the next day to say that the OB company was supplying "their own lighting director!" It appears that we are being out-bid, even when the contact is

good. I assume his costs were lost in an overall package for the whole job. I had never got as far as quoting a fee, so that wasn't a factor.

**GOOD TO SEE** an old acquaintance - Max Keller from the Kammerspiele in Munich - stunning them at the Met' in New York. Sorry Ian Herbert, I'm not really straying into your theatrical patch, though I might, given half a chance. It must be 20 years ago when, thanks to one of those legendary STLD trips, we were introduced to this innovative

lighting designer's work. His use of an almost exclusively HMI rig produced a totally unique look to his productions. I remember particularly, dozens and dozens of motorised dimmer shutters all working flawlessly (and quietly) driven from the Galaxy, I think. I also recall some HMI Niethammer profiles: are there any other really powerful profiles - even now? Anyway, from what I read, Max hasn't calmed down much, thank goodness. At the Met' he is using 20 ARRI 5k HMIs bounced to light the cyclorama, all with dimmer shutters and colour scrollers. He added nine 5k tungsten Fresnels because he was unhappy with the Red from the HMIs; I do like someone who doesn't muck about.

**AS YOU WILL REALISE**, dear reader, I'm a bit of a jet setter (used to work for the gas board, "till he got too old to ride the range," Lewisham Hippodrome 1951), so you won't be surprised to hear I'm involved in a UNESCO lighting quote. An equipment list has turned up on my desk which is a good read. It would appear that somewhere an Arabian manager (yes, they have them too - company camel and a papyrus clipboard), has got hold of a Strand catalogue. He has had a bash at translating what he thinks he needs into French, and a French diplomat has translated into English what he thinks the Arab needs! All I have to do is my own interpretation of what I think they both want. Oh, and the rule is: don't even think of asking for explanations, just guess. So I'm currently shopping for a 600W profile with 'fluorescent light operation', 'large sized barn doors for easy focusing' and 'control cables, filters, attachments and mounts, one set required'. Plenty of scope there.

**IN THE INTERESTS** of being totally fair and above board, I must report on a rare visit to the hallowed ground in Wood Lane. (Overseas readers please note this is a big round building in London now run by a man called Greg Dyke who

used to shout at me a lot when we were at TV-AM. This was a Breakfast TV channel - a bit like GMTV, but with real pictures and sets.) Anyway, Greg has announced that he's had an idea (everybody duck). He's going to spend more money on programmes and less on management. Well, I for one hope he succeeds. In the top 10 programmes of 1999 none came from the BBC, (Coronation Street, Who Wants to be a Millionaire, Heartbeat and Frost) but whether or not this is significant I'm not sure. Personally, I would rather he went for quality rather than quantity, but will he dare in this ratings-driven world? I hope he won't forget shift workers like me: for a start he could provide an alternative to Channel Four, which takes late-night programming seriously.

**FOR EXAMPLE**, this is what you might have seen on February 20th at 1.20am. The 11 O'clock show! Highlights of last week's satirical shows. At 1.50am, you could have seen Babylon 5, Voices of Authority - there's a powerful new ally in the fight against the shadows (a footnote says this ends at 3.35am). At 2.40am, The Other Side - The Liars & Les Rhythmes Digitales tasting the flipside of success (why are all these shows about lighting?). At 3.35am, Katia Ismailova, in Russian with English subtitles. At 5.10am, The Sudden Walk, a film that explores the depths of human isolation (see, they are all about lighting!). 5.30am, Countdown. Praise the Lord! it's not only dawn, but Richard Whiteley too, one of TV's nice people.

**WHERE WAS I?** Oh yes, I went to TV Centre and my name was on the car park list (a first) and after the pigeon run to reception, my name was on their list too (Greg's obviously getting a grip). And so I got in and was an hour early for the rig. The nice man at the car park had directed me to the 17th floor, so I felt at least half a page coming on when I emerged into daylight on the 16th, obviously the roof. Maybe he reads this column and is trying to tell me something. Unfortunately, there is a 17th floor, or half of one anyway, so no chance of a moan on this front - what a let down. For the record, John Bradford still wears a tie and looks after this visitor at least, like a son. Gaffer Les Lamont does pretty well too - didn't he used to be in 'On the Buses'?

**OFF NOW TO PLY** my trade in another remote news room. I wouldn't say this is the small-time, but when I get there I have to ring headquarters and they will give me the code for the door so I can let myself in. Assuming I don't fall off the steps, when I've finished I'll turn off the lights and slam the door behind me. This somehow neatly sums up life as a new millennium lighting director.

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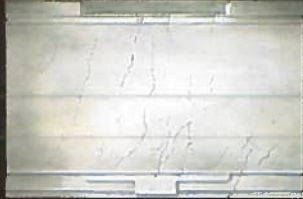
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Same Scenery Under UV Light

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Alladin's Lamp



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Miller Genuine Draft



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John Fogerty



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# Face the Music

**T**he adverts would have you believe that it's a musical and, certainly, it has music. But musicals normally also tell a story, and Fosse is really a collection of stories told through song and - mainly - dance. So, a revue then? Yes, but a revue connected by the theme made clear in its title. This show is a loving tribute to legendary Broadway director-choreographer Bob Fosse.

Fosse is the second show to be built on that legacy. The first, *Chicago*, exploded from a one-off concert performance in New York to become arguably the most successful musical at the moment in terms of the number of companies playing around the world. In that show, choreographer Ann Reinking, Fosse's former mistress, took her experience of dancing in the Fosse style and placed it into a sparser, simpler staging than the original production of the show allowed. The result was to bring the dance to the fore and force it into the minds of audiences who'd become used to the epic British musicals of the eighties where dance became a minor part of the overall evening's entertainment, rather than being the very core on which that entertainment was based.

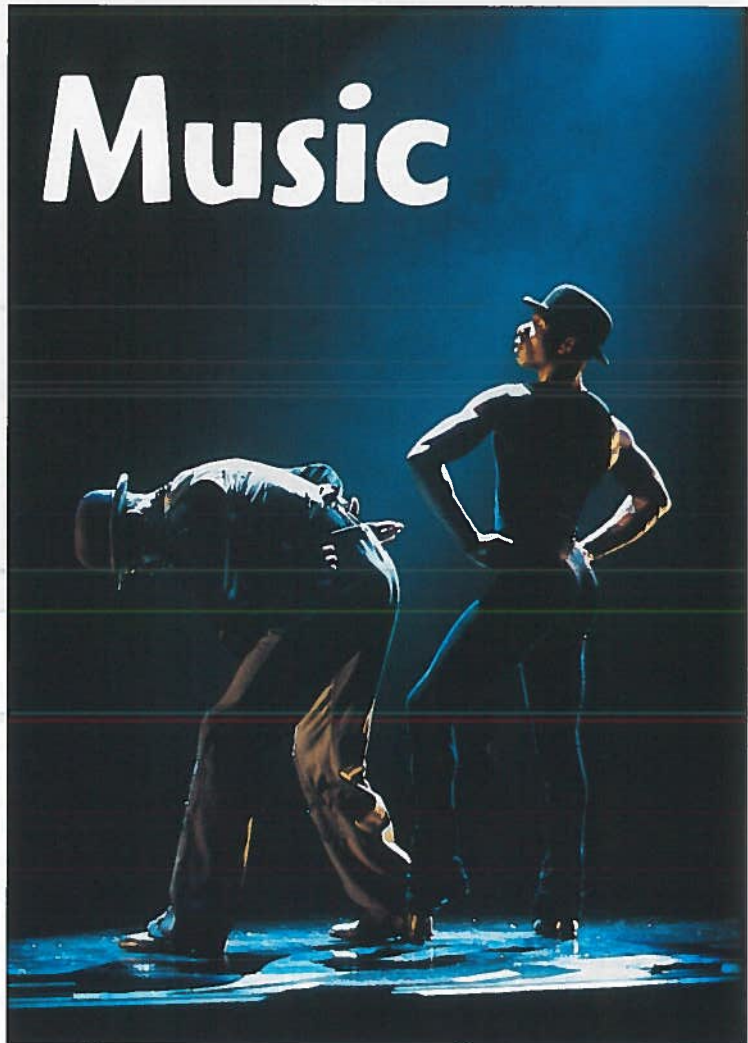


THEATRE

*Chicago* was an established show, though, and told a story. The intention with Fosse seems to have been to commemorate, to celebrate. It is an eclectic collection of numbers from Bob Fosse's stage and film career, some familiar (items from *Chicago*, *Cabaret*, *Sweet Charity*), others less so (*Pippin*, *Big Deal*, *Dancin'*), loosely organised to chart the choreographer's life and career. The show was conceived by writer/director Richard Maltby Jr, Chet Walker (a long-time Fosse dancer) and Ann Reinking, and bills Gwen Verdon, Fosse's wife, as artistic adviser - thus having approval from every area of the Fosse world. The credit floating above all of the others on the programme's title page makes it absolutely clear who's still in charge: Choreographed by Bob Fosse.

The design for the show follows the sparse, elegant environment that has made *Chicago* such a hit rather than some of the excesses of the original productions of Bob Fosse's shows. Set and costume design is in the experienced hands of Santo Loquasto, whose career spans everything from ballet to Broadway musicals (including *Ragtime* and *Grand Hotel*) via 18 Woody Allen films. The heart of the show is theatre, and Loquasto has accentuated the real proscenium arch of the Prince of Wales theatre with a bright gold version, then created two more miniature theatres within that picture frame with a smaller proscenium arch on either side of the stage, both hinged downstage and so capable of pivoting onto and off the main stage area. The stage itself is black, as are many of the costumes that play within it, but it is black with class, a thousand variations of hue and detailing.

Into this black box are dropped other elements as required - a backstage brick wall, swaged drapes, a glitter



curtain, a wall of light bulbs, even an on-stage band at one point. With the show having originated in Toronto, then touring the US before arriving in New York and with a second production already out on a US tour, the 'formula' for the set was pretty well established. To get the London production up-and-running, producers Pola Jones turned to the experienced hands of production manager Richard Bullimore, who in turn entrusted the work to Terry Murphy, Roger Hardwick and Unusual Rigging and was rewarded with a smooth-running fit-up on quite a tight time schedule.

Black costumes in a black set. A lighting designer's dream, surely? "Actually, it's a pain in the . . . If anyone says to you 'we'll just give you a black set and it's down to you and the lighting - it's a magic box' I just go - ohh, no!" recalls Andrew Bridge, who received a Tony Award for his work on the show last year. "But what Bob gave you was a magic routine, one which could take extreme conditions in lighting - you could do a single slot of light and he would work that hand, that white glove, in that slot of light." Perhaps it's not surprising that Bob Fosse's shows practically always received the nomination for the lighting Tony - and often won them, too. Bridge never met the director-choreographer, but admits that his career was influenced by Fosse. Despite this, the British Bridge could be considered an unlikely choice to light a quintessentially Broadway show. His invitation came from Garth Dubrinsky, head of Livent who originally produced the show before becoming embroiled in financial turmoil.

The first thing Bridge had to overcome were the memories of the lighting in the original productions, usually created by Fosse's long-time collaborator Jules Fisher. "I was not

**"Exquisite hoofing".  
That's perhaps the  
best summary  
(courtesy of *Time  
Out New York*) of  
the otherwise  
slightly hard-to-  
define show Fosse,  
freshly arrived  
at London's Prince  
of Wales Theatre  
after sweeping  
across North  
America last year.  
Rob Halliday  
catches the show**







into reproducing: I wanted to do the spirit of Fosse, but with our modern lighting system. I did threaten to put a JF-meter on the table when people kept talking about him!"

Bridge's 'modern lighting system' for the show gives a rig that is almost a showcase for the current leaders in entertainment lighting equipment. The conventional rig is based around ETC Source Fours and Source Four Pars, along with conventional Par cans and Wybron colour scrollers, all from White Light. Then there's the automated rig: "This show has actually got what I joked is the triple threat on it - High End, Martin and Vari\*Lite fixtures all on the same pipe."

VLPs have provided 20 VL2Cs for the overhead rig and 16 VL5Bs mounted to the scenic moving prosceniums, while The Moving Light Company have provided 18 High End Studio Colors and eight Martin MAC 500s, as well as five DHA Digital Light Curtains used upstage. "It is quite a release for us as designers to be able to concentrate on what's required for each specific show," Bridge explains. "All of the manufacturers have good equipment, but some aren't right for certain pieces - the VL4 is a favourite of mine, but it wouldn't have worked here because the beam isn't wide enough, so I substituted the StudioColor. And the VL5s have been fitted with a new honeycomb spill ring we developed (with theatre lighting specialist City Theatrical), which is fantastic - you can use them as dangerously-downstage crosslights without killing the audience." The moving lights were programmed by Patrick Shulze using an Artisan; they are now run from a mini-Artisan, with the conventionals running from an ETC Obsession 1500 and the two linked via a Macintosh running Richard Bleasdale's SAM software.

With the rig in place, Bridge then had to create the lighting for a sequence of numbers that both had their own internal stories and linked loosely together into longer sequences. His approach was to invent his own private story for each number. The on-going challenge, though, was to keep the show sharp but maintain the identity of each number. "The way Bob introduced numbers was in a shock visual - swing a ladder out and there's an artist or he's in a pool of light with a bowler hat. If you're not careful you can find yourself with too many pools of light and bowler hats - Bob wanted people to be bold enough to try it in different ways." Mixing these demands with Bridge's own stories and filtering them through the demands of practicality leads to some stunning lighting moments. "For the Berlin section from Cabaret I wanted a circle of lightbulbs to come out of the floor, so the girls would be trapped in a circle of glaring light. But for various reasons we couldn't troop a full deck. Then in rehearsals I saw them clicking their fingers under the bentwood chairs, so I decided to put lights under the chairs. Then I managed to persuade Ann to let them exit carrying the chairs above their heads with the lights on, which is a good Bob Fosse moment - taking a chair then making it something different."

This constant drive to produce the best has resulted in a stunning show, lighting-wise. It is clean, crisp, clear and beautifully, beautifully precise - aided by the precision with which the dancers perform and hit their marks. It has also evolved and altered slightly from the New York production; there the moving prosceniums had lights fitted to the top of them, here those lights are gone, giving a cleaner look but, conversely, in New York the Vari\*Lite gobo washes were fractionally wider in the air because here the rig is trimmed some five feet lower. But the conceptions for the numbers are the same, and always beautiful even when, as with the number 'Mr. Bojangles', they are simply achieved - a front, sharp-edged 'variety' spot for the ageing dancer, a side backlight spot for his younger 'ghost' shadow, and just a touch of blue on the floor. Bridge and his associate Vivien Leone are full of praise for their London team (led by production electrician Fraser Hall and moving light technician Chris Dunford), and in particular for their followspot operators.

And the JF-meter? "Jules? He's great! He phoned up and said it was fantastic." And the choreographer? "There was definitely someone watching over us when we were first lighting the show - it was uncanny, weird. But we did get to the end of a very long patch in Toronto and I went to Ann and said what do you think, how are we doing - with the whole picture, not just one number. And she said 'well, I think Bob would really be smiling'. That was great. Though God help us if Bob had been around now with Vari\*Lites and moving lights. We'd have been at it forever . . ."

"Bob Fosse was as precise with sound as he was with every other aspect of his production," notes Fosse's sound designer, Jonathan Deans, "and though sound technology has advanced immeasurably since then we still had to respect his demands and live up to the precision and discipline he'd have required." To assist him in this Deans was happy to talk to and take advice from those who knew and had worked with Fosse, including musical supervisor Gordon Lowry Harrell, the New York mixer David Gotwald, a veteran of many Fosse shows, and legendary Broadway sound designer Abe Jacob, who designed the sound for those original productions.

The advice was noted, but the actual sound system used on Fosse is clearly a Jonathan Deans system, reflecting his philosophy and attitude with regard to the need to collect the audio to the best possible standard in the first place, and then to offer the ultimate versatility in the way that sound is fed out into an auditorium. That is a philosophy he has developed and refined in the 15-or-so years since he left London to work on such epic American shows as Siegfried & Roy, EFX and Cirque du Soleil in Las Vegas. The show also reflects a departure from the musical norm where the voice is the most important element of the sound and everything else has to be matched to that. "With Fosse, only eight of the numbers have vocals - the rest are all performed as dance. In early discussions about the



show we therefore decided that in this case the sound of the band was the most important element. This also means that where we do add vocals we've worked to achieve the best possible quality, even if that means running very small microphones along the side of the face."

Unlike many 'book' musicals, though, where the use of such boom mics is often distracting, they do little to spoil the overall feel of Fosse - particularly on the London production where great care is clearly taken and the microphones are practically invisible. "We've done a lot of work on this," notes Autograph's Chris Full, who was the show's production sound engineer in London, "buying the booms straight and then bending them ourselves, which means we can be a lot more subtle." Unusually, though, when a performer is not singing both their microphone and their transmitter pack are removed then replaced when required, which makes for quite a hectic time backstage for the radio mic crew of Oliver Schreiber and Pam Maloughney.

Sound from the 24 radios follows a fairly conventional path through Sennheiser transmitters and out to a 59-input, nine-VCA, eight-aux Cadac F-type mixing console, which also controls sound from the five PCC160 float microphones and eight rifle mics used to pick up performer sounds when they're not wearing radios; some of these sounds are backed up with effects from a click track. Vocal sound then passes out through a speaker system composed largely of Meyer UPA-1P powered loudspeakers, of which Deans is a huge fan. The 16 UPA-1Ps are supported by two PSW4 powered subwoofers, six powered UPMs for front fills and seven dBb E3s (run from dBb122 amplifiers) as delays, and there are then E3s and EAW JF80s providing on-stage foldback, and UB12s for offstage foldback.

The route that the orchestra sound takes is much more interesting. Each orchestra mic arrives as an input at one of the two Mackie digital 8 bus memory recall consoles stacked to one side of the Cadac, an arrangement forced on the sound team by the limited space available for the console. The Mackies allow the level and EQ of each instrument within the band mix to be changed on a cue-by-cue basis, something that is extensively used throughout the show.

But the Mackies are effectively just acting as hands-on controllers for another system: an eight-unit Level Control System (LCS) digital matrix. Each individual instrument comes out of the Mackies and into the LCS as an individual feed. And the LCS system is individually connected to almost every loudspeaker in the rig (apart from the circle delays, which are wired as two circuits). This means that any instrument can be routed to any loudspeaker on a cue-by-cue basis - or, indeed, moved from speaker to speaker - by the LCS system. Deans plays with this, too, throughout the show, sometimes subtly, setting up different orchestral 'shapes' for different numbers, and sometimes in a very

deliberate and showy way as percussion sounds swirl up and down and - seemingly - around you, the latter most remarkable since there is no surround speaker system and the effect is merely an artefact of sounds being moved up, down and around the proscenium arch. Deans and associate Peter Hylenski have been working on the effects throughout the show's evolution, but in London were given the chance to refine things further, thanks to an overnight sound call.

Of course, things are never simple in musicals and Fosse complicates this already complex system in the show's finale, a spectacular Benny Goodman jazz sequence called 'Sing Sing Sing' where half of the band move to a podium at the rear of the stage as dance mayhem erupts around them. "The problem, primarily, is the number of inputs involved," Chris Full notes, "which means we use an Autograph-built MIDI switchover box rather than separate desk channels to deal with the drum kit. Of course, it's not quite as simple as that: as the drummer leaves the pit, the percussionist takes over the pit drums. As he finishes his cymbal roll into the finale, the third tom has already been swapped



over and the on-stage drummer plays that as another changeover swaps the rest of the kit! The snapshots in the Mackie allow us to deal with the different drumkits." The rest of the on-stage band mics are collected by the Cadac but fed straight out to the LCS.

All of this technology is under the control of mixer Mark Karrie, with Cadac's control software triggering the LCS system, and LCS carrying out any other work (such as locating the Akai DR8s containing the click tracks and

reading timecode from the DR8s for one effect sequence) where required. He also has an LCS eight automated fader wing that effectively gives him overall VCA-style control over the band mixes in the LCS. "We had to install some switching devices because we reached a stage where we couldn't do anything round the desk without having to move a keyboard or mouse," recalls Chris Full. "We now have a switch to route the mouse to the various computers!"

**"Deans plays with this, too, throughout the show, sometimes subtly, setting up different orchestral 'shapes' for different numbers, and sometimes in a very deliberate and showy way as percussion sounds swirl up and down and - seemingly - around you, the latter most remarkable since there is no surround speaker system."**

And how does it sound? Superb, actually, and in a way very like the lighting - powerful, precise, crisp, clean and clear. Even if loud at times. Anything the majority of the audience knows, such as the number from Cabaret, is much more warmly received than other, equally powerful numbers from other shows. The rest of the show is somehow admired and respected rather than eliciting a truly emotional response. And, aware that London audiences might not be such Fosse devotees as those in New York, the show is slightly trimmed in length. Though this does mean that London is denied the slightly bizarre spectacle seen in New York where performers in neighbouring theatres perform identical songs with identical dances at about the same time of night in the Chicago Hot Honey Rag section, one of the casualties of the London cuts.

You still marvel at the performers though. And you marvel at the showmanship of the man. The sheer theatricality. "The smell of the greasepaint," as Andrew Bridge rightly puts it. They don't seem to make them like that any more. And that's a shame.

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*tony Cottle*

# No Comment...

I would be curious to know what PRG had in mind when they acquired The Spot Company, the Pete Miles-led lighting rental 'boutique', which now seems to have shed all its core staff, including Miles himself of course. Is it whither Spotco? Or withers Spotco?

**"There was a rampant rumour doing the rounds at SIB of the imminence of a major merger in the lighting sector . . . I know who my money is on."**

**READERS WILL REMEMBER** the Spotties, as they were affectionately called, as the enfants terrible of the lighting rental business, the guys who broke the mould by enthusiastically grasping the waggly mirror. It may have slipped our minds but, back in 1988 when the company was started, non-yoke systems had a very tawdry image.

**INDEED**, if the rest of the market, apart from disco, believed that nodding buckets were the pail, the same people had also decided that waggly mirrors were way beyond the

bucket. The Spotco's mission to break into the events market using these delinquent devices as both their entrée and their USP, changed the landscape in the UK lighting hire business forever. (Though it is curious, in the ten years since, how the wheel has turned yet again, and today there can be no such thing as a bad yoke.)

**OF COURSE**, Spotco was a people-business originally run by a triumvirate of the aforementioned Miles, Ben Sullivan and Hugh Fraser-Mann, with the later suffix of Mick (Jaggie) Scullion. These guys dealt with the customers on a day-to-day business, brought in the deals and saw them through, each had their

own patch and contacts. But Fraser Mann left before the business was sold to PRG last year, Pete Miles took the money and took-off, Ben Sullivan has since gone walkabout (to Oz) and now Jaggie, with a couple of sidekicks, has taken his client base to Lighting Unlimited, a subsidiary of Gearhouse. Somehow, the PRG version of Spotco has created its own competition.

**IT MAKES ONE WONDER** what attracted PRG to Spotco in the first place, especially as they already had LSD under their belt, by comparison to whom the Spotties must be, much as the nickname infers, just a pimple. It surely can't have been the inventory, much of which was probably several years old at the time and, it would seem, not the name because, consequent with the recent move to Midnight Design's premises in Croydon, the moniker seems destined to extinction. The Spotco is not listed on PRG's website, though, to add to the confusion, press releases are still being issued. Go figure, as the Americans would say.

**MEANWHILE**, the US parent has reported a preliminary net loss of USD14.7 million for the fiscal year ended 31st December 1999 on revenues which had increased by 59% for the period, but with operating profits which dropped to 51% of the previous year's total. At the same time, PRG has filed for reporting exemptions with the SEC, which infers that it is moving out of the corporate bond market and rescheduling its debt. In the preliminary report, total debt is indicated at USD185.3 million.

**I HAVE JUST RETURNED** from the SIB Trade Show in Italy, which has been in hibernation for the past two years due to a reduction in its frequency. Consequently, there were doubts as to whether it would retain its previous excitement and pulling power, indeed some exhibitors, of which Clay Paky was a leading proponent, were keen to see the Show downgraded to a national exhibition.

**HOWEVER**, despite the absence of representatives from the UK leisure groups, and a sharp downturn in the discotheque market in Italy due to Government health warnings (which also led to a sad reduction in the previous freak show aspects in halls A-D) there was an enthusiastic turnout of visitors and, on the face of it, the numbers were vigorous also. Apparently, there was a large contingent of visitors from the Eastern European countries, for which Italy is particularly well placed geographically. So its international soubriquet may well have to be reinstated. More about all of this in the next issue.

**THERE WAS A RAMPANT RUMOUR** doing the rounds at SIB of the imminence of a major merger in the lighting sector and speculation was rife as to who the morphing participants might be. I know who my money is on, but I am keeping it to myself in a responsible fashion. Watch this space.

**IT'S NOT UNUSUAL** to steal someone else's clothes, just ask an American patent lawyer, and we blatantly lifted the idea for the name of this column from the FT's advertising campaign. However it's a bit rich when the Chancellor of the Exchequer's ex-press secretary compounds the felony, while upstaging one in the 'clever clogs' department.

**FOR CHARLIE WHELAN**, now spin doctor at large and broadcaster, has just done that by publicly announcing an insider's guide to Whitehall gossip on the Web, called . . . KnowComment. (To our overseas reader: For Chancellor, read controller of the national purse strings and the PM's next door neighbour, for Whitehall, read White House, for Know Comment, read The Drudge Report.)

**THE THOUGHT** of Springwood Leisure, Adam Page's bars and discos emporium, cosyng up to Kingfisher, Fred Lawrence's danceries and drinkeries vehicle, has raised a few eyebrows around here. In terms of the principals involved, it is very hard to imagine the two individuals getting on, let alone being able to communicate.

**ADAM PAGE** is a tall, taciturn man with a tendency to mumble in the received BBC fashion, and with a penchant for pinstriped, city suits. Fred Lawrence, is also a quietly spoken person, but his accent is pure Scotland. One wonders if each can actually understand what the other is saying, half the time. Perhaps this explains why the deal has been on and off over the last few months.

**CURRENTLY**, I believe it to be off, though Page now has just below 20% of Kingfisher.

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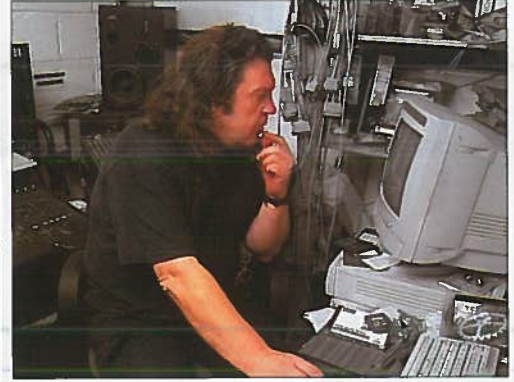


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# Cause and FX



*There's an old truism in business that if you don't keep moving you'll soon be left behind, and two years after undergoing a complete management restructure it appears the FX Group of companies has taken this motto to heart. Sue Sillitoe finds out how*

Since August 1998, when the company underwent a major restructure following the departure of former managing director Neil White, FX has directed an enormous amount of energy into not standing still, with the result that it is now a much bigger and more diverse entity. By adding new divisions, FX has expanded into entirely new areas such as sales, equipment servicing and repairs. At the same time, investment in its core rentals business has been increased to ensure that the company maintains its competitive edge.

"Based purely on turnover, FX Rentals is the leading pro audio hire company in Europe," says operations manager Tony Andrews. "In addition to pro audio, FX has extensive hire stock including backline, instruments and live sound. Although these days equipment rental is only part of what we do, it's no hollow boast to say that in terms of service the FX Group is ahead right across the board."

FX Rentals was established in 1992 and rapidly consolidated its position in the rentals market through a pro-active 'customer first' philosophy that involved giving clients access to the equipment they wanted and ensuring that they also got high level service and reliable maintenance and back-up. The success of this philosophy - which continues to this day - became apparent in 1997 when the company moved to much bigger premises in Telford Way, West Acton, where it was able to double the size of its staff to 30 employees. At about this time, White - a chartered accountant by profession - announced his intention to leave the company. This led to the 1998 restructuring, which saw the appointment of the current management team consisting of chairman Roger Evan, managing director Nick Harris, director of operations Tony Andrews and technical director Frank Oglethorpe. These appointments also coincided with an announcement that the company was ready to expand and within a few months it has added a tape transfer facility, an overseas rental operation and a sales arm to its Group structure.

"From the outset we hit the ground running," says Roger Evan. "When we first moved to Telford Way, I remember Nick looking at me and saying 'how are we ever going to fill all this space?' But now all that space is packed with racks of equipment and it's getting to the point where we're wondering if we have enough room . . ." The filling up of all that warehouse space reflects FX's continued investment in new equipment, which in the last two years alone has amounted to nearly £500,000. "It is very important that we are able to supply the latest recording technology," Evan says. "However, at the same time, we need to maintain and support a full range of popular vintage equipment. Obviously, the shelf life of a piece of equipment varies tremendously. Some of the valve microphones and valve compressors that we have in stock have been popular for more than 20 years. But other items - some keyboards for example - go in and out of fashion much more quickly, sometimes in as little as 12 months."

As part of its evolution, FX now offers a range of add-on services to its core business of renting pro audio equipment. To emphasise that these services complement rather than dilute what it already offers, FX has marked the start of the new Millennium with a brand new image designed to clearly identify and promote all areas of its business.

The changes are highlighted by the company's logo which now features the FX brand name followed by the name of each of its separate divisions. These include FX Rentals, which handles all rental business; FX Copyroom, which handles transfers to and from any format - analogue and digital; FX Music Control, the company's sales arm; FX Spain, which represents its international dimension and the recently-added FX Cimple Solutions, a new servicing and repairs division.

While each division operates independently, all five are able to draw on the company's common resources, and all are committed to offering the attention to detail and customer service which FX Rentals prides itself on having established. "We constantly reinforce the fact that all our divisions come under the FX umbrella and benefit from our overall corporate strength and our total commitment to technical excellence and high quality customer service and support," Evan says.

Breaking down the divisions and the services they offer, FX Rentals remains dedicated to the business for which it is known and continues to pursue a relentless policy of improving customer services. Evan says: "FX Rentals has over 3,000 hire stock items, from DI boxes to digital recorders. We have always had particular success with tape machines of



COMPANY  
PROFILE



From top to bottom, Roger Evan, Nick Harris,  
Tony Andrews and Frank Oglethorpe

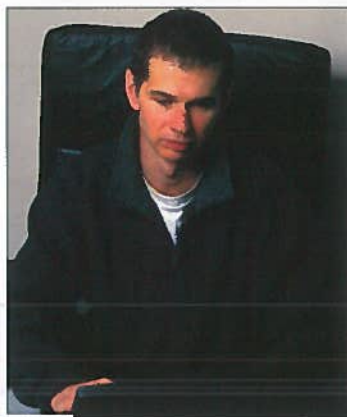
all formats including Sony PCM 3348HR digital recorders, traditional 2" analogue machines such as Otari MTR90 and Studer A820, ADATs, DA88s and the new hard disk recorders such as the RADAR and Pro Tools. In addition, FX holds many vintage items such as classic guitar combos, valve microphones and value audio processing equipment."

Ongoing developments include an investment in the GPS Tracker tracking system, enabling all deliveries to be geographically located; a technical helpline offering support for all equipment-related problems to clients and third parties alike; and two Pro Tools specialists who ensure that systems are installed smoothly and used to their full potential.

FX Spain, a separate division headed up by Marc Neuhaus and based in Barcelona, is also primarily a rental operation, although it has recently broadened out into sales and installation. The division began in 1993 as a project to supply producer Trevor Morais with equipment for his studio in Malaga, but in 1998 it was formalised to provide a service to recording, live sound and audio post-production clients across Southern Europe. The company has its own stock of equipment, although it can draw on the UK inventory if necessary.

FX Music Control is the Group's sales arms which was launched in October 1998, following FX's acquisition of established pro audio sales company Music Control. Based in Stoke, this division continues to run from Music Control's existing premises where it is headed up by Emma Brown. The link-up of FX Rentals with Music Control, which already had an established, country-wide client base, provided both companies with obvious cross-pollination opportunities. These included the ability to pool databases, the availability to Music Control of FX's fleet of 10 drivers and access to FX's 24-hour staffing, plus the benefit to FX Rentals of having an in-house sales company.

"We'd dealt with Music Control, buying equipment for the rental company, and found they offered a very impressive level of service



which matched our own," explains Evan. "We were also attracted to the company's proven ability to track down pieces of pro audio equipment, no matter how ancient, obsolete or esoteric. If you give them a list, which includes new, used and just plain weird equipment, they'll source everything. They're really

geared up to providing a good, all-round sales service for new and used equipment, with complete after-sales service."

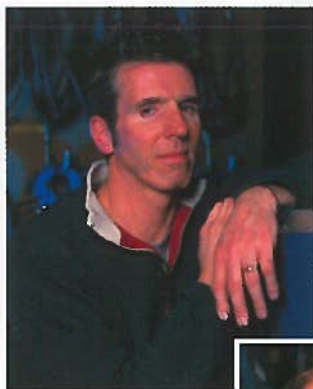
Evan adds that while some sales companies only want to sell you the box, Music Control are completely client-driven - and they have become so successful at what they do that FX has recently increased the amount of workshop space available so that staff can continue to overhaul the equipment they source before it is passed on to clients.

Major expansion has also been taking place in the FX Copyroom division as a direct result of client demand. The success of its existing copyroom, which was opened in 1998 as FX's first-add-on service,

has led the company to open a second copyroom offering format-to-format transfers and safety copies across all analogue and digital formats.

Explaining the background to

this division, Evan says: "Hire companies have traditionally been in demand to make transfers from one storage format to another due to the wide range of equipment they have available. Before we opened the first copyroom we would offer this service on an ad hoc basis, relying on machines that were not out on rental. Obviously this had drawbacks - not least that



## FX PROJECTS

The FX Group is no stranger to unusual requests, but two recent projects undertaken by the company highlight just how diverse its clients' needs can be.

The first case involved FX Copyroom and is a perfect example of the type of work undertaken there. The drama began some months back when Thunderwing Productions was in the process of compiling a T Rex Greatest Hits album. To the record company's horror, it was discovered that someone had managed to wipe part of the drum track of Metal Guru. The only remaining safety copy was tracked down to an office basement, but was found to be in very bad condition.

FX Copyroom's manager, Kevin Vanbergen, was brought in to restore the tape, which meant baking it twice and manually cleaning the tape edges and partial tape surface before transferring it to a fresh medium. Thanks to his efforts, Metal Guru was saved from extinction and Thunderwing was able to incorporate the track on its T Rex compilation album Bump 'n Grind, which will be released on 26 April.

The second case involved FX Rentals, which recently came to the aid of producer Trisin Norwell when he decided to convert a stunning manor house in Gloucestershire into an impromptu recording facility. Norwell, the producer behind Talvin Singh's Mercury Award-winning album OK, felt Batsford Manor would provide the ideal environment in which to record a new album with Hut signing, Embrace. Before the project could go ahead he needed an equipment package that would transform part of the house into a control room and live area.

FX Rentals put together a rental package based around a Studer A827 analogue two-inch 24-track tape machine running with Dolby A. Along with 32-channel and 24-channel Mackie desks, FX also supplied a pair of Munro MA1 monitors and an extensive range of processing equipment including three Avalon VT737 mic amps.







Left, Marc Neuhaus who heads up FX Spain, a separate division based in Barcelona. The division works across almost every pro audio discipline despatching equipment throughout Spain, Portugal and France.

Below, FX Rentals go live.



The last piece in the FX jigsaw is FX Cimple Solutions - a very recent acquisition headed by Cliff Whitehead and operated from FX headquarters in Acton. Explaining why FX bought Cimple Solutions, Evan says: "We were forever being asked if we could repair and service equipment but we didn't have the manpower to do it. Now that we have

we couldn't guarantee a first rate service when our clients needed it. So eventually we took the decision to set up a dedicated copy room with permanently-installed equipment and a full-time person, Kevin Vanbergen, to run the service. The second room was set up to cope with a significant increase in the Copyroom's workload and to ensure clients continued to get the high level of service they were used to."

The copyroom also provides archiving and tape-baking services - the latter added by default when staff found themselves handling large amounts of old analogue tape that needed heat treatment to re-adhere the oxide to the tape backing before the transfer could be carried out.

acquired Cimple Solutions we can extend the FX service philosophy to these clients too. This includes arranging to have equipment collected and delivered back as soon as it's repaired and offering a replacement piece of equipment for just one day's hire charge, regardless of how long the repair takes."

The FX Group's five main divisions are bolstered by a small but active backline department that not only hires out guitars, amps, drums and so on, but also does a fair amount of trade with corporate clients who need PA equipment for launches and presentations.

In terms of technology and future trends, Evan points out that digital technology has transformed all areas of recording, first through digital audio processing, then with recorders, mixers, etc. He adds that pro audio equipment is now advancing in line with the computer industry, with increases in processor speeds, storage capacity, and data transfer technology all directly affecting the audio equipment audio professionals will be using in the future.

"With this in mind it's nice to think that things can only get better - or maybe just faster!" he says.



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# Ian Herbert, Asleep in the Stalls...

It won't be long now before we get the next master plan to save the regional theatre. It's been a long time in the pipeline, which means that it has been quite well leaked already - someone should plug those holes.

**BECAUSE IT'S BEEN SO LONG COMING**, we have (rather carelessly) lost one or two regional theatres during the wait, but there are healthier signs out there than we've seen for a long while: Hornchurch has just picked up £50,000 to bolster its finances and strengthen Bob Carlton's

unashamedly populist programming - which has already seen attendances trebling; Keswick's spanking new replacement for the old Century mobile shed was selling out consistently during its first summer season; and all over the place we are seeing signs of revived ambition on both main stages and in the studios. You remember regional theatre studios? They weren't always prop stores, you know.

**NOW I STILL** don't get about as much as I should,

so it's just as well that some of this evidence of regional energy should have come down to London recently. Lucy Bailey's splendidly steamy adaptation of Tennessee Williams' *Baby Doll*, for instance, has arrived at the Lyttelton from Birmingham Rep, and very handsome it looks too. Because it's based on the film, there's a cinematic element about Bunny Christie's set designs, not to mention the use of a busy soundtrack from Ian Roberts and Adam Rudd, backed by Django Bates' evocative southern music. Chris Davey's lighting plot has to work

very hard to keep up with the constantly changing focus: the first state is a downstage water-pump, dry at present but due to gush symbolically later on.

**THEN THAT INFINITELY FLEXIBLE** Lyttelton set of stage masks comes into play, opening on a tiny square through which we can just see the corner of a cot. Gradually we pan across the figure of Baby Doll. Then the whole of her nursery bedroom is revealed as the masking slides away. Next, it slides stage right, to open up her husband's adjoining bedroom. The first, very narrow focus gives way later on to the full wide-screen effect, as the whole of the Lyttelton stage opens up to form a composite of Baby Doll's yard and various other settings.

**MAYBE THE BURNING DOWN** of the cotton gin owned by Baby Doll's ultimate seducer, Vaccaro, could have been a little flamer - the explosions were marked with a very white light streaming in from the full-height side flats that represented the gin. But otherwise Chris Davey soaked the stage, in its large and its small forms, with hot southern afternoon light, taking us into the cooler, yet still pretty, steamy interior from time to time with a whole series of effective changes.

**THE SEQUENCE** - and you can't help using filmic terms for what happens in Bailey's assured production - in which Vaccaro plays hide and seek with his prey, makes brilliant use of the doll's house look of the interior, sectioned set. As the cuckolded husband plays his own game of hide-and-seek with the two lovers, the full-stage set comes into play: where the earlier chase had Baby Doll and Vaccaro flitting from room to room, popping up to surprise one another, now husband Archie-Lee is careering all over the yard, shooting at shadows, and the production is using a very different spatial concept to generate excitement.

**THE ABILITY TO DEFINE** the area you're looking at, used so cleverly here by Lucy Bailey and her

designers, is not just an equivalent of the camera zooming in and out in a movie: it's a very theatrical way of adjusting the focus from one tiny corner to the whole space.

**THERE'S A SIMILARLY HUGE SET**, unusually, for Michael Boyd's *Miss Julie*, which has come in to the Haymarket. Tom Piper has made the family kitchen look twice as big as Arnold Wesker's industrial one, with a huge spiral staircase leading out of it, two floors high, to Julie's bedroom. If this is life below stairs, there is certainly no lack of stairs. But where his use of height and staircases seemed very mannered in his RSC *Measure for Measure* a couple of seasons ago, this time it works very well, since in Christopher Eccleston and Aisling O'Sullivan, Boyd has two actors capable of filling a big stage area without a qualm. Rick Fisher gives them a cool summer night, which they proceed to warm up with their sexual chemistry, and the otherworldly incursion of a band of midsummer revellers who suddenly turn this intimate play into a stage riot gets much of its effect from Rick's nifty changes of mood. Both it and *Baby Doll* bring a rare sexual charge to the stage.

**THE SHOW THAT IS STUNNING LONDON** at the moment is also a regional import, Michael Grandage's *Sheffield As You Like It*. Curiously, the last terrific version of this tricky play that I saw was also out of town, Polly Irvin's Bristol/Leeds version. Grandage has used his familiar design team of Christopher Oram and Hartley Kemp to provide the usual dynamic support. An architectural, gloomy court gives way to a wintry, rather Nick Ormerod Arden, which in the second half is gradually suffused with the colours of spring. Oram's costumes, contemporary yet timeless, are mostly subdued and monochrome - the colour comes from an extraordinarily lively set of performances. And there's hardly a stick of furniture on stage throughout, which just whizzes the production along.

**A SMALL BUT SIGNIFICANT POINT** is that both *Baby Doll* and the Grandage *As You Like It* were extensively (and glowingly) reviewed by the London critics at their original venues. In recent years, newspapers have had their own cutbacks, which have meant that the critics haven't been able to pay as much attention as in the past to theatre outside London. It's unfortunate, and maybe not a coincidence, that this period of critical neglect should have come at the time of serious economic decline in regional theatre. What the regions needed then was a few more informed voices telling the world how essential they are to the whole fabric of theatre in Britain. Now that the critics are getting out again, they are seeing evidence of this in some very fine regional shows. Let's hope their editors don't take away their Railcards.

"What the regions needed then was a few more informed voices telling the world how essential they are to the whole fabric of theatre in Britain."

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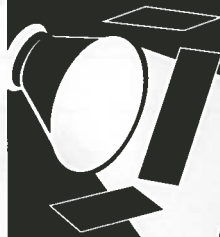
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# Entech 2000



**T**he organisers' decision to run the show biennially after 1998 seems to have paid off well: interest from a visitor point of view appeared more concentrated as a result, with both the number and - more noticeably for many - the quality of visitors up on the previous event.

There was a change of venue too, from the central and easily-accessible Convention Centre on Darling Harbour to the half-an-hour-away-if-you're-lucky Olympic Park. Visitors to the 2000 Games shouldn't be misled by claims that this Park is the geographic centre of Sydney: the city has a vast 1,100sq.km (700sq.m) suburban sprawl, so near the city centre it ain't. But although the change of venue brought its own set of pros and cons, it did have a positive effect on visitor quality, as it seemed that no-one was going to wander over to Olympic Park unless they meant it. No decision has yet been made on the venue for 2002 - while Homebush Bay is cheaper, the organisers say that the need for courtesy buses pretty much wipes out any saving. The 'filter effect' on visitor quality is certainly attractive - but then so is Darling Harbour.

PLASA once again organised a strong contingent of UK exhibitors to Entech, with 24 companies taking advantage of the SESA (Support for Exhibitions and Seminars Abroad) sponsorship package offered through PLASA by British Trade International, the DTI's export development department.

High Wycombe-based **AC Lighting** has been a regular member of these groups, and Glyn O'Donoghue and Mark Ravenhill were this year showing the full range of AC's Chroma-Q colour scrollers for the first time in Australia, and also promoting the WYSICAD/WYSIPAPER package to accompany **Cast Lighting's** WYSIWYG lighting software. Other products on stand included the Starlite Mk5 moving lights, Procolor lighting filters and Tourflex Datasafe DMX cable.

**Anytronics** were represented on the stand of **Greater Union Entertainment Technology (GUET)**, showing the latest additions to their Series 192 dimming packs - the new D1205 (12 x 5A per channel) and D610CB (6 x 10A per channel, with panel-mounted circuit breaker protection). Also new is the DS410 dimming/switching pack (4 x 10A per channel). These products can now be supplied with the Australian 'sad-face' sockets as standard.

The GUET stand was also the base for both **Celestion** and **Studiomaster** from the UK. Celestion only announced the appointment of GUET as their Australian distributor in February. The Celestion brand will fall under GUET's



TRADE SHOW



specialist SVL division (sound, vision, lighting). GUET's Billy Mawer reports that there is already a significant interest in Celestion's product from the Australian pro audio and musical instrument

markets, while the company will also be working on newer markets for Celestion, such as permanent installation and AV rental.

Paul Wright of Studiomaster has a strong track record in the industry, having formerly been sales and marketing director for Marshall Amplification. Studiomaster has

undergone some drastic changes recently, with the closure of its Luton facility and the opening of a new base in Milton Keynes taking place alongside a massive investment in R&D, increased cost-effectiveness in manufacturing and the appointment of a new distribution network.

Consequently, the brand can now offer a new range of mixer products at more competitive price points than ever before, and the response so far - including that in Sydney, says Wright - has been excellent. New products on show included the Logic 12, a compact

mixing console featuring four mono mic/line and four stereo line channels, two aux sends, PFL buss and rotary faders, and the E-Series amplifiers which were available in four models, ranging from the 600E (300W pc) to the 2000E (1000W pc).

**DHA Lighting's** Custom Gobo Service was introduced after Entech 98, and so was being promoted for the first time in the country, along with the excellent Gecko image projectors which were first seen at PLASA 99. These gobo projectors, ideal for retail display and promotional applications, use a 75W MR16 light source. DHA's top-drawer stand lighting design for the show was by Baldock,

**The Australasian entertainment technology industry centred on Sydney's brand new Olympic Park early in March, as the Entech exhibition returned after its first two-year break. Lee Baldock was at the Show**



Top, Mark Ravenhill (left) and Glyn O'Donoghue of AC Lighting with lighting designer Alan Stone who lit the Sydney Opera House for the recent Festival of Sydney

Inset, Studiomaster's Paul Wright (right) with Richard Harper of the DTI

Left, Celestion's Richard Wear and Billy Mawer of GUET





McGreevy & Associates (now retired).

Another member of the UK group, DSFX and AVW had an encouraging response to their joint venture - the DSFX Flymaster powered flying system, controlled via AVW's Impressario automation and control system. The Flymaster is designed to provide an easy retrofit system to automate traditional counterweight rigging installations, and the Impressario offers an affordable control option with up to 500 programmable cues.

Edwin Shirley Staging, the veteran British staging specialist, started its own Australian operation 18 months ago, and was promoting its staging, temporary structures and truss systems services at the show. ESS's Jeff Burke told me that a key factor behind the Australian venture was the pool of expert Australian crew that the company has used worldwide over the years who

are now back at home and readily available. With such an experienced workforce to draw on, ESS has already been involved in a number of prestigious projects for the touring and special events markets in Australia.

LightProcessor's Paul Fowler reported a good deal of interest at Entech, where he was showing the company's latest product lines, including the Paradime dimming packs and the show replay unit for the Q-Commander lighting control console - the Replica. Also on show, the DMX Distributor - an isolator, splitter and buffer in a 1U 19" rack mount format.

David Rose of Navigator Systems was demonstrating the latest release of the company's HireTrack Eclipse rental management software. This incorporates features such as e-mail facility, multi-currency and multi-site support. It is another product which has featured in London's Millennium Dome - Navigator developing a customised version to cater for the venue's rigorous and specific testing requirements.

Penn Fabrication is another British company with an existing Australian office. The Victoria-based Penn doubled its number of product lines in stock during 1999, with the addition of an extra 600 Penn products. The company now carries all types of Penn lighting truss, along with the company's full range of accessories and hardware - a stock-holding of around 1,400 lines.

Stage Technologies' Nomad staging automation and control



system was again on show at Entech. The company's recent successes with Nomad in the UK have included the two biggies - the Millennium Dome and the Royal Opera House. In the States, the worship venue market has thrown up an interesting project for the Nomad system on behalf of the Church of Jesus Christ of Latter-day Saints in Salt Lake City, Utah - providing stage automation for a 33,000-seat church which also doubles as a television studio.

Tomcat's John James was joined on stand by Jo-Anna Kamorin-Lloyd of JKL Productions Pty, the Tomcat representative in Australia and New Zealand. Tomcat hosted two sell-out workshops during the show: the Rigging Workshop on day two and the Hoist Workshop on day three.

Universal Lighting and Audio (ULA) is one of the country's leading distributors, with product lines including Avolites and Le Maitre. Avolite's Steve Warren was demonstrating the Sapphire 2000 and Azure 2000 consoles for the first time in Australia. Steve had a busier show than expected and was delighted to confirm three large orders for the new ART dimming systems at the show.

Le Maitre's Steve Ramos was also having an excellent show with ULA, with a great response to the company's new Bubble Master machine, as well as to the company's other established lines including the Low Smoke Generator. Other ranges on show from ULA included Abstract (whose Galactic Star won the Best Effects Lighting Product Award at the show), Citronic and Infinity.

Nearby, another of the big Aussie distributors was Show Technology Australia, whose range of distributed lines was spread over several stands - and for good reason, comprising as it does such bedfellows as Martin Professional, Clay Paky and Studio Due, among others. Martin's new MiniMACs made a big hit on the Martin Pro stand, while the MAC 250 picked up the award for Best Moving Light.

The award for Lighting Product of the Show went to a British-made product - the Flame Light, from the Unique Flame Light Company.

These imitation flame effects come in a variety of sizes and use a light flame-shaped gauze over a silent fan, lit from beneath and the sides with blue and orange lights. It's a beautifully

simple idea, but extremely effective and - as our picture will doubtless prove - very hard to photograph.

Coemar-DeSisti was showing a range of new lighting products from Coemar, as well as a line-up of moving lights all protectively sheathed in the superbly-named Con'dome inflatable waterproof covers. Among the architectural fixtures was the Coemar Panorama (winner of the Best Outdoor Lighting Product award), which

comes in architectural and touring versions, as well as a built-in ballast version (panorama BBI) and a Beam version. Also from Coemar was the Broadway Cyc 2k - a colour-mixing cyc light for theatre and studio applications, and the CF7 moving yoke fixture, which utilises a 700W MSR lamp and is available in HE

(hard-edge) or Wash versions.

From Fal was the Night Colour outdoor projector which accommodates standard and custom gobos for use with large-scale outdoor projection applications. It utilises a 1200W lamp (MSR or HSR) and offers 56 colour combinations from twin dichro' wheels. Compulite was also represented on the Coemar-DeSisti stand, showing among its range of lighting control products the new SparkTop - the company's lighting control 'desk in a box' aimed at touring LDs, and offering control of up to 1,536 DMX channels.

New Zealand-based manufacturer Selecon picked up the Entech award for Innovation in Lighting Design for the Pacific 'cool' profile range, which so narrowly missed debuting at Entech in 1998, and was launched at PLASA later that same year. At least partly due to the success of the same excellent product, Selecon also collected the Lighting Exporter of the Year Award this year. The company launched a new low-voltage tungsten halogen lamp which has been developed in conjunction with Philips, for Selecon's Pacific luminaires. An electronic auto transformer mounted on the side of the yoke delivers a maximum 80v - the most efficient voltage for the 1200W tungsten lamp - giving a beam that is brighter and whiter than a 2k, and offering a 40% energy saving, say Selecon. Also new is the Finelite large image projector, which utilises the heat management facilities of the

Top to bottom:

Stage Technologies' John Hastie and Nikki Scott

David Clare of Unique Flame Light Co Australia with Jacqueline Mitchell of Unique Flame Light, London

Emmanuel Ziino of Show Technology with Jon Petts of Jem

Jo-Anna Kamorin-Lloyd of JKL and John James of Tomcat Show Technology's Angela Ziino with Clay Paky's Renato Ferrari

Ryan Lamb (left) and Andrew Rushen of Penn





Pacific modules to provide clear colour images produced from any standard inkjet or laser printer.

One of Selecon's Australian distributors is **Clearlight Shows Pty**, who at Entech 98 was also appointed as distributor for **James Thomas Engineering**. Two years on, Clearlight's John McKissock is pleased with the progress. It has, he



says, been a case of increasing awareness of the quality of the Thomas trussing, lighting and accessory products in a market where cheaper and poorer quality alternatives are everywhere, but

people are coming round to the idea that a Par can, for example, can last longer than two years.

Two members of the UK group - **Martin Audio** and **Allen & Heath** - were represented by **Technical Audio Group (TAG)**, who won the

Distributor of the Year Award, as well as picking up Awards for **QSC's** Powerlite Series amplifiers (Best PA Product) and **Allen & Heath's** GL4000 mixer. In fact, TAG narrowly missed out on a neat little system hat-



trick when the Best Loudspeaker System Award went to **EAW** for the KF750 (distributed by **Production Audio Services**) - unfortunately for **Martin Audio's** Wavefront system which, via TAG, has enjoyed considerable success in Australia. The focus of **Allen & Heath's** exhibit was the new flagship dual function live mixing console, the ML5000, which

offers 24 group/aux busses, eight VCA groups and four-band EQ with fully parametric mids. Other lines distributed by TAG include **Euphonix, Marantz, Klotz and LA Audio**.



**Yamaha Music Australia** was showing the PM1D digital live console for the first time, in fact the very desk that was on show at the Paris

Top to bottom:

*Bruce Maggs (left) and John McKissock of Clearlight with Andrew Walters of James Thomas Engineering UK*

*The LSC team with the E24 touring dimmer system*  
*Allen & Heath's Glen Rogers with the ML5000 dual-function live mixing console*

*Paul Mulholland with the Jands Event Series 4*  
*Mark Amory (left) and Danny Bishop of Yamaha Music Australia with the Yamaha PM1D*

AES recently. Elsewhere, the **Midas Heritage 3000** was being debuted by **EVI Audio** (Australia), picking up the Audio Product of the Show award along the way.

**Bytecraft** was displaying a range of High End Systems fixtures, following its appointment as the company's Australian distributor. **High End's** Bob Schacherl was also present on stand to further cement the relationship. For **Bytecraft's** own product, the emphasis was very much on their Variable Sinewave Dimming (VSD) technology dimmer, which won the company a product award at **PLASA 98**, has attracted interest from consultants such as **Arup Acoustics**, and is continuing to draw attention in the face of changing harmonic performance requirements. On a slightly different note, look out for a ballet production called **Nutcracker**, which tells the story of how ballet took root in Australia as a result of World War II: the show has

played to good reviews in Melbourne and Sydney, and may well be visiting Europe in the future - lighting design by **Bytecraft's** John Montgomery.

Home-grown talent of a slightly different kind was on show from **ARX Systems**, the manufacturer of signal processing, amplifiers and speakers, who picked up the Award for Audio Exporter of the Year, in recognition of

its success in exporting product to over 50 countries around the world.

**LSC Lighting Systems**, has been through some tough times since we last saw them at Entech 98, having gone into Voluntary Administration late in 1998. This is similar to Chapter 11 in the States,

and is intended to allow companies to continue operating in the hope that they can trade their way out of problems. Which is just what LSC appears to have done; technical director Gary Pritchard told me that the company would very shortly be back to full personnel strength, and Entech 2000 was the launchpad for two new products - the E24 Touring Dimmer System

(featuring 24 channels of 12 amps connected through a 2:1 series/parallel patch bay, and offering 48 or 60 outputs depending on the connector arrangement) and the ePRO 12 amp professional dimmer pack. These new products

were shown alongside the company's established ranges of lighting control desks, dimmers and DMX512 distribution equipment.

Further positive news from **LSC** - they have recently supplied lighting control systems for the Carnival Triumph and carnival Victory

cruise liners. The systems are being installed by **HMS** in Italy.

**Jands Electronics'** Paul Mulholland reports that business is 'comfortable' in Australia at present, and he was happy with the response at the show to **Jands'** two main attractions - the Event Series 4 lighting control desk and the new sale-model **Vari\*Lites** that the company distributes in Australia. The Event Series 4, launched at **PLASA 99**, continues to draw a very positive reaction from customers requiring a simple approach to incorporating small numbers of moving lights into conventional lighting/dimming systems. As to the **Vari\*Lites** (the VL2201 and VL2400, launched at **LDI 99** in Orlando), he is full of praise for what he says are excellent products, adding that the reaction to them during the show had been overwhelming.



Mulholland was also of the opinion that the biennial Entech is now a 'can't miss' show for everyone, as four years would be too long to wait. Judging from the noticeably improved quality of the 2000 event, this would seem to be the case.

**Look out for Frankfurt, Rimini and ABTT show reports in the next issue**

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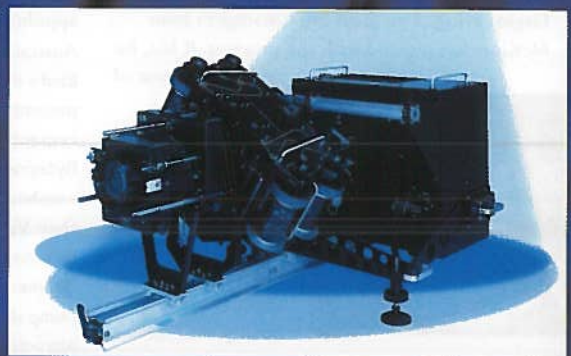
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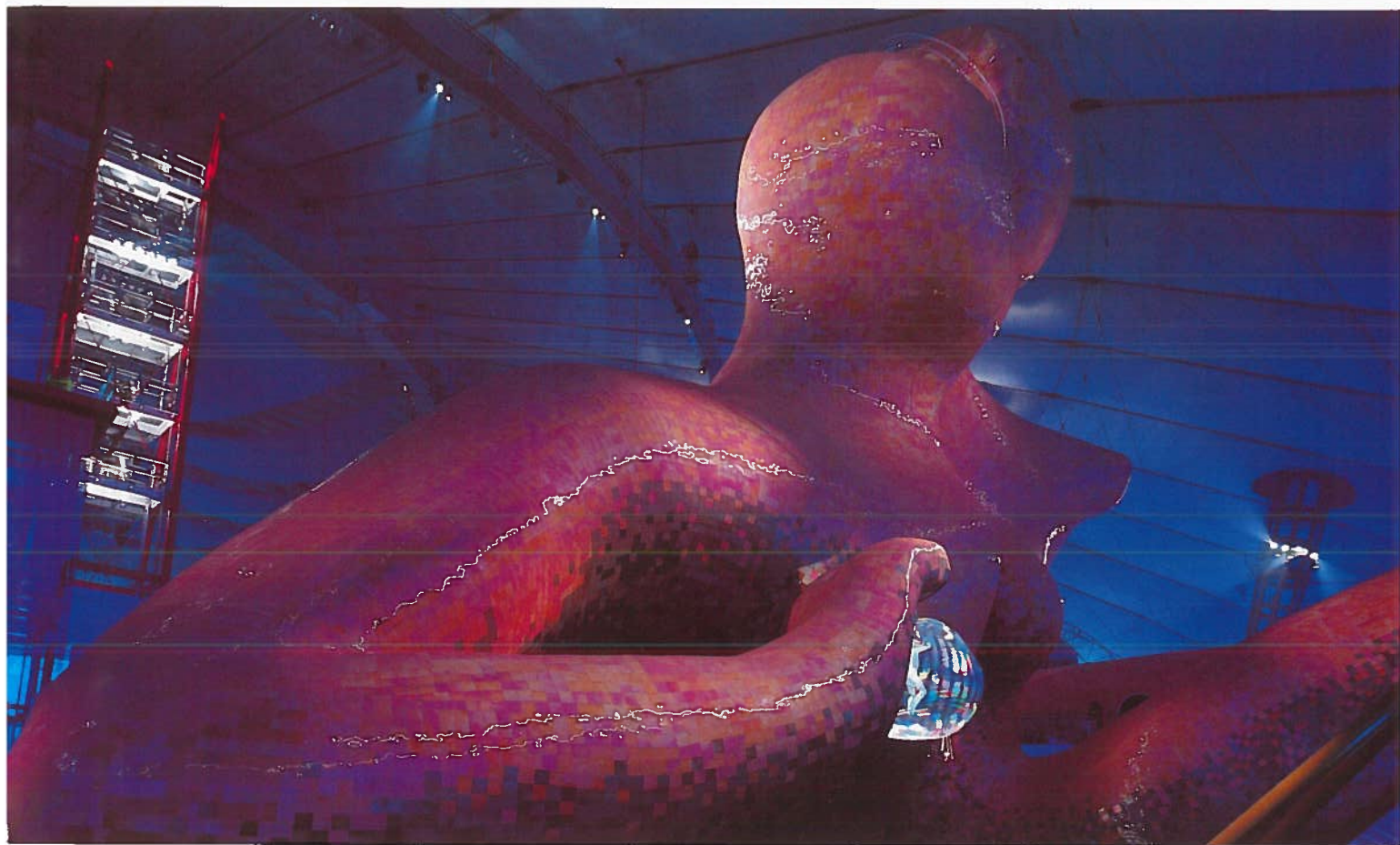
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# Once in a Lifetime

*Following our review of the Central Show, we now come to the final part of the Dome feature - an overview of everything else. Ruth Rossington goes quietly barmy trying to make sense of it all.*



MILLENNIUM

The Dome must now rank as one of the most familiar icons of the twentieth/twenty first century. Courtesy of a media always on the look-out for a good story, a steady stream of information has been drip fed into our daily lives since the idea of a showcase for the Millennium was first mooted way back in the Dark Ages. I doubt if any other venue has attracted so many column inches and once you start to unearth the story of the Dome, it's easy to understand why it's captured the imagination of so many.

Although Prince Charles famously referred to it as a 'monstrous blancmange', the Dome is actually more than just a big tent - it's quite a feat of engineering. The 12 masts that lend to its distinctive profile, are 300 feet high and the roof itself, 150ft high. Unless you've actually made the trek to Greenwich, these figures can be pretty meaningless, but to give them some perspective, you could actually fit the Statue of Liberty or Nelson's Column upright in the centre, or better still three billion pints of beer.

Allowing for the fact that none of these was an option, filling all this space was a unique challenge for the technical and creative teams. At the head of the charge was the New Millennium Experience Company (NMEC), specifically set up to deal with the Dome. Its first task was to recruit specialists from all walks of life to pull the project together.

## PROJECT SCHEDULE . . .

Without money of course, nothing could happen, so the first priority was to raise the capital to fund the project. Despite what some may claim, no taxpayers' money has actually gone into the project. Instead the £758 million has come from three sources: £400 million from the lottery, £160 million in corporate sponsorship - and an anticipated £150 million from ticket sales and merchandising, though the accountants may be hastily revising this last figure if early indications are anything to go by.

The original designs for the Dome were first

aired in June 94. By 1996, the Millennium Commission had offered a grant and construction began in earnest in 1997. For much of the time the Dome was simply a building site, with hundreds of construction workers crawling across its surface. In the background the technical teams were dealing with architects and building engineers and fighting to bring together an equipment spec. The construction work was finally completed in June 98.

Roland Hemming, as head of sound, was busy pulling together all the audio elements of the project, whilst Simon E Brophy, in the equivalent role on the lighting side, was doing much the same. Government involvement in the project meant that all purchases had to be made using formal government tendering processes and Hemming and Brophy were forced to issue tender documents hundreds of pages thick.

By August 98, things were beginning to gather momentum: the technical teams





were now working round the clock, some based at NMEC's offices in Central London, others on site at the Dome. The main issue for all concerned was time - January 1st, 2000 was a non-negotiable deadline and with construction work on the Zones not kicking in until the following February, this would leave only 10 short months to install, trial, refine and snag the systems. Plus, there hove into view the additional complication of an official Opening Ceremony, so whilst work began on the main zones, parallel work on the VIP-laden launch was shoe-horned into



Above, one of the Edit Suites on site; right, the central monitoring room and below, one of the two Radio Studios

the already tight time schedule.

Unfortunately, there just isn't space within the constraints of this feature to go through each of the 14 Zones and associated areas and detail all the equipment involved and I do appreciate that there has been a cast list of thousands working on the project, from those who have supplied a single item of kit, through to the main contractors whose list of kit supplied ran to literally thousands of items. I'm sorry we couldn't credit every company involved and I hope you'll understand why we've necessarily had to take an overview of the project.

#### AUDIO . . .

For Hemming and deputy head of sound Gerry Logue, fitting the Dome with sound equipment has to rank as one of the most challenging projects ever undertaken in our industry, not least because it is the largest single installed sound system anywhere in the world.

Eight sound designers were engaged to specify the main systems, with the remaining half designed in-house by Hemming and the NMEC sound team. The plan was to centrally procure all the equipment and issue it to all the contractors to install. This had a number of advantages, not least a sizeable discount for buying in bulk and the useful standardisation of equipment. Since sound designers have been known to change their minds, it also meant that Hemming's team could swap kit around to different parts of the installation as required.

In an unusual, but totally understandable move, the NMEC decided to 'break the rules' and buy direct from the various manufacturers, with many of the orders being amongst the largest ever placed with these companies. It was a huge logistical task handling that much equipment - the audio inventory alone runs to more than 12,000 items.

In the 10 months available to them, Hemming and his team put together 57 sound systems, installed across the 14 differently-themed Zones. All are intricate, and all but one plays at least 24 tracks of audio (a small number play 40 tracks and the Body Zone has 96 tracks). The entire audio back-up for the site is over 350 gigabytes on hard-disc

drives. There are a staggering 5,000 loudspeakers across the site (3,500 of these are Harman), ranging from small Audax drivers, Amina NXT flat panels and JBL Control 1s through the entire JBL Control range, plus all the Soundpower and Venue Series, right through to the HLA Series. C Audio Pulse amplifiers power virtually all these sound systems. In total, there are 514 Pulse units around the Dome and as power levels in the zones are pretty minimal, Pulse 4x300 models have been used, each capable of providing four channels of 300W. There are also a small number of Allen & Heath 8-channel amps across the site.

Providing the control for all this kit is a bevy of Soundcraft desks - in fact, the majority of consoles on-site are Soundcraft - including a number of K1s, K3s and Spirits. Spirit Digital 328s are fitted in the edit studio and the radio studio desks.



With this many sound systems and possibilities, it is essential that a close eye is kept on the dynamic performance of

all these systems. Enter Connect - C Audio's control and monitoring system. Using a PC based in a central control room, Connect monitors the critical amplifier systems for input signal, output level and current, and can detect problems with amplifier channels or loudspeaker drivers immediately, even indicating possible problem areas before they become an issue. Operators can call up individual amplifiers for inspection or create custom view panels for

groups of amplifiers that can be monitored as one. They can also adjust sound levels from distances as far away as two kilometres.

You can't write about sound in the Millennium Dome without mentioning BSS's Soundweb. The company are no strangers to projects of scale having previously

supplied 65 Soundwebs to the Toronto Skydome and a 150-box system for the San Antonio Convention Centre, but even David Neal of BSS must have thought Christmas had come early when the order came from the NMEC for 800. (It's rumoured that Neal is asking everybody how they like his new showroom).

Each zone has its own Soundweb network, and these vary in size from two to 20 units. Interestingly, in addition to using Soundwebs for delay, EQ and crossover, the sound crew is also using them to help with voice alarm. "The rules for voice alarm systems are rather proscriptive," stresses Hemming. "We had paid architects and designers millions of pounds to make these fantastic-looking zones. They didn't want to see one speaker, let alone have two sets of speakers, one for production and one for voice alarm. So we took the decision in some of the zones to integrate the systems together." The Soundweb is used as a source



**"No doubt all who were involved in this unique project, be it in a large or small way, will have taken something positive from the experience. Many got through a large volume of work in a very short space of time and in conditions which were significantly more hostile than the entertainment industry usually expects to work in. The positive thing is that they all worked together to make it happen."**



# "You can do amazing things with just one or two Soundweb boxes..."

... we have 804 Soundwebs  
at the Dome."

*Roland Hemming, Head of Sound, New Millennium Experience Company (the Dome)*

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Right, the stunning exterior of the Dome lit with Coemar CF1200s in an acrylic weatherised housing. Inset, the Play Zone - an interactive area

selector to switch between the production audio and the voice alarm message. As well as the zone networks, there are a number of site-wide audio networks, each over 100 boxes in size. These have a number of uses: one, for instance, is a Broadcast plug and play network which allows visiting broadcasters to plug in at any number of points in the Dome. Technicians then softpatch the audio to one of the two outside broadcast parks, or to the radio studios. There is also a Dome-wide routing network which lets the sound team patch audio from one place to another, much like the plug and play network. This is also used as a means of remote monitoring the audio in each zone from the sound monitoring room.



The project sound designers have also taken an unusual approach with intercoms. At each location where communications stations are required, an intercom power supply has been installed. The 2-wire signal is converted into 4-wire then plugged directly into a dedicated Soundweb network which makes the whole system into a party-line comms system.

In addition to the Soundweb networks, a series of data networks are also installed. In total, there are about 80 separate streams of RS232 and some MIDI across the site. A BEC technology data network is used as the transport for all of this data, including all the C-Audio amplifier monitoring information, allowing the sound team remote access to any of the Soundweb networks. The data network is also used to get integrity monitoring from the 50 or so DAR OMR-8 hard disk recorders used across the site.

The backbone of the system is some 50 miles' worth of fibre-optic cable, routed via 12 hubs or 'highway racks' that form a loop around the Dome. Every other system on the project connects to one of these racks - which, incidentally, only arrived on site in August 99. "We worked out that if the truck crashed on the way, there wasn't enough time left in the year to build the replacement gear," Hemming adds. "So, we used two trucks." How wise.

## LIGHTING . . .

Head of lighting Simon E Brophy, and head of maintenance for lighting Maggie Bragg, were responsible for the operation and running of all the lighting systems. Together they co-ordinated the specifying, tendering and installation of all lighting around the Dome, including the building's exterior, Skyscape and the central show, in addition to the general and between-

zones lighting inside the building. Because each Zone features its own LD and installation company, the NMEC Lighting team took on a liaison role,

approving all the equipment installed in the exhibitions and also in specific parts of the Zone builds.

Lighting Technology Projects and subsidiary The Technical Department were appointed as a main lighting contractor for the Zones. They then raided the resources of the rest of the Group and other companies to provide the luminaires, control systems and associated equipment for many of the Zone areas.

One of the largest elements of the exhibition lighting system and an area where at least some consistency could be achieved was the dimming. To help them arrive at the right decision, the NMEC lighting team and LTP organised a dimmer 'shoot-out' between the main manufacturers. After extensive trials, ETC emerged the winner - in more ways than one - for the company received the order to supply, via LTP, over 3000 Sensor dimmers - effectively the largest ETC installation in Europe. The dimmers were then free-issued to the various design teams across the Zones.

When it came to the architectural lighting systems, lighting designers Spiers & Major commissioned Dynalite to provide some 3,000 plus channels of dimming, switching and DMX control. Also spec'd were a number of Light Processor Paradimes, supplied by Lightfactor Sales, which were also used for the Central Show.

With the dimming in place, the lighting team and LTP began to source the wide range of luminaires requested by the different designers for the Zones. Just about every type of luminaire, from a basic fluorescent pop pack to an intelligent automated light, plus the dimming and control systems to link them all together, was hunted down. Again the desire was to

standardise as much as possible. Once again it was ETC who drew the long straw - there are over 2,000 ETC Source 4 Pars pervading every area of the Dome and all the Zones. For the moving fixtures (central show, exterior stages and Dome roof) Coemar units were chosen. The 400 head-count consists predominantly of CF1200 moving yoke washlights - one of the brightest fixtures available. These are used extensively on the central show and in lighting the roof of the building.

One of the two primary lighting suppliers was AC Lighting, who not only provided all the ETC fixtures mentioned, but a heterogeneous stream of lighting fixtures, control equipment and accessories which reads like a Who's Who of the industry - Anytronic, Artistic Licence, Avolites, Canford Audio, CAST Lighting, Clay Paky, Columbus McKinnon, DHA, Doughty, ETC, Flying Pig, Jands, JEM, Le Maitre, Lee Filters, Martin Professional, Pani, Rosco, Strand, Strong, Thomas, XTBA and Zero 88 - there is simply bucket loads and bucket loads of kit in the place. The second key lighting supplier was Lumenation, who provided all the Coemar units and also fibre optics, a particular feature of the Body Zone.

To ease the installation of the lighting systems, AC supplied additional lighting fixtures on internally-wired bars; 60 bars fitted with James Thomas ACL fixtures, 30 bars fitted with ETC Source Fours and 20 fitted with James Thomas Par 64s. At one point during the supply of all this equipment, Hemming even decided to make his life easier and commissioned AC to construct a series of internally-wired bars to his specification to ease the audio installation.

By this time, LTP's contracting department based at the Dome was occupying a double figure count of portacabins and containers. Computer systems were organised on site, along with a CAD team of three specialists. A professional estimating department reviewed work in progress and the set-up grew to a point where back-to-back shift workings were introduced to meet the deadlines, with 24 hour working on a number of



areas. Having started the operation with just two or three people producing odd ideas and mock-ups, LTP had rapidly moved to a situation where they had a team of 160 working at the site on almost all of the 14 main Zones.

The next issue was one of control for the various areas and the NMEC lighting team turned to AC Lighting for the answers. Central to the control systems in use are seven Wholehog II desks, four Wholehog II expansion wings, seven WYSIWYG 2000 visualisation systems and a variety of smaller consoles from Australian manufacturer Jands, including units from the Jands Hog, Event and ESP II ranges. Micro Scope 3 units from Artistic Licence and L'il DMXters from Goddard Design comprise the main thrust of the DMX test equipment. Coupled with all of this control equipment, are a number of dimmer racks. Two 72-way Vision racks and a single 24-way Vision rack, both fitted with Jands modules, along with two 66-channel ART dimmer systems from Avolites.

The logistics of managing all this kit are, of course, a nightmare: Navigator Systems' HireTrack Eclipse software is used to continually track all of the lighting and flying systems equipment, as well as keep track of equipment rented out to temporary exhibits, and record information when the safety testing and inspection procedures are carried-out. Speaking of which, health and safety became a major issue for lighting, particularly in terms of rigging. As a high profile government project, the various rules and regulations governing all the different departments (not necessarily from the same handbook) had to be followed to the letter.

In terms of rigging, NMEC had to use IRATA Level 1 riggers across the board for all installation work, and Level 3s for certain areas. When it came to tendering for the rigging contractors, lighting had the task of finding a company that could supply riggers fulfilling three criteria. Firstly they all had to have IRATA 1s; secondly they needed to work at some dizzying heights (the exterior masts - with lights atop - are 150ft high) and thirdly they had to have specific experience of working with specialist kit including moving lights.

The contract was won by Greenwich based Pro-Design who work extensively in the architectural installation field and some 28 Pro-Design riggers worked on all areas of the installation rigging. Brophy and Bragg also completed the IRATA course themselves, gaining a useful insight into how jobs needed to be scheduled, personnel allocated and time-aligned.

Originally, it wasn't planned to light the exterior of the Dome, but at an early stage Brophy and Bragg launched a campaign to do so. It was well worth the extra effort - one of the most spectacular and beautiful views of the Dome is yielded by the illuminated roof and service towers, lit in contrasting vibrant colours.

Having researched and tested all the exterior lamps currently available, they settled on the Coemar CF1200 and produced an acrylic weatherised housing for the fixture. This had to give 300 degrees of clear vision around the units and not obstruct their movement, with forced air cooling and a lip on which an engineer can sit and perform maintenance work on the light in situ.

Style, design and the way things look was a paramount issue for all technical departments throughout the build period. Accordingly, all lighting fixtures within the Dome are matched to the RAL colours of the building, while the CF1200s on the masts are silver.

#### AUDIO-VISUAL . . .

Which brings us to the final part of the equation - AV. Whilst Hemming and Brophy were working with their key contractors, head of AV Richard Wathen, was consulting with four major AV companies - Electrosonic, DJ Willrich, Blitz Interactive and Sysco. Between them they were responsible for a huge amount of projection, display and control equipment from a posse of manufacturers, ranging from the smallest plasma screen right up to the giant Barco DLite LED-based daylight screens used both in the Central Arena to supplement the central show and in the entrance areas to inform visitors.

In fact, both Barco and NEC became preferred suppliers, Barco subsequently supplying more

The main picture shows the Body Explore Zone, where a 4-channel Electrosonic MPEG2 Video Server is linked to four interactive computer systems, with a touch screen to allow visitors to change the look of their faces. Below the Electrosonic racks serving the Zone



than 60 ELM Series DLP and 6300 Series LCD-projection systems for the various Zones.

As with the other areas, since there were just under 50 Dome-wide AV projects, Wathen and his team were looking to standardise where possible and consulted with Electrosonic on the Dome's audio visual show control systems. The company provided its Eslinx show control equipment, linked to a number of AMX systems, to manage the site-wide systems. Electrosonic also worked with Wathen on the audio visual system design and installation in seven major areas - Body, Body Explore, Faith, Play, Money, Mind and Skyscape pre-show, and also the Internet Exchange Café. Like its counterparts on lighting and audio, the company was active in the initial discussions, much of that early advice relating to matching technique to environment, and some of the obvious challenges the specialised Zones presented. Some of these related to specific design restraints, others included working with very specialised exhibits, using audio-visual techniques that are actually quite unique and yet still have to operate predictably and reliably every day. To give you an example of how this all worked, in the Mind Zone, for instance, Electrosonic acted as the



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Skyscape - left, the pre-show area and inset, one of the two 2,500-seat cinemas



2,500-seat cinemas, one of which can convert into a 3,700 capacity live venue. The 60ft wide screen simply flies out revealing a stage (16m deep and 52m wide) for concerts. Of particular note here is the audio system, Hemming and co

systems integrator for the Zone, ensuring that the specifications for the exhibits from each of the interactive designers and artists could be turned into reliable working systems. The Zone has a master control system that allows for all of the computers to be networked together. Show controllers, digital units and video servers are integral parts of the system within the individual areas. An interactive voting area within the Zone utilises five MAC G3s linked to Barco 6300 projectors. The interaction is provided from 20 individual positions fed into a PC to correlate the voting scores, and thus change or reply to the video on the screens.

#### THE DOME AND BEYOND . . .

Trying to get to grips with the size of the Dome is pretty difficult unless you've been. In addition to the Central Arena and 14 Zones, there is a press conference room, a school group holding area for 2,500 children, an education centre which is also a lecture theatre, a chapel, and a video conference suite. There is also a pub, two permanent outdoor stages, a VIP lounge and six corporate hospitality suites which will entertain over 1 million people during the year.

Marquee Audio installed most of the vocal presentation and playback systems across the site, providing racks, engineering and other

components including Denon playback machines. Sysco, meanwhile, as we reported last issue, installed the Central Show audio, three zones and the Our Town story stage, whilst ATG Spectrum did all the studio fit-outs. To deal with issues of safety, there are a number of voice evacuation systems (in addition to those touched on earlier by Hemming), provided by Protec. Each of The Dome's cores incorporates a Protec voice alarm and public address rack, whilst voice alarm coverage has been provided to the peripheral areas by TOA's new SX-1000 DSP matrix system. Logic control and audio routing to the piazza areas is handled from six main amplifier racks - TOA SX-1000s and V Series power modules - sited over five different locations. Each rack runs as a stand-alone system, with the SX-1000s slaved onto the main site network; this is then routed through the ProVoice system. Paging, emergency announcements, background music and broadcast to different zones are all controlled by the system.

One other area of the Dome deserves a mention - Skyscape - affectionately referred to by the technical team as 'Baby Dome' and an installation jointly handled by Sysco, Marquee and Electrosonic. Inside the structure, designed and built by Edwin Shirley Staging, are two

having installed a full front-of-house and monitor system.

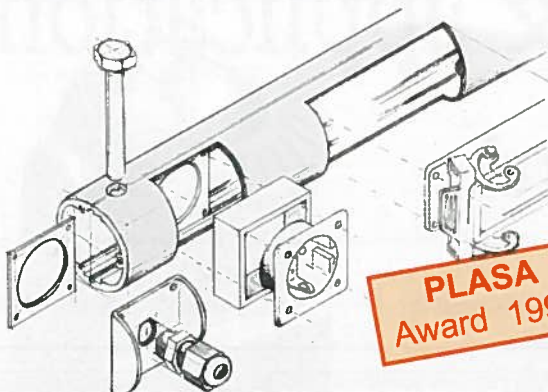
Here, a total of 82 JBL HLA cabinets feature across the two areas. For cinema purposes the two systems are identical, with left, centre and right clusters, but when in concert mode, additional cabinets are turned on in the theatre side. "In many cinemas they have a perfectly good front system, but then they put tiny 'shoebboxes' on the walls to handle the side and rear surrounds," Not for the NMEC - they've used another 14 HLA cabinets per auditorium for the sidefills and surrounds, and for good measure six JBL MS28s as downfills.

On stage in Skyscape are a number of JBL Array Series wedges, all powered from C-Audio 2 x 1100W or 2 x 650W amplifiers. The Soundwebs are used as standalone crossovers and a switch has been added to each rack to allow the team to select a number of presets within Soundweb, depending on what monitors are being used.

The control side has 48-channel Soundcraft Series 5 front of house and monitor desks, whilst the racks have BSS and Lexicon processing and BSS active splitter systems. Distribution of audio to the main PA is done with Soundweb.

So there you have it - a bird's eye view of life at the Dome and if you haven't already been, less than eight months remain in which to get yourself a ticket to Greenwich. As has been widely reported in the media, come 2001 all of the scenic and production equipment inside will be removed, and the Dome structure will have a new tenant. No doubt all who were involved in this unique project, be it in a large or small way, will have taken something positive from the experience. Many got through a large volume of work in a very short space of time and in conditions which were comprehensively more hostile than the entertainment industry usually expects to work in. The positive thing is that they all worked together to make it happen.

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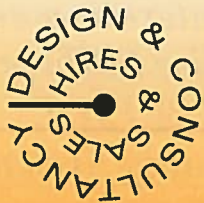
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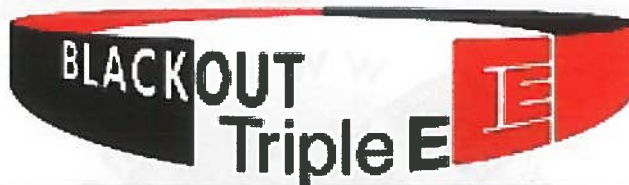
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Candidates will be qualified to degree level and experienced in software writing for real-time embedded systems to assist with building and testing prototypes. With good hardware knowledge, the successful candidate will also help contribute to new product definitions and will be experienced or very interested in the audio industry. They will be self-motivated with the ability to generate and work to project timescales.

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# CLASSIFIED/RECRUITMENT

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### Contact:

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VLPS London has the following positions available at its West London-based office.

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### TECHNICIAN

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# In Profile...

L&SI Talks to the Industry Trend-setters

There is a Doctor in the House would be a suitable title for a biography of Mark White, technical consultant at The Royal Opera House.

Although it is quite well known that White is an Aussie, what isn't common knowledge is that he trained to be a doctor in the country of his birth and wanted to be an Anaesthetist. It might be thought cynical to suggest that his Accident and Emergency experience would stand him in good stead in his future change of career, but it has certainly left him with a facility for being calm in a crisis.

To subsidise his existence as a student, White worked as an electrician. Then in 1983 he came to London on what he describes as 'a field trip', during which he blagged his way into a job at The Cambridge Theatre working as a stagehand.

This is the point during which most profiles would state 'this experience changed his life for ever'. Although, in retrospect that may be true, White is not given to such lavish statements, though he remembers one experience which obviously left a lasting impression. Crossing the road from the theatre

after work one evening to get a drink at Macready's, he got into conversation with a crumpled inebriate at the bar; when they exchanged work experience as one does in such circumstances, both said they were working in Musicals. The bespectacled drunk was none other than Lionel Bart!

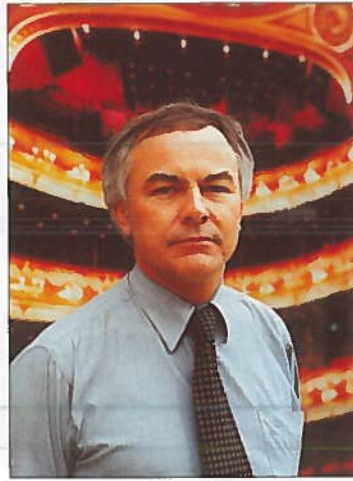
White returned to Oz to find that there was a great shortage of posts for his chosen medical discipline, so in 1985 he set off to England with the specific

intention of finding work in theatre. Once again he started as a stagehand, this time at the Ambassadors: "Two weeks on, and two weeks unemployed," is his description of the job. However, he quickly found himself with the grand title of chief electrician at the Richmond Theatre: "I think the title was supposed to be some compensation for the poor wages," he says. However, he got to meet Bob West, and this led to a stretch with Cameron Macintosh's production company.

Eventually Mark landed the job of technical manager of the Maybox Group of seven theatres: "It was here that I learned about Health and Safety and all about licensing issues," White says. "But Maybox was taken over after two years and my position disappeared." There followed a succession of jobs with entertainment technology companies: R&D at Howard Eaton Lighting, electrical manager at Kimpton Walker, the scenery manufacturer, and then, as a freelance in 1992, he was asked by John Hastie, now of Stage Technologies, to assist installing point hoists at the pre-reconstructed Royal Opera House. "Basically, I've been there ever since."

Four-and-a-half years later, White's role was switched to ROH Developments: "I did my first CAD drawing for the new House in April 1995," he remembers. "I was originally doing the lighting only, then the electrical systems and, finally, assisted with the moving elements. The House closed on 14th July 1997, and we started re-construction during September that same year. Suddenly, I was the on-site client, in essence part of the construction company, checking specs, being part of the formal tendering process, dealing with legal and technical aspects." Of course, this meant dealing with, and learning about, building materials, which previously had been of secondary concern. Set against the massive scale of the task must have been the joy of working with the dedicated team at the Opera

photo: Rob Moore



House, and especially their highly-skilled LDs John B. Read and David Harvey. One of Mark White's personal achievements, which he rates most highly, was to be part of the conversion of the planned orchestral rehearsal room into a world class, stand-alone Studio Theatre in which productions, both dance and opera, can be put together and rehearsed. White was one of the principal designers for this new space and it is planned that L&SI will report on this development in a future issue.

Of the main contract Mark

White says candidly: "I never realised how difficult it would be to spend £2.4million on lighting and was amazed how quickly it went away. However, we did have the time and money to properly evaluate each piece of equipment. For example, we had a dimmer shoot-out which revealed a previously unknown fact, at least to me: it had always been assumed that the noise associated with dimming lights was a function of the dimmer rise time. That turns out not to be the case, some dimmers are just more tolerant to the lanterns on the other end, so you have to be careful to get the combination right."

Fortunately, the man who carried the can more than anyone when things went wrong with the new system at the new Opera House, or when things simply weren't ready, or commissioned in time due to contractual disputes or labour problems (issues forgotten by critics when in suits them), is phlegmatic. He gives the impression that nothing phases him and he would have made a great neurosurgeon. Come to think of it, much of what has been done at ROH, could be described as neurosurgery.

With this great wealth of experience and the scale of the project, one wonders what the next challenge could possibly be. ■

Lighting & Sound ENTERTAINMENT

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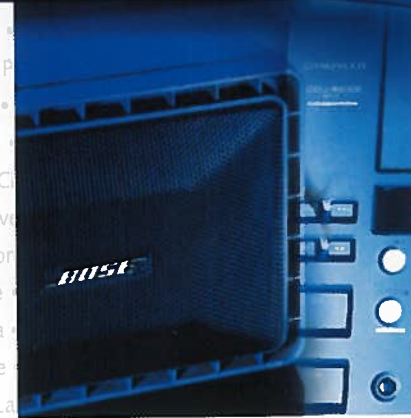
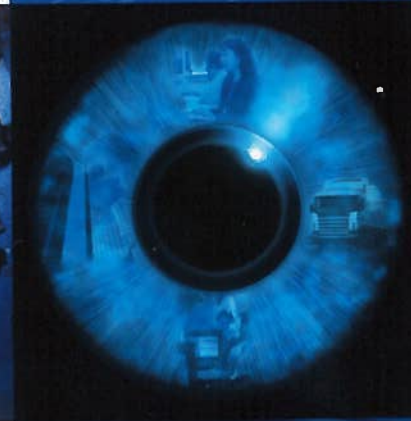






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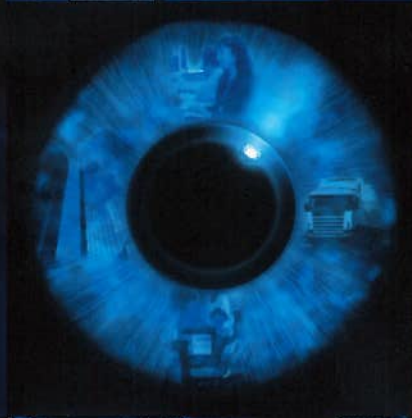
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