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- PLASA 96 - our annual comprehensive Show Report (21 pages plus news)
- Manchester's Bridgewater Hall - new home of the Hallé Orchestra
- Sound Monopoly: has Dublin gone Soundcraft crazy?
- Segaworld Blasts Off at the Trocadero
- Company Profile: way out west with Stage Electrics
- Sound engineer Lars Brogard interviewed

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OCTOBER 1996

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LIGHTING & SOUND *International*

OCTOBER 1996

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The views expressed in Lighting and Sound International are not necessarily those of the editor or the Professional Lighting and Sound

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Deputy Editor: Ruth Rossington

Associate Editor: Tony Gottelier

Assistant Editor: Lee Baldock

Advertisement Manager: Barry Howse

Production Manager: Nicola Evenden

Production/subscriptions: Sheila Bartholomew

Advertising Co-ordinator: Jane Cockburn

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LIGHTING+SOUND *International News*

PLASA Show Breaks New Ground at Earls Court

PLASA 96 surpassed all expectations and all previous attendance records. More than 15,000 visitors (to be audited by ABC) from around the world gathered to see 300 exhibitors launch over 400 new products at the show.

Commenting on PLASA 96, PLASA chairman, Paul Adams told L+SI: "This year's PLASA was a spectacular success. Our PLASA members reported a more buoyant home market, as well as increased interest from international buyers, as the world's entertainment and leisure industries prepare to meet the demand of many exciting projects planned in the run up to the Millennium."

John Offord, PLASA's chief executive, said: "As the show continues to consolidate its status as the entertainment technology industry's leading international event, it was a pleasure this year for us to host a DTI-supported trade mission from Australia, venue for the Millennium Olympics. We also had groups from Japan and Portugal searching out the equipment and expertise essential for the success of future projects and events in their countries. It is no understatement to say that London is now the capital cultural city for both performance and the technology that holds its hand."

Show director, James Brooks-Ward, remarked: "Both the visitors and exhibitors have had the best PLASA yet. I have received excellent feedback on the benefits of visitors being able to visit Presentation Technology and the British Music Fair as well as PLASA."

The 1997 show takes place at Earls Court 1 from Sunday 7th to Wednesday 10th September 1997. For further information about exhibiting or visiting, contact Bridget Beaurepaire at P&O Events, telephone 0171-370 8229.

A full report on the Show begins on page 26. More show information next month.



Side by side: PLASA 96 and the British Music Fair made London the industry's entertainment capital in early September.



Strand Bought By Schroder Ventures

Following our news piece last issue on the sale of Strand Lighting, L+SI has been informed that on September 28th, 1996, Schroder Ventures purchased Strand Lighting from The Rank Organisation. Schroder Ventures is one of the largest private equity fund managers outside the USA with \$2.4 billion funds under management. It has operations in 10 countries worldwide with a large presence in both the UK buy-out and venture capital markets.

The company intend to manage Strand Lighting, which will maintain its current global manufacturing and trading activities, and plan not only operational improvements, but increased investment in R&D also.

Jim Ryan will be the company's new managing director with Andrew Ricketts and Adrian Evans becoming finance and production directors respectively. They will augment the existing management team of Donna Appleton, David Bertenshaw, Ian Haddon, KK Mak, John McAuslan, Phil O'Donnell and Naresh Shankar.

Bumper to Bumper



It was bumper to bumper at the busiest ever PLASA Show, as illustrated by this snap of an expectant Gayle DeWinter of Vari-Lite Europe with an equally large Judy Jones of Wybron Ltd.

Champagne Winner

The draw for the bottle of champagne offered on the PLASA Publishing Stand for new subscribers to L+SI and S+CSI, was held at the Eastbourne office as L+SI went to press. L+SI's Jane Cockburn drew out the ticket of Robert Mulcock, of Whitstable in Kent, who will receive the bubbly at about the same time as he receives his first issue of L+SI. Congratulations.

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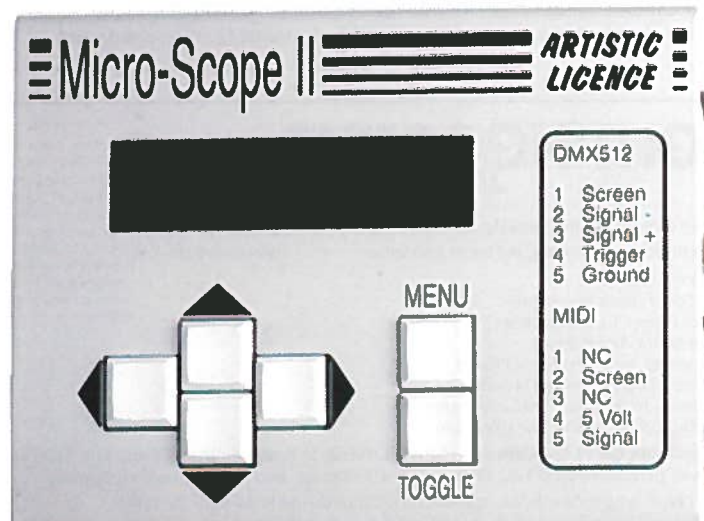
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Celco Presentation

An inward trade mission to the 1996 PLASA show, organised by Roy Tazawa of Roy Planning, paid a visit to the Celco stand (see picture). Celco enjoy huge sales in the Japanese market, and their stand was an early destination for the delegation, who will also be visiting LDI in America and Entech in Australia. Celco arranged a presentation of the Ventura 1000 via their Japanese distributor, Takeshi Hayakawa of Celco Japan Inc. Included in the party were Yasuyuki Tomita of Tomita Lighting Design, Toshiaki Yamaguchi of Jemco Ltd and a party of interested technology students from the Tokyo Institute of Polytechnics.



Roy Tazawa (second right) and Celco's Colin Whittaker (right) on stand at PLASA.

A similar Australian Inward Mission, organised by the British Consulate General in Sydney, Richard Harper, also took a great interest in Celco's new Ventura 1000 lighting console. Among the delegation of lighting importers and specifiers were Tony Davies (Chameleon Touring Systems Pty); Colin Baldwin (show Corp Pty); Denis Irving (Entertech Pty) and Brahm Ciddor (Lightmoves Pty).

PSL Boost Rental Stock

Presentation Services Ltd, a division of Gearhouse Group plc, has dramatically boosted its rental stock with the placement of two orders worth in excess of £3 million. Their spend is spearheaded by the acquisition of 42 super bright BarcoData 9100 projectors. The kit will go straight into PSL and Gearhouse rental operations, bringing the Group's super bright LCD fleet up to a total of 132 projectors. The company have also announced that further purchases from Barco are in the pipeline, with a quantity of BarcoGraphic 9100s projected for early 1997.

In a second major deal with Sony, PSL have bought 150 Sharp XG-3795E LCD projectors. Eight of the multiscan rear projectors plus the PVM-2054 monitors have already been shipped, and were used by PSL's customers on their stands at the recent IBC Show in Amsterdam.

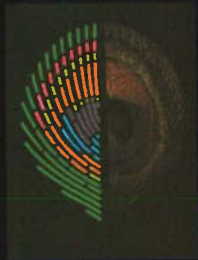
Marquee System in Questors Theatre

Marquee Audio have won a contract to supply and install a new sound system for the Questors Theatre in Ealing, described as the largest non-professional theatre in Britain and probably the world. The move follows a successful lottery application by the theatre. Built in the early '60s, it was the first new theatre design in this country for over 30 years and the adaptable horseshoe shape was revolutionary, including a 100v line system, column speakers and rotary attenuators.

Solutions to some of the problems caused by the adaptable stage space were identified by consultant Rob Dollings of AMS and a specification drawn up. The fixed speakers have to be 20ft above the stage, so there is a delay system. Once the basic spec had been decided Ian looked at various suppliers. "I had already met Spencer Brooks and his installer, Robin Stubbs, and knew of the LIPA project. In the end Marquee were the only company who gave me the confidence they could come up with what we wanted within the budget and tight time scale."

Marquee fine-tuned the design, supplying Martin Audio speakers, already Questors' preferred choice since their components met all the necessary criteria within the available budget - Martin ITC 300 and EM 25 cluster for reinforcement and in the round productions; ICT300 cluster for proscenium productions and more ICT300 bass bins, one fixed and one portable.

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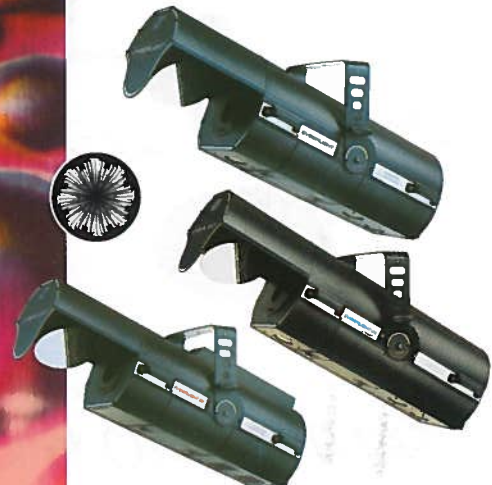
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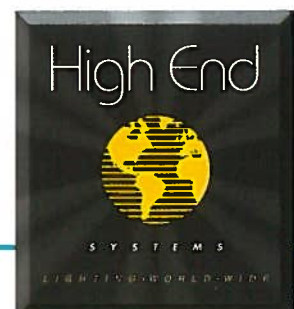


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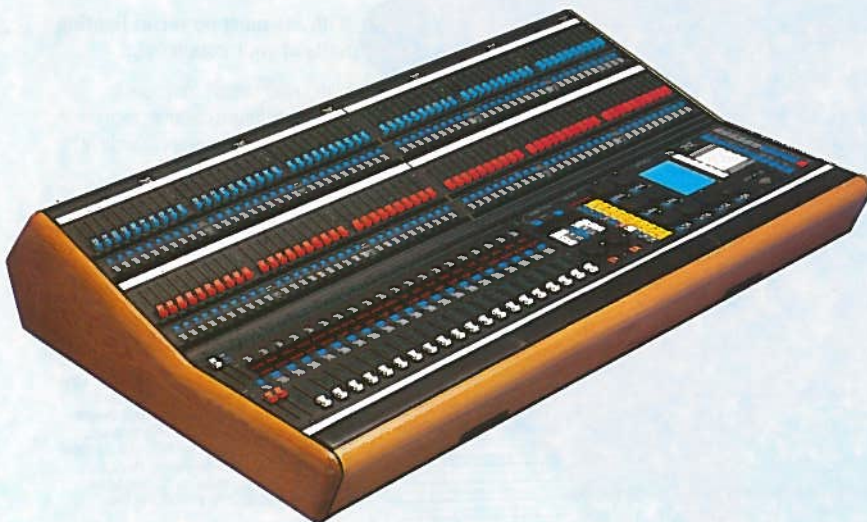
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Stage Technologies Appoint Triple E

Triple E has been appointed as the Exclusive dealer for Stage Technologies' Tow Rack and associated equipment for the UK and the whole of Europe. The appointment is part of a business consolidation programme and in a reciprocal move Triple E has appointed Stage Technologies as its preferred supplier of control systems.

The joint agreement brings together two highly respected companies, each one a specialist in its field, yet each with products that could be viewed as competitive. In fact, both companies believe that their products are totally complementary and that each has a position within the market place.



ABTT North

The ABTT North Entertainment Fair will be held at the Royal Hall, Harrogate, from 30th - 31st October 1996. Bookings for the show are already looking very promising and reflect a continuing upturn in the entertainment industry.

To coincide with the Trade Fair, a series of seminars have been arranged, and will cover topics such as the National Lottery, Health & Safety and Risk Assessment. The latter part of the day features the inimitable Francis Reid with recollections of 41 years in the industry, and David Wilmore talking about the ongoing restoration of The Royal Hall - a Frank Matcham classic - in which the Trade Fair is being held. Entrance to all seminars is free and will take place in the Crescent Room of the Royal Baths Assembly Rooms.

Exhibitors at the show include: Futurist Sound & Light, Strand Lighting, A.S. Green & Co, ASP Frequency Management, Action Lighting North, British Harlequin, Harkness Hall, LMC Audio Systems, Lite Alternative, Northern Stage Services, Octavious Hunt, Penn Fabrication, Peter Wood Bookseller and Philip L Edwards.

Vari-Lite for Ford at Motor Shows

Theatre Projects/Concert Production Lighting (TP/CPL), part of the Vari-Lite group of companies, is supplying lighting equipment to design and presentation company, Imagination, for Ford's stands at the Paris and Birmingham Motor Shows.

TP/CPL have supplied 160 Par cans and 32 2.5k HMLs, all with a blue colour filter to match Ford's corporate colour, and 16 VL6s for the Birmingham Show at the NEC. The equipment went out at the end of September and will be on the road for over a month. The companies will also be supplying Imagination with 70 Par cans, 10 ETC Source 4s, 10 HMLs, Cyberlights and Vari*Lite, all running off a WholeHog 2 desk for Ford at the Paris Show.

In addition to these events, TP/CPL is supplying equipment for a number of other Imagination projects for Ford, including a trade launch to dealers at Victoria Dock. Equipment supplied includes 100 Par cans, 28 ETC Source 4s, AF100 DMX Dataflash strobes and 18 VSFx drives.

Coemar's Exclusive in the USA

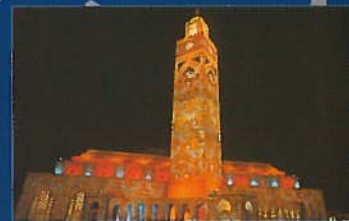
Following the Obie Company's recent appointment as distributor of Coemar Products in the United States, the Coemar NAT 2.5 is now on tour with Metallica in Europe and also featured on the European leg of the Neil Diamond tour.

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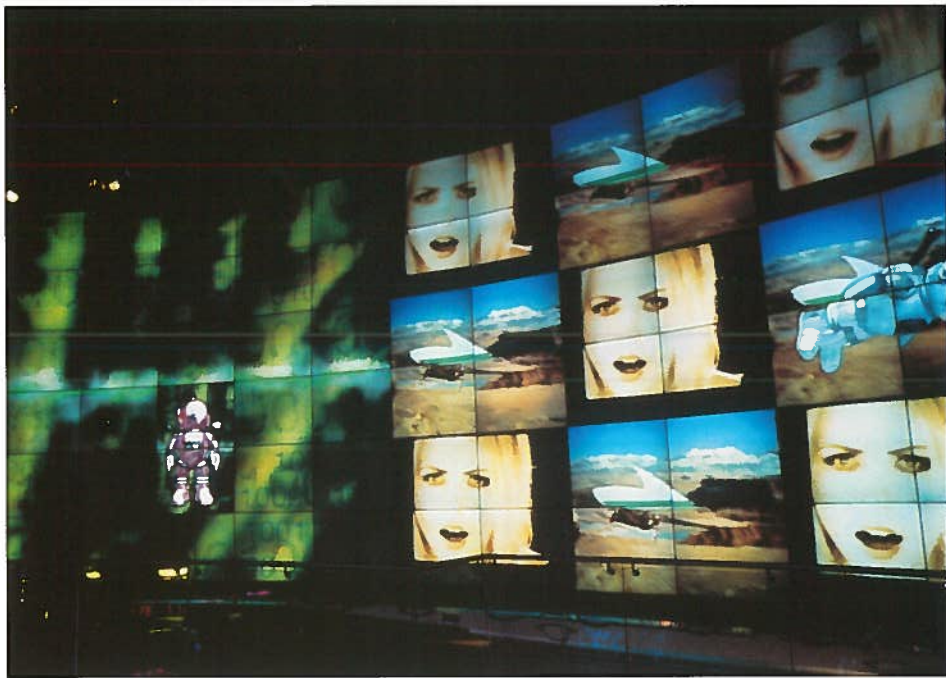
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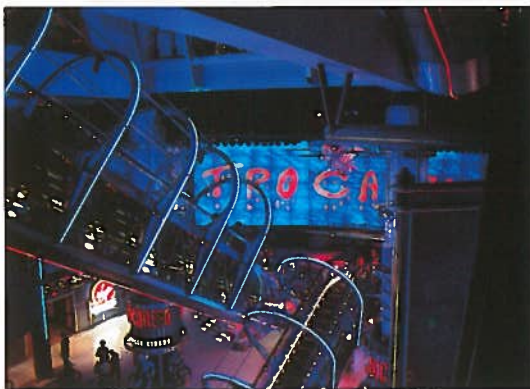


Electrosonic has supplied a suspended curved videowall to the newly refurbished Trocadero Atrium. The display consists of 108 50" screens in an 18 x 6 configuration within a custom framework hanging 11m in the air. The video projectors are Hitachi CM-RD50YE with built in doublers to provide a higher quality and lower flicker image. Image processing is provided by an Electrosonic Picbloc 3 system which is configured to show up to 12 RGBS live sources simultaneously across the wall.

The screens have been custom-made for this display to optimise viewing angles, whilst maintaining gain for high brightness output.

The videowall displays a four minute show every hour which was produced and programmed by Media Projects International. This show makes maximum use of all the available video sources and Picbloc effects. In between shows the videowall is used for displaying advertising material.

The complex size and nature of the structure meant that the alignment of the screens was carried out using lasers to ensure perfect registration. Servicing the display is achieved via two internal walkways accessed from a mobile library ladder attached to the structure. A custom program was written by Electrosonic to allow full remote set-up of the Hitachi projectors from a personal computer. This communicates via a data highway, allowing each projector to be addressed individually and gives full access to all of the set-up parameters.



Bag End Expand

Bag End Loudspeakers Systems of Barrington, Illinois, manufacturers of loudspeaker systems and components, has continued its international expansion by signing an agreement with Cambridgeshire-based marketing firm, De-Règle Enterprise & Marketing Specialists, to be its exclusive distributor for the United Kingdom.

The announcement was made jointly by James Wischmeyer, president of Bag End and John Jeffries, owner of De-Règle.

The UK company is a division of the De-Règle Group, which embraces a diverse group of companies trading in financial services, introductions (brokering) and property development.

Gearhouse Growth in South Africa

Meeting the growing market demand in South Africa, the Gearhouse Group have purchased The Lighting Unlimited Group, comprising the big five companies in staging and presentation: Lighting Unlimited, Stage Design, Woza Power, PA Sound and PSL Southern Africa.

Lighting Unlimited operates as a one-stop shop, offering a range of support services, including lighting, staging, power generation, sound and AV to a wide customer base in the corporate and live entertainment industries. The Lighting Unlimited Group is headquartered in Johannesburg, with a strategic satellite operation in Cape Town. The company opens the season with tours by the Soul Invasion (Maxi Priest, Kool and the Gang, Randy Crawford and the Stylistics), Bread, Meatloaf and the Radioactive launch of SABC Radio, followed by stints with Def Leppard and Gladys Knight.

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Lightfactor/Kingsfisher Set the Theme



Reacting to new trends in the entertainment industry, Lightfactor have entered the growing market of themed bars, restaurants and clubs. The company's Dick Carrier has been working with Kingsfisher Leisure, winner of the 1996 DI Award for 'Operator of the Year', who have opened a number of such ventures in the south of England.

Lightfactor have supplied lighting, sound and video hardware for McClusky's in Southampton and Brighton, the British Embassy Rock Bar in Redhill and the Croydon Coliseum amongst others. The latter's original lighting system was updated to include the latest intelligent lighting, plus a powerful new D.A.S sound system.

McClusky's, in the expanding university town of Southampton, is a 900-capacity venue with retro British and American decor and music spanning three decades to attract a wide age-group. It also has a small stage to accommodate live bands and PA's. The D.A.S sound system was specified by Kingsfisher's technical co-ordinator Keith Hardy and the system was installed for Lightfactor by Chris Gunton Associates. The main dance floor system features D.A.S Sub 18s for adequate bottom end, and the new MAD scans, although the lighting was generally designed in a theatrical, rather than disco, vein.

Brighton, one of the liveliest towns on the south coast, is the site for the latest McClusky's. The unorthodox design of the building produced some



Kingfisher Leisure's Keith Hardy (left), Fred Lawrence (centre) and David Cliff, with Lightfactor's Dick Carrier (right).

interesting acoustic nuances that had to be overcome through speaker placement and accurate digital delay settings, and once again the multi-zoned D.A.S. system did the honours. The venue features two High End Studio Colors for maximum diversity - the first such installation of the luminaires in the UK. Other lighting includes MAD Scans, MAD Colours and Par cans.

The British Embassy Rock Bar in Redhill, Surrey, housed in a listed building that was formerly the local cinema, has operated as a discotheque for the last 20 years and is now a high tech theme bar. Lightfactor's lighting rig includes Cyberlight CX's MAD Scans, MAD Colours, Pars, pinspots and neon. Lightfactor also supplied a comprehensive entertainment video system, CCTV and some revamped audio from the previous system.

RH System for Opera House

Renkus-Heinz speakers were chosen recently for the complete sound system refit for the Wakefield Theatre and Opera House. Stageteq (UK) completed the installation, which included three pairs of TRC121 cabinets - one for each of the seating levels, a pair of BPS15-1 sub-bass and a single SR62H under-balcony speaker as a fill for the front stalls.

Meanwhile, the two main venues in the Dutch city of Haarlem have both decided to purchase Renkus-Heinz Complex Conic loudspeakers. The Concert Gebouw, home of The Noord Holland Philharmonic orchestra, will be using the system for corporate events, jazz blues and other concerts, while the Stadschouwburg will be running mainly cabaret and theatre-style shows. Both venues have chosen the Complex Conic SR-5 loudspeaker for their main left, right and centre cluster, with the SR-82 for the delay system.

Finally, the Dr Anton Philips Zeel, one of The Netherland's major concert halls, has recently purchased a Renkus-Heinz CE-3T system. After careful listening tests on a number of loudspeakers, the Renkus-Heinz CE-3T system was chosen to handle this highly reverberent hall.

Summit Relocate

California-based Summit Audio recently relocated their separate corporate and manufacturing facilities into one 3,000sq.ft building. The lateral move to the newer site, only half a block from the old location, fills the need for more efficient manufacturing space.

Summit have enjoyed record sales recently of their popular tube-based outboard equipment, and just recently hired a further four staff to handle production control, final testing and mechanical assembly. In the near future, the company expects to ship the new MPC-100 mic/pre-amp/compressor, with a new line of near-field monitor speaker systems in the pipeline.

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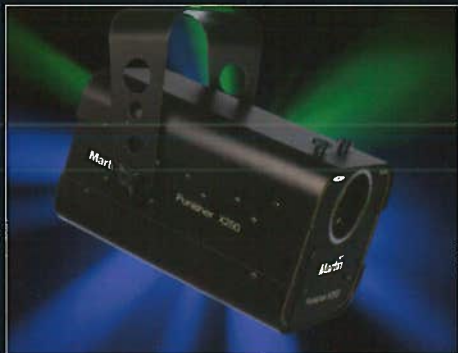
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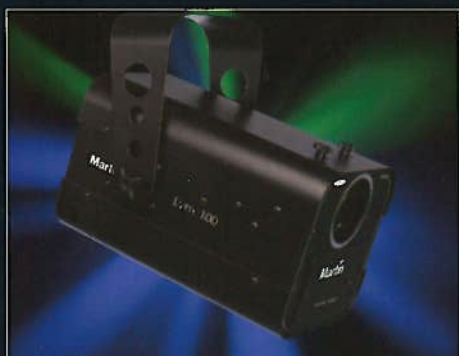
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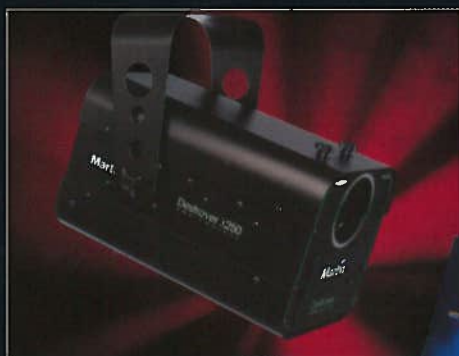
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Freedom to Roam

Following their success with the new Freedom range of profiles, frebles (Fresnell/pebble convex) and the choice of on board dimmers, CCT are touring the UK with the range in October.

The company can be seen at the following venues, where 'hands on' experience of the products is offered: 11th - Gulbenkian Theatre, Canterbury; 15th - Theatre Royal, Plymouth; 16th - Chapter Arts, Cardiff; 17th - The Theatre, Coventry Technical College; 18th - Abraham Moss Theatre, Manchester; 21st - Cumbria Park Hotel, Carlisle; 22nd - Aitken Suite, Partick Thistle FC; 23rd - Amitola Hotel, Aberdeen; 24th - Live Theatre, Newcastle-upon-Tyne.

At the recent PLASA Show, Freedom was 'Highly Commended' in the annual PLASA Awards for Product Excellence and earlier this year ABTT technicians voted it 'Product of the Year'.

Major Sound for JC

TP Sound Services Ltd has been awarded the contract by the Really Useful Theatre Company to supply a £600,000 sound system for the new production of 'Jesus Christ, Superstar' which opens in London at the Lyceum Theatre in November 1996. The system includes both J and F-type Cadac consoles, over 60 Yamaha H5000 amps, 116 EAW loudspeakers and the largest number of Sennheiser radio mics ever used together on a London West End show.

The show will be reviewed in a future L+SI.

Association Links



The ALD recently awarded an Honorary Membership to John Offord, chief executive of PLASA and editor of L+SI. The award, in recognition of the ALD's valued links with PLASA, was presented at the recent PLASA Show. He is seen above (centre), flanked by the ALD president Michael Northen (left) and chairman Rick Fisher.

Big Love Theft

Stories of theft in the industry are on the increase, as illustrated by the recent experience of Nick McGeachin, export director at Numark in the US.

Numark was supplying DJ equipment to the Big Love dance event in Oxford and McGeachin was staying at the Randolph Hotel in the city. On the morning of Sunday 29th September, an intruder entered and ransacked his room. Given what was taken, all available evidence would appear to indicate that the perpetrator was connected to the industry. His image was captured on the hotel security video, copies of which are awaited.

If anybody can help, they can contact the Thames Valley Police on (01865) 266000 quoting case number: BA-8073119-96. Alternatively, they can contact Nick McGeachin in the US, tel +1 (707) 769 0243.

TSC Celebrates 21 Years in Style

West Sussex-based TSC Music Systems Ltd is not only celebrating its 21st birthday this year, but is also enjoying a significant expansion in business and products, together with the official opening of TSC House, the company's new premises.

The company was formed from the Sussex branch of a major engineering company, by founder and managing director Neal Abdool, and is now a leading nationwide supplier of sound and communication systems. With extensive commercial activities elsewhere in Europe it currently employs 22 full time staff and has its head office in Crawley, with an area office in Sheffield.

Supporting its ability to offer a nationwide service, TSC controls a network of sales and engineering personnel and having recently achieved ISO 9001, has further increased the quality of service provided.

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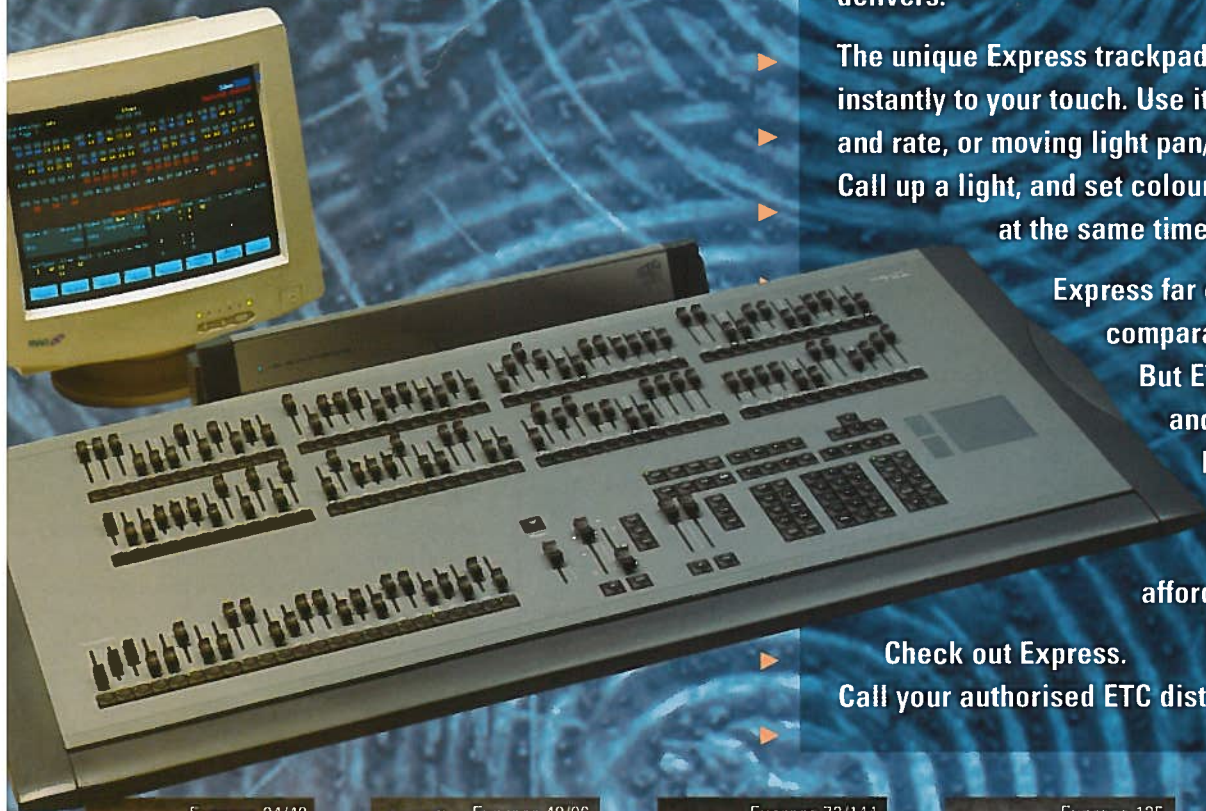
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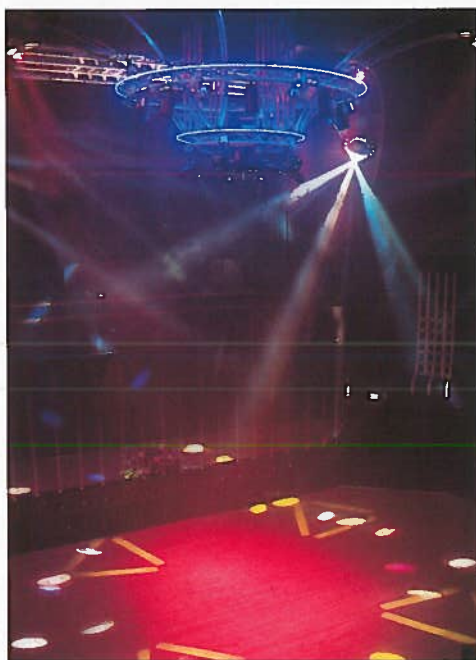
New Moving Images at the Former Picture House

When Camden Palace first opened its doors 15 years ago, it set out a blueprint in theatre and cinema conversions. Over the next ten years, disused picture houses, from the projection room on down (along with old disused churches), were prime targets for club developers. Many failed the test, but one that is almost certain to be a success opened a month ago, thus giving Stourbridge in the West Midlands its first discotheque, aptly named The Picture House. It's small wonder that Hereford-based Enteramma, who had been looking for a suitable site to make their discotheque debut, settled on this 1930's former cinema in Hagley Road, which had latterly been operating as a bingo hall, and got to work turning it into a 1250-capacity nightclub.

Now in its third leisure incarnation, the new owners have painted the interior navy blue, with beige featuring. They have spent more than £1 million adding dancefloors to the circle area, along with table seating for 144 and an upstairs bar, while downstairs a stage, dressing rooms and a DJ booth have been built into the infrastructure. There are two further bars on the ground floor - one in the belly of the discotheque, facing the dancefloor, the other a completely remote lounge bar in the front of the building. But the highlight of the club is undoubtedly the incredible giant petalled lighting rig, constructed from Penn Fabrications' custom trussing, which completely fills the vast roof void.

All the lighting equipment was supplied by Lightmasters UK, who also designed the sound and video systems, while handing the rig design and programming to Carl Dodds due to their own excessive workload. The installation and commissioning of the system was carried out in conjunction with Enteramma, and Masdar joined the team for the final commissioning and to assist with the final fix. The rig itself is edged with neon and FAL Galactica 575s are suspended from the tip of each petal, spraying beams in all directions; a FAL Nebula 1200 provides the central stamen of light and four neon circles are enhanced with two Smoke Company Powerfog 1500s through which the powerful Pro Scan 2 beams are projected. Other components that contribute to the lightshow are 24 Par 56 lanterns, plus eight Madscans, eight Mad colour changers and eight Anytronics strobe pods - all run off ShowCAD.

"Now in its third leisure incarnation, the new owners have spent more than £1 million on the infrastructure."



Dodd's programming was done using a ShowCAD control system, with a Roland PC 200 MIDI keyboard and a Peavey 1600 MIDI fader panel.

The sound system comprises four JBL 1770 mid/highs, six P749 bass cabs and four I350 peripherals, with a JBL C236 system controller, driven by JBL MPX amps. Processing equipment is a combination of JBL, Yamaha, Rane and dbx effects, while

the front end includes a Cloud CXM modular mixer, two Pioneer CDJ 500 Mk2 CD players, two Technics SL1210 decks, a Pioneer twin cassette deck and two Shure SM58 microphones.

The video system, featuring two Seleco SVT 150Q video projectors onto 10ft electric screens, was added to preserve the venue's original spirit; it was felt the club ought to be able to show moving images - whether they be films, old video clips, or simply footage of the dancers.

Enteramma moved in last January. "The interior was originally pink so we decided to paint it blue and keep the original art deco features," commented entertainments manager Glen Baker. He plans a wide variety of features, from leading house DJs to cabaret and comedians.

Stagetec's 16-Track College Studio

Stagetec (UK) Ltd have just completed the installation of a new 16-track recording studio at Buckinghamshire College. Designed in association with Tony Platt of Platinum Tones Production, the new facility has been developed for its students on the BA (Hons) Music Industry Management course.

The studio is designed to provide a solid grounding in both analogue and digital recording techniques for students at the college as well as providing additional income for the college out of term by renting out the facility. The installation consists of a Mackie 32-channel 8-bus console, wired through a Mosses & Mitchell patch bay, to a comprehensive range of processing and recording equipment including two Alesis ADAT XTs, Akai S3000 hard disc recorder and Tascam DA30 DAT recorder.

The processing equipment is aimed to provide a cross section of the equipment which the would-be audio engineer is likely to find in the real world, and includes Yamaha SPX990 and Alesis Midiverb effects units, Roland SDE330 delay, Drawmer DS404 noise gates and DBX 160A and TLA 2021 compressors.

Century in Scotland

Northern Light of Edinburgh, Crest Audio UK's newly-appointed Scottish dealers, have sold a Century Vx console to The Liquid Room, a new music venue due to open in the Scottish capital's Victoria Street. The 40-channel desk has been supplied with flight case and two PSUs.

According to Northern Light's Ritchie Rae, who co-ordinated the sale, the console was chosen after it had been on demo at a recent music festival on Glasgow's River Clyde, aboard the famous Renfrew Ferry, which has been converted into a music venue. Another Crest Century console sold by Northern Light is a 40-channel TC 4-buss desk to Chequer Mead Arts Centre in East Grinstead.

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Optional lenses	—	13 and 9 degree	16° - 13° - 11° - 9°
Electronic focus	*	*	—
Wheel with 7 colours + white	—	*	*
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Special light blue filter	—	*	—
Rainbow effect, two-colour beams	*	*	*
Colour temperature correction filters	2	2	2
RGB colour mixing systems	*	—	—
Max. No. of colours	Infinite	113	24
Rotating gobos in dichroic glass	Optional	2	Optional
Rotating M-size metal gobos	4	2	4
Fixed M-size metal gobos	4	4	—
Variable speed indexed two-directional rotation of gobos	*	*	*
10 additional gobos in metal	*	*	*
Fixed prisms	—	1 (5 facets)	1 (4 facets)
Rotating prisms	2 (4 facets, 3D)	4 (4 facets, 3D, wake, image doubling)	—
Frost filters	2	2	1
Iris	increased speed	increased speed	*
Dimmer 0-100% - Stop - High speed strobe	*	*	*
Rotation of mirror adapter on projector body	360°	360°	360°
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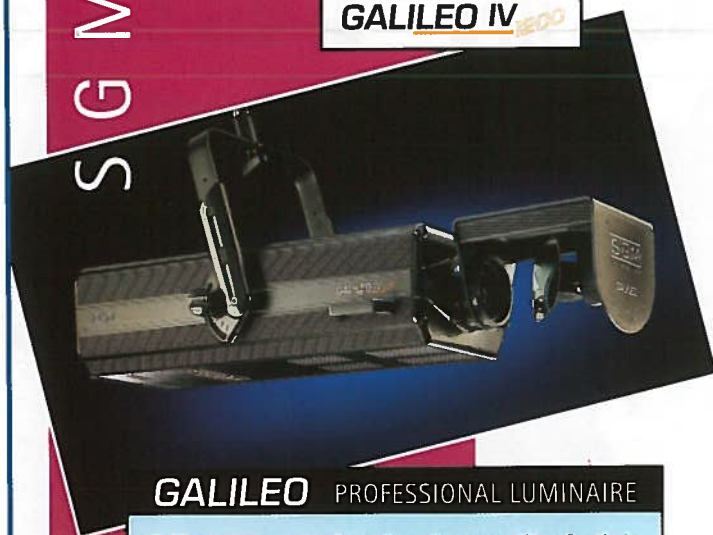
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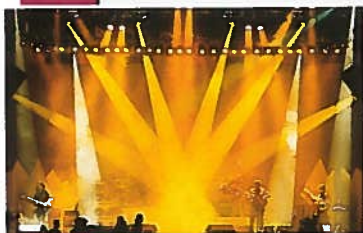


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Levi's Blueprint



The Original Levi's store in the Meadowhall Centre, Sheffield has been given a new look designed to be the blueprint for all other stores across Europe. Chrysalis Retail Entertainment has worked with the store's designers Checkland Kindleysides to create and install a tailor-made audio and AV system. The installation is being used to enhance the store's unique 'zoning' design and bring the Levi's brand to life.

Each 'zone' within the store is designed to give the consumer a mix of visual and emotional experiences and the key focal point from the front of the store is the 'Roots' zone. Video screens of varying sizes, ranging from mini 14", regular 21" and large 25", have all been strategically placed within the shelving units from which continuous Levi's advertisements run. A music system, including a cassette and CD package, has also been installed.

New PGC in Reproduced Sound

The Department of Acoustics and Audio Engineering at the University of Salford is introducing a course leading to a Postgraduate Certificate in Reproduced Sound.

This new distance-learning course is taught on a part-time basis - with two residential weeks at the University for practical work, tutorial support and additional seminars. Course material is presented to the student in both electronic and written format and the students' learning is supported by monthly seminars and tutorials. Weekly timetabled tutorial support is offered interactively. Completion of the course will result in the award of a Post-Graduate certificate of the University of Salford, and the certificated graduate will have accrued 40 credits at postgraduate level which could contribute towards the subsequent award of a Master's degree, which could be attained in a further 18-24 months part-time study.

Further information on the new course is available from Lisa Probyn at the University of Salford, telephone: 0161-745 5000 ext 3313.

Peavey MediaMatrix Seminar

Peavey Europe, based in Corby, Northants, is hosting a three-day programme of product information on the MediaMatrix system. Developed by US parent company, Peavey Electronics Corporation of Mississippi, all functions of the system between input and power amp/speaker system are created in software on an industrial PC.

The complexity of any system is now only constrained by memory. Multi-channel mixing, equalising, delay lines, signal processing and effects are easily compiled into a system on screen. Installed in the US Senate, MediaMatrix copes with multiple channel mixing, monitoring, multi-lingual translations and extensive global outside broadcast links. In the UK, MediaMatrix has already been specified by leading audio consultants, including a central role in the new Bridgewater Concert Hall (see feature this issue), home of the Hallé Orchestra in Manchester. Liverpool's Institute of Performing Arts have also installed MediaMatrix as the state-of-the-art core system in the Paul McCartney Auditorium (see news this month).

For further details on the course contact Peavey Electronics Ltd in Corby, telephone (01536) 461234.

A live show not to make light of?



The Lighthouse Family's 'Ocean Drive' UK Tour 1996

The cool melodic grooves and loungey jazz pop of the Lighthouse Family have made them an instant success with wide popular appeal.

The live line-up for their first tour included some of the finest musicians in the land and therefore the lightshow had to reflect the quality of their performance. Four Golden Scan HPEs, four Golden Scan 3s, six colour changers and four bars of ACLs constituted the flexible rig that had to contend with a variety of venues from small clubs to large capacity halls. The theme of the lightshow was moody, evocative and thoughtful, with crystal



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clear image projection using the latest technology glass gobos. In total control of the spectacle was the Masterpiece 108, its first major road test using the live/ theatre software. It was also Lighting Designer Nigel Monk's touring debut with the controller and he was more than pleasantly surprised with its overall performance. He commended the Masterpiece, saying it does a lot more than many other comparable desks and is great for running a tightly structured show. For a cost effective control board of this size, it is extremely powerful!

Vari-Lite Open Office in Madrid

Following the lapse of the contract with sub distributor CYP, Vari-Lite has opened its own office in Madrid. The wholly-owned subsidiary company will trade as Vari-Lite Spain S.L. It has taken a lease on a new building in Madrid which has been fitted out to include an office, warehouse, engineering department and demonstration area.

The company will be headed up by the new general manager, Sonia Martin. Martin's experience covers the Spanish film and TV business and includes two lengthy spells at Berenice/CYP, the previous sub distributor. Sonia has recruited a team including Albert Bravo as operations manager, who has a distinguished career in production; Pablo de la Flor as technical manager, a qualified electronics engineer; Carmen Lopez as accounts manager; and two technicians, Juan Garcia Costa and Pedro Pablo Garcia.



Pictured above is Vari-Lite Spain's general manager, Sonia Martin (second right), with members of the team.

LTP's Major EAW Sale

Lighting Technology Projects (LTP), part of the Lighting Technology Group, has announced the sale of £400,000 of Eastern Acoustic Works' (EAW) Stadium Array Systems to European hire company Concert Sound. LTP is the sole UK distributor for EAW's range of loudspeakers and, as such, conducted the negotiations for the deal which was finalised on the last day of PLASA in Lighting Technology's 'Planet Destiny' lounge (located above its space-age stand). The sale includes a substantial amount of EAW KF853 High-Q mid/high array modules, BH 853 low-frequency array modules and KF855 front-fill array modules.

LTP has also announced its enrolment to membership of the National Inspection Council for Electrical Installation Contracting (NICEIC). Bruce Kirk, projects director at LTP told L+S: "Becoming a member of the NICEIC is an important development for us because it will help us to further expand our activities in to the corporate and local authority fields."

Soundcraft Aplauso

Portuguese PA company Aplauso recently purchased a Soundcraft 40-channel console from sound specialists Caius - Audio Professional. Aplauso will be the first PA company in Portugal to have a 40-channel sound reinforcement console.

HELL Relay

Howard Eaton Lighting Limited (HELL) has won the contract to design and build new relay racks for lighting rental and production company, Theatre Projects. The HELL relay modules come in 6-way and 12-way units and will be used by Theatre Projects' hire department. The new relay modules, which have both DMX and analogue control, have been designed to work with existing modular systems and complement the range of mains distribution equipment which Theatre Projects has previously purchased from HELL.

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BALLANTYNE →

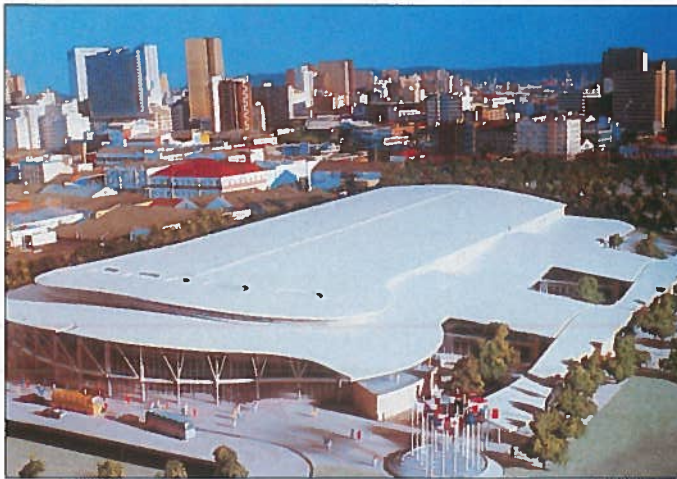
ICCD Choose Electrosonic/Celco

A Celco Aviator R180, five Pathfinder EPXs and a Navigator EPX have formed the control centre of the biggest audio visual contract ever to be awarded in South Africa.

The contract for South Africa's largest convention venue, the International Convention Centre Durban (ICCD) was won by Electrosonic South Africa. The company have supplied stage lighting, sound reinforcement, public address, signage, touch panel controllers

and simultaneous interpretation systems, video, slide and data projection, plus other AV equipment.

As part of the contract, the ICCD has taken on board the first Celco Aviator R180 lighting console to be sold in South Africa, which will be used to control Martin intelligent lighting, as well as conventional lighting dimmers and fittings. In addition, a Navigator EPX console will control Martin Roboscans and Robocolors and five Pathfinder EPXs will run the conventional lighting. The sale comes during a period which has seen Celco supply desks and accessories around the world. Pathfinder and Fusion dimmers have gone



into the Bangkok Marriott Hotel through Dyntec Audio of Bangkok, while in Turkey, Akhan Elektronik have specified a Pathfinder EPX and accessories for use in the huge leisure theme park, Bayindir Insaat, described as a mini Disneyland.

Over in Indonesia they have met a large order at the Hyatt Araduta in Jakarta for a contract won by Helvar Electrosonic, with a Celco Pathfinder and 36 channels of Fusion dimmers for use in the main ballroom (supplied by PT Nusatama Sekawan of Jakarta), while being involved in a quite different venue in the same city - supplying Digital DMX transmitter/receivers to The Fashion Cafe, which will be opened by Claudia Schiffer.


Jackson on Tour


The news as the Autumn season gets underway, is the re-emergence of Michael Jackson back onto the touring scene. Following a concert for the Sultan of Brunei in the summer, the 'Wacky one' has been tempted out and is about to start a world tour. Rehearsals have been taking place in Los Angeles where lighting designer Peter Morse is developing a rig to suit Michael's latest extravaganza.

The design is still evolving and currently contains every toy in the box: Telescans, Coemar NATs and Martin mirror lamps (sub'ed from Obies) with Intellabeams, Cyberlights and Vari*Lites. That's in addition to four truck loads of lamps and truss out of Birmingham including 270 Coloumags of various sizes. Control includes an Artisan, Wholehog II, Celco Gold and four Colormag desks - needless to say Peter Morse has some assistance, in this instance the redoubtable Merle Mclain who also shares design honours.


LSD are main contractors for the tour, co-ordinating equipment supplies from all over the US and UK for what promises to be the show of the season.

Steve Moles





PRODUCT OF THE YEAR 1996



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*Chris Webster
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“ When CCT bragged about the light output I was very sceptical, but seeing is believing ”

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Scene 2: The Production Office

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PCM Lodestar Motor School

Over 30 people from diverse areas of the entertainment and music industry attended PCM's fifth Lodestar Motor School. They included freelancers, rental company employees, theatre and venue riggers and even flying system manufacturers, all keen to further their knowledge of the Columbus McKinnon hoist.

The comprehensive two-day course catered for all levels of experience and ability and was led by CM's Wally Blount.



Tomcat Head West

US truss manufacturers Tomcat have opened an office in the UK. The company, based in Evesham, is a manufacturing facility that is now producing and selling the Tomcat line of truss and related products.

In addition to providing the full line of truss, the company will also provide a wide selection of related products, including everything from Tomcat Par cans, custom cable assemblies and rigging accessories like roundslings, shackles and couplers, to Columbus McKinnon theatrical chain hoists.

Parent company Tomcat USA Inc has also announced that Jo-Anna Kamorin Lloyd will continue to be the company's distributor in Australia, following her departure from Showtech. Tomcat director John James told L+S: "We established a relationship with Jo-Anna prior to her affiliation with Showtech and, now that she has chosen to move on, we will continue to rely on her to distribute our full line of trussing, rigging accessories and electric products including Columbus McKinnon theatrical chain hoists." Tomcat UK can be reached on (01386) 48888.

Virtual Termination

An array of Crest Audio's CA Series amplifiers are providing the power for the elaborate \$60 million 'virtual-adventure' experience called Terminator 23-D at Universal Studios in Orlando, Florida. Soundelux Florida of Orlando were the contractors in charge of the audio system installation and production design, which features a kinetic mixture of film, sound and three-dimensional imaging. A total of 62 CAs have been installed for the T2-3D attraction, with nine CA4s, 23 CA6s, 13 CA9s and 17 CA12s featuring. Crest amplifiers are driving custom Soundelux and EAW speakers in the main show audio system and JBL speakers in the pre-show system, as well as powering in-ceiling Sound Advance CT73S speakers in the queue audio system. In total, over 45,620W of power will be pumped through an assortment of 141 loudspeakers.

Optikinetics' Options

Optikinetics have just launched their new Effects Catalogue which details the company's full range of current effects and which is the most comprehensive listing ever compiled regarding their in-house gobo production.

radio systems sales & rental

VITAL STATISTICS

PERIOD: AUG 1 - SEPT 15

JOBS: 357

RADIO MICS: 1208

IN-EAR SYSTEMS: 346

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LIVE 3²
THE CLOSER YOU LOOK - THE BETTER THEY GET

LIVE 4²

THE NEW SPIRIT LIVE RANGE

offers even more power than its predecessors, and more than many other mixers costing several times as much. The culmination of months spent talking to engineers and musicians about what they actually needed, Live 3² and Live 4² provide a host of professional features and optimum sound quality, in frame sizes that don't require a team of strongmen to lift them. For the full story read on:



Quiet, High-Headroom Mic Preamps

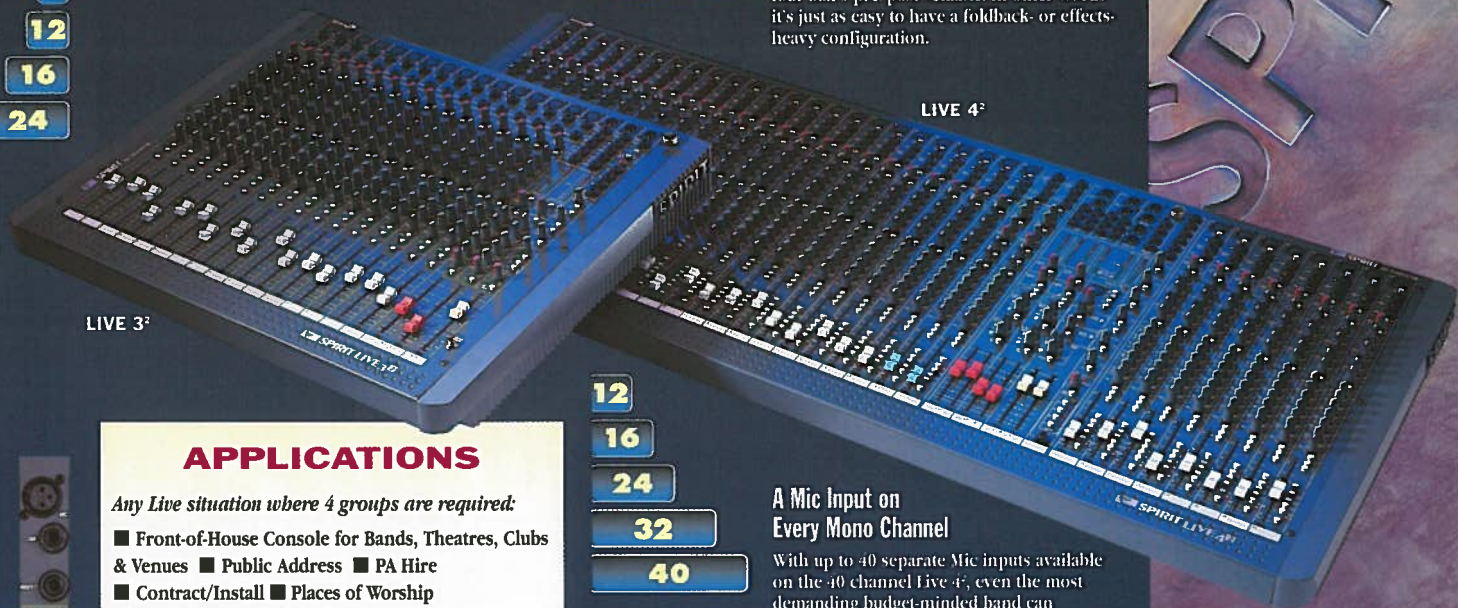
"UltraMic Plus" is Spirit guru Graham Blyth's most transparent preamp ever, ensuring that Live 3² and Live 4² produce noise-free mixes. In addition, an incredible padless 66dB of gain range means you can plug in anything from line level electronics to the "hottest" of mics without running out of headroom or gain.

Flexible Auxiliary Switching

Four of Live 4²'s six auxiliaries can be set to pre- or post-fader, with three of Live 3²'s four aux's pre/post settable; in other words it's just as easy to have a foldback- or effects-heavy configuration.



- 8
- 12
- 16
- 24



LIVE 3²

LIVE 4²

APPLICATIONS

Any Live situation where 4 groups are required:

- Front-of-House Console for Bands, Theatres, Clubs & Venues
- Public Address
- PA Hire
- Contract/Install
- Places of Worship
- Conferencing
- Recording (via Direct Outs)

- 12
- 16
- 24
- 32
- 40

A Mic Input on Every Mono Channel

With up to 40 separate Mic inputs available on the 40 channel Live 4², even the most demanding budget-minded band can be satisfied.

Balanced Inputs

All inputs (even the stereo ones) are balanced on Live 3² and Live 4², keeping the noise floor to a minimum. In addition, both desks' outputs are impedance-balanced so that long interference-free cable runs are possible.

Consistent Controls

Unlike other manufacturers, Spirit specify components with specially designed potentiometer laws that guarantee predictable response to any movement.



LIVE 3²

MAIN FEATURES

- 3-Bus Mixer
- Four Frame sizes: 8, 12, 16 and 24 channel
- Separate Mono Bus
- 4 band EQ with two swept Mids
- EQ In/Out Switch
- 18dB/Octave High Pass Filter on every mono input
- 4 Aux's with 3 pre- or post-fader
- 2 Stereo Returns
- 2 Stereo Inputs
- Inserts on every channel
- New UltraMic⁺ Preamps
- 8 Channel Expander Option

PRICES FROM **£739** +VAT

LIVE 4²

MAIN FEATURES

- 4-Bus Mixer
- Five frame sizes: 12, 16, 24, 32 and 40 channel, with separate mic input on each mono channel
- 4 Stereo Inputs for Keyboards or Tape Returns in addition to the mono inputs (2 on 12 ch.)
- 4 Groups, with 4 additional Stereo Returns
- 6 Aux's with up to 4 pre- or post-fader
- 4 Mute Groups
- 6 x 2 Matrix section
- New UltraMic⁺ Preamps
- Phase Reverse Switch on every mono channel
- Independent Phantom Power Switching on every channel
- Direct Outs on every mono channel, for individual effects or multitrack tape sends
- 4 band EQ with two swept Mids
- EQ In/Out Switch
- 18dB/Octave High Pass Filter on every mono input
- End checks removable to reduce road case size
- 8 Channel Expander Option

PRICES FROM **£1305** +VAT

Individual PCBs

Each channel on Live 3² and Live 4² has its own individual circuit board, making maintenance or replacement easy on the rare occasions that mishaps or drinks spillages cause a channel to go down.



Expandable

Both consoles offer the option of 8 channel expanders for the smaller frame sizes, and dust covers for protection. The 8 channel Live 3² is rackmountable.

SPIRIT

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I am interested in using Live 3² and Live 4² for: Band PA Installation Other application (please specify)

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Address

Post Code

Company/Band (if applicable)

What magazines do you read?

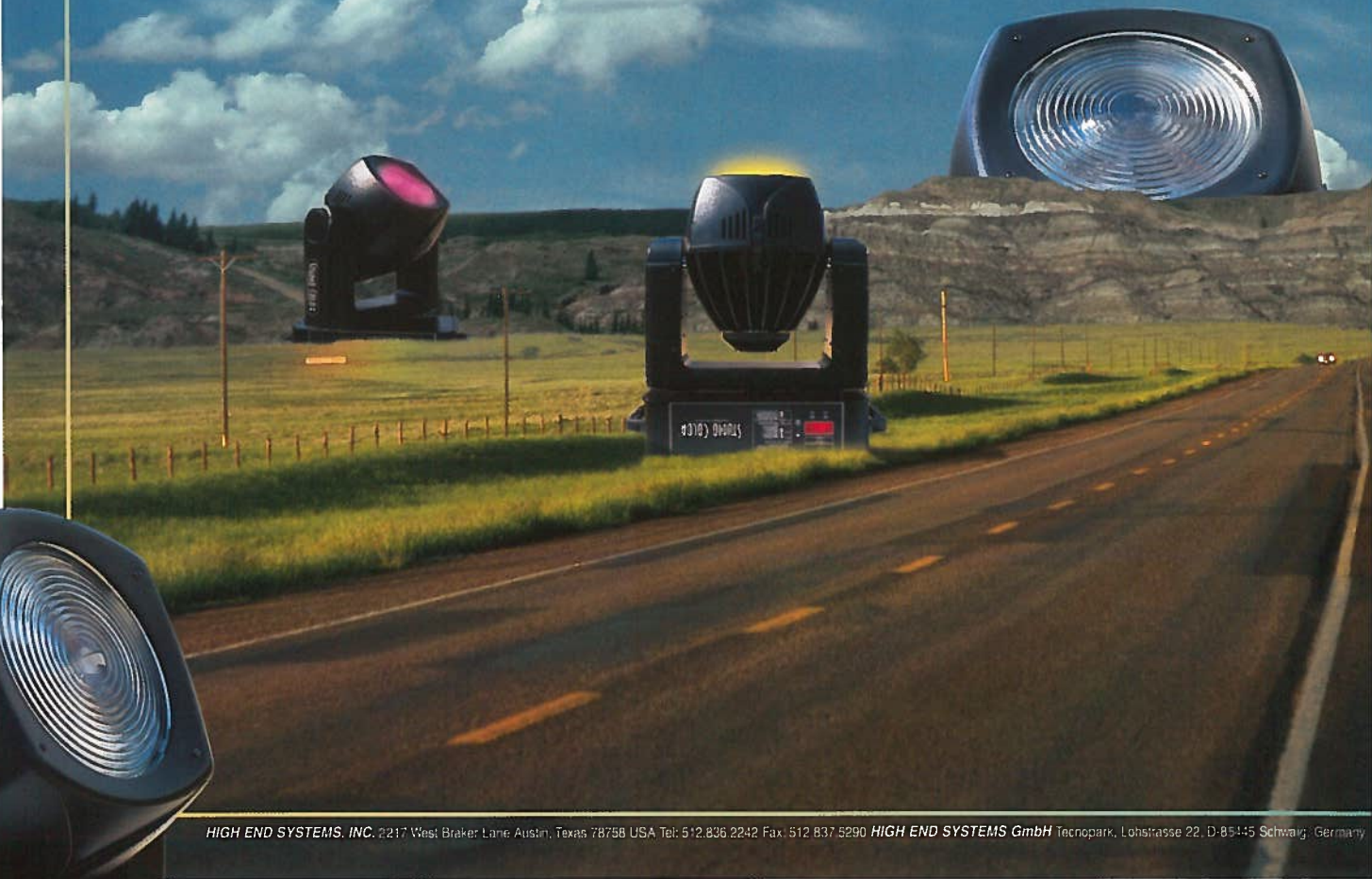
What mixer do you already own? None Other

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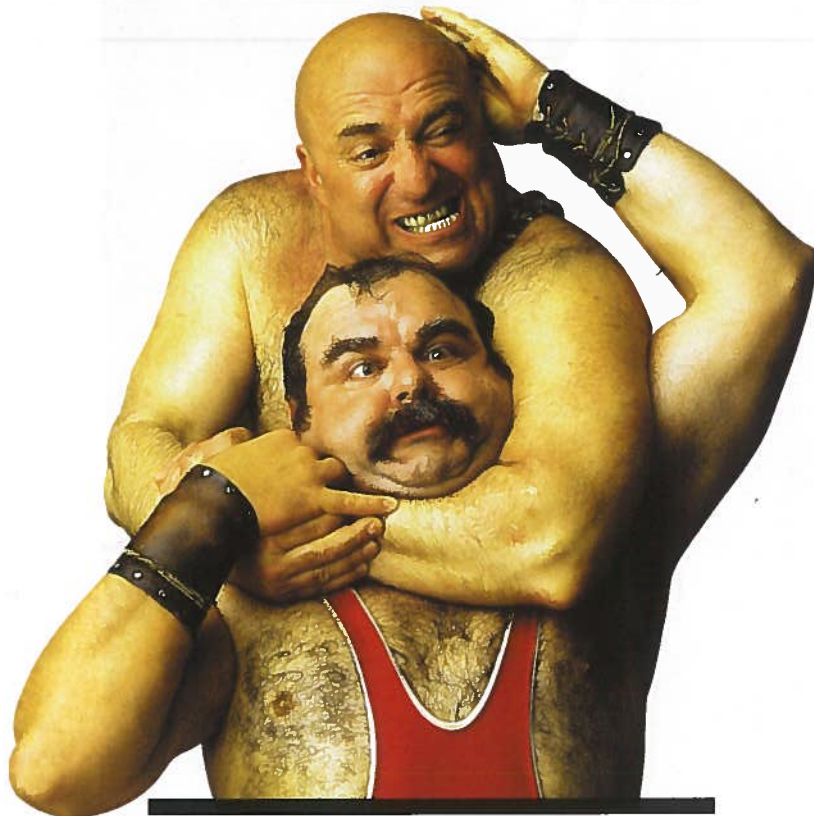
High End



SYSTEMS

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* (but if you really *must* buy a projection system, we'll be happy to sell you one).

PRODUCTIONarts
SEE WHAT WE CAN DO.

ETC Europe Expand



In the 15 months since ETC opened its European headquarters in London, the company has increased its staff by 50%. Seen here outside the company's premises in West London are as many as could be gathered together on a grey day in August!

Dublin Viking Adventure

Located in Temple Bar, Dublin, the Viking Adventure retraces the city's history and includes a journey by boat from contemporary Dublin to Viking Dublin, circa 1000 AD, populated by 'live' Vikings. A lifesize model of the archaeological dig at Wood Quay follows, and leads into the Viking Feast room in which a stage is ingeniously incorporated into the hull of a replica Viking longship.

The lighting for the project was designed by Andrew Leonard of Lighting Design Associates. The four rigs involve over 500 luminaires from various manufacturers including Strand, ETC, DHA, Eurotec Fibre Optics, ERCO and over 200 channels of dimming by Mode. The main suppliers to the project were Arena Lighting and Stage Lighting Centre, with show control by Electrosonic and audio by Mikam Sound (Ireland) Ltd. Shortly after the summer opening of the Adventure, Andrew Leonard designed and supplied the rig for 'Hello Europe, This is Temple Bar', a TV spectacular to celebrate Ireland's Presidency of the European Commission and to launch Meeting House Square in Temple Bar, a new open-air performance space. The rig included 24 VL5s and VL6s, 96 Pars and 15 2.5k HMIs with Rainbow Scrollers used to illuminate the city buildings.

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L+SI on (01323) 646905**

Entex Events

Entex have confirmed details of two Autumn trade events. These are part of a series of regional shows designed to provide an opportunity to see the latest developments in sound and lighting equipment for use in the entertainment industry.

Sol Wales & West will take place on 20th October at the Hilton National Hotel in Newport. The 'Autumn Event' will be held on 3rd November, at the Clarendon Suite, Hagley Road, Edgbaston, Birmingham. The event will include a wider range of exhibitors alongside Club Ex '96, designed to showcase products and services specifically for clubs and leisure venues, which will run alongside in a separate hall. For further details contact Terry Lees, telephone (0973) 122484.

Lamba Professional Division Established

Lamba have established a new division within the company to concentrate on the professional product ranges they distribute. The move follows a successful re-structuring of the KAM dealer network. The new division has been set up specifically to offer sales and service for Cerwin-Vega! and the growing range of KAM lighting control products. Damon Crisp will head the new division as national sales manager developing the Cerwin-Vega! series of full range cabinets, and CV's Intense! product line.

As the Intense! range has been designed for solid sound reinforcement in both outdoor and indoor venues, Crisp will be liaising with installation companies and hire companies alike.

Valiant's Mission

Valiant Lamps (part of the Lighting Technology Group), one of Europe's largest stockists of specialist lamps, supplied Paramount British Pictures with 150 slow peak flash bulbs for the blockbuster film *Mission Impossible*. The lamp, which is a clear GLS with an ES base filled with magnesium fibres and produces 110,000 lumens-seconds of 3800 degree K colour temperature light, was used for a number of specific effects by Paramount at Pinewood Studios.

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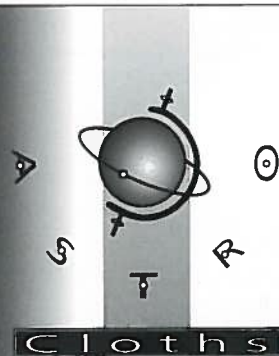
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Ken Billington on the Art of Lighting

"My canvas is the theater and my medium is light."

*"I can't paint, sketch, draw or anything even close.
But give me light and I can make magic."*

Sixty-five Broadway shows, seventy operas, fifty off-Broadways and countless spectaculars, night club acts and architectural projects.

That's a lot of magic. And to the man behind it, the business of magic is supposed to be fun. For the audience, certainly, but for the people who create it, as well.

"I won't do a show anymore unless I think it's going to be fun," Ken Billington says. "To me, that's when a team of people come together to produce something that makes the audience stand up and cheer."

According to Billington, that creative team goes beyond performers and directors - it also includes the innovators whose tools make certain effects possible. Take, for example, one of his long-running outdoor spectaculars that brings cartoon characters to life. The show's visual feast of fountains, fireworks and bold color effects was taking quite a toll on the equipment.

"The fountains were shorting out three or four color changers a night," Billington says. "I had two choices: lose some effects, or find a water-resistant color changer." He turned to Wybron, and we developed THE AQUARAM! "Two years later," Billington says, "we've only had to replace one unit."

Tools are an important part of the creative process," he says. "When I don't have to worry about the mechanicals of a show, the possibilities are almost without limit." At Wybron, we are proud to remove the barriers to imagination, so designers like Ken Billington can stay focused on the magic.



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The Works Opens in Aberdeen



The Works, a new nightclub/music venue has opened in Aberdeen. The club opened in the city's Belmont Street in July and features a mix of live and recorded music. Owner Ian Harding has spent in the region of £250,000 developing the three-storey building, including £40,000-50,000 on sound and lighting.

Installed by Warehouse of Edinburgh, the lighting design at The Works was conceived by Steve Mackie of The Creative Lighting Company. With a brief to use no moving lights, Mackie gave the rig a theatrical look, using profiles and birdies, and scaffolding and chains instead of truss, in order to give a post-holocaust effect. The sound specification is designed around an EAW loudspeaker system.

Master control is provided by 'The Stinger' which sends MIDI signals to the lighting controllers and talks directly to the sound desk. The 24 channels of DMX effects lighting are run from a Pulsar Masterpiece 108, with the house lighting occupying a further 60 channels, loaded onto a replay unit. Seven of Celco's digital Fusion dimmer racks have been specified for the venue and the 12 x 10amp racks control the lighting over the entire three floors. There is also a separate stage installation. Fusion dimmers are also designed into the emergency evacuation system so that in the event of the fire alarm sounding, for example, the system has been configured to bring on all the house lighting to a preset level.

HES Summer Course at LIPA

High End Systems' programmer Vickie Claiborne recently helped to teach a summer course in rock and roll lighting at the Liverpool Institute for Performing Arts (LIPA) in Liverpool. A dozen potential future lighting designers learned the basics of safety, rigging and the designing and programming of conventional and automated lighting. For their final exam, they designed and lit a show featuring fellow student musicians.

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POWERFUL

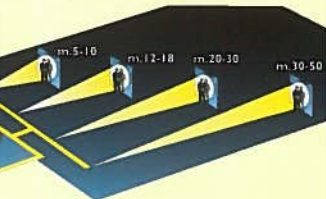
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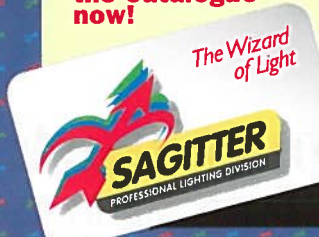


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Your Lighting Partner

Robert Juliat Would Like To Apologise...



Robert Juliat are renowned for their Build Quality, Performance and Features.

We feel that, in one area, we have fallen badly behind.

Other manufacturers fit automatic shutter locks on their profiles. When the unit heats up to operating temperature the shutters are locked solid.

The movement of our shutters remain silky smooth regardless of temperature and we felt it necessary to install a manual device to lock them solid.

We feel we must apologise for the amount of extra time the locking and unlocking will add to the time it takes to focus and refocus our profiles.

We are very sorry...

professional tools from robert juliat

People on the Move

Henrik Bang is leaving Denmark-based lighting manufacturer Martin Professional in order to take up a new position in Italy with video monitor manufacturer Seleco.

Meanwhile, it was confirmed at the PLASA Show that **Pio Nahum**, formerly sales director for Clay Paky, has joined up with Martin Professional. Nahum will be remaining in his native Italy, from where he will run Martin Southern Europe.

Turbosound has appointed **James McKeown**, formerly of Squire Sound and Light and Envotech, to the post of UK sales executive. He will be responsible for retail sales throughout the UK.

Britannia Row have appointed two new tour services personnel to their sales team. **Mike 'Bunny' Warren**, once FOH sound engineer for bands such as Status Quo and Take That, will take on the more technical aspect of the job, while **Helen Smith**, who worked previously with GP Presentation, will be handling the administration.

After four years as sales manager of Britannia Row Productions, **Chris Mounsor** has joined leading video services company Presentation Services Ltd, as head of their music division and concert touring for Europe. PSL are part of the rapidly-expanding Gearhouse Group, and Mounsor's brief is to further increase the roster of bands using PSL's services.

PAG Direct has appointed **Gary Smith** as artiste liaison manager. Smith joins from Shuttlesound, where he spent six months in sales.

The M&M Group has welcomed **Andrew Hurst** in the newly-created position of in-house sales and client contact. In addition to his sales capacity, Hurst is available to answer technical queries, particularly in connection with ETC products, a role for which his experience as both a working electrician and in lighting and set design will prove invaluable.

Nigel Wydymus has joined Triple E as sales engineer. He joins from The Old Rep in Birmingham, and has hands-on experience of production management across a broad range of productions.

Maris Ltd have announced the appointment of **Philip Stratton** in the capacity of general manager. Having been associated with Maris in recent years, he will now take over the day to day running of the company.



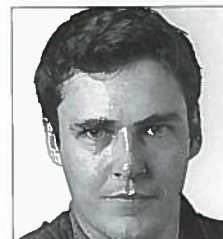
Pio Nahum.



James McKeown.



Chris Mounsor.



Andrew Hurst.



Brit Row's Helen Smith and Mike 'Bunny' Warren.

Rapid Promotion

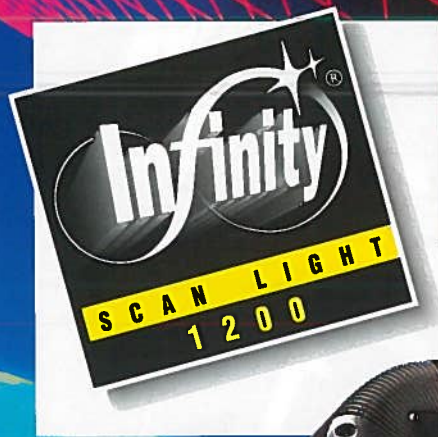
During the PLASA Show, an eagle-eyed reader of the Wednesday edition of the PLASA Show Daily brought to our attention the sudden promotion of Trantec's Chris Gilbert to the elevated heights of 'Christ Gilbert'. Although we are awaiting confirmation of the change from Trantec, we are preparing ourselves for the inevitable press coverage that must follow an announcement of this magnitude.



'Christ' Gilbert.

TFI Friday Update

Apologies also to Martin Kisner, the BBC lighting designer recruited to light Chris Evans' TFI Friday, for the incorrect spelling of his name (Kissner) in the September issue of L+SI.

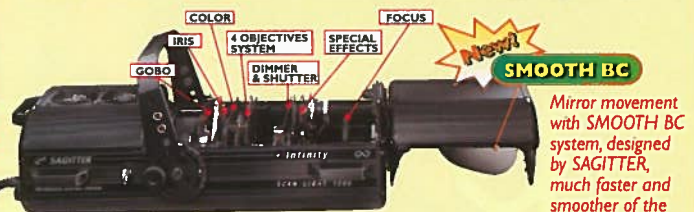


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IBC Settles Into Amsterdam RAI



Beyerdynamic's Steve Bickford and John Midgley.



Sharon Atherton, Nick Shapley (centre) and Penos Louka of Arri.

The International Broadcast Convention, IBC, continues to grow, both in size and acceptance as the major European event for broadcasters. The exhibition saw a move to the Amsterdam RAI, the amenities of this modern, purpose-built centre being ideal for this international technical conference.

On the lighting side, **DeSisti** took a large area which played host to The Great American Market, whilst **Arri (GB)** also had a large stand showing both lighting and cameras. The ARRISUN range of PAR HMIs has been extended to include three new lampheads, the ARRISUN 5, ARRISUN 2 and the baby of the range, the ARRILUX 125 or 'Pocket Par'. Designed specifically for theatre use, the Compact 4000T and 2500T have many well designed features including a cold glass mirror reflector to cut down heat.

New additions to the range of Pro Bags on the **CP Cases** stand included the lightweight cam bag, the waterproof cam cover, the audio organiser and harness along with the VTR bag. **Canford Audio**, meanwhile, showed a selection from their range of professional audio products whilst **Beyerdynamic** launched the first digital condenser-Studio microphone (MCD 100), in which pre-amplification and A/D conversion of the microphone signals is now carried out directly behind the microphone capsule. The principal attraction at **Amek Technology Group** was their Digital Mixing System, whilst on the **Soundcraft** stand their latest console, The Ghost, was featured alongside Broadway, the top-end theatre console and the B800 surround, a compact production console for television, radio and outside broadcast. **Soundtracs** demonstrated their latest product, Virtua, aimed specifically at the broadcast market. This is a stand-alone unit requiring no external computer, but provides a highly intuitive touch-sensitive motorised fader control surface, combined with high resolution VDU and LCD display.

HHB Communications launched a number of new lines at the show including the Motionworks R2P2 remote control, for post-production, broadcast studio, film dubbing and music recording studio which can be either hand-held or desktop mounted. Also launched were the VTRs and digital audio and video workstations that support the Sony P2 protocol and the HHB CDR74P printable CD-R disc.

As well as eight halls and an outdoor section of exhibits, IBC 96 hosted over 40 technical presentations. Additionally, 35 programmes were screened in a special theatre for awards in the International Widescreen Festival.

Ken Walker



Soundtracs' David Gibbons demonstrates Virtua.



Caroline Cook, David Beesley and Ian Jones of HHB with Motionworks' Sean Fernbank and Kevin Brown of Genex.

Chroma-Q Success

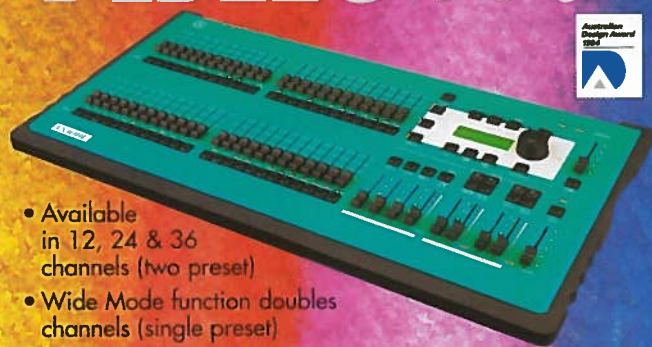
Since the launch of AC Lighting's Chroma-Q's colour changer in June, it has already gained widespread acceptance within the industry. The unit has features moulded into its body that usually have to be produced separately, thus taking advantage of the mass production cost savings of injection moulding. The Chroma-Q has been an instant hit with schools and colleges and top rental companies have also started investing in Chroma-Q, including LSD, who have had 140 out on the Eros Rammazzotti European tour for the past month.

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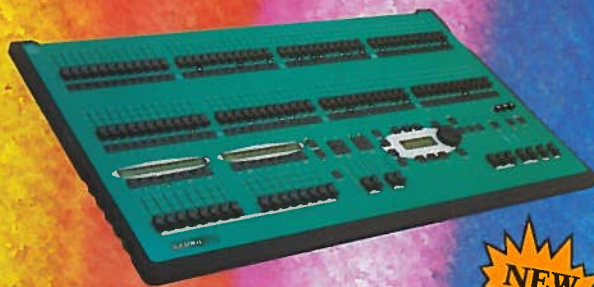


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Bose at RNLI Charity Event



Alan Reid of Joffins Travelling Discotheques recently undertook what he describes as 'one of the most challenging jobs yet' - namely supplying a full 2000W Bose driven discotheque to the RNLI for a charity fund-raising event aboard U475 Foxtrot - a 92m long submarine currently moored in London. "The load-in was difficult as nothing could be more than 21" wide," explained Reid, "but nothing compared to the near-vertical load-out."

Using 300W Thomas cans and several Genius flower effects, together with the first outing for their newly acquired Denon 2,500 the 'mess' soon became a sauna as 75 guests (about the size of the total crew of the submarine when active), danced until the early hours.

Le Maitre Wins Festival

Le Maitre Fireworks of Mitcham, Surrey, recently won the International Fireworks Festival held in Sakura City, near Tokyo, Japan.

The annual festival is organised by Mr Katsuyama of Katsuyama Enterprises BV who has handled all arrangements since its inception seven years ago. Each year, two countries are invited to compete against Japan in the festival - one of the leading events in the fireworks calendar. This year, Le Maitre Fireworks were invited to represent Great Britain, and Moog Fireworks were invited to represent Germany. The competition was attended by the Mayor of Sakura city together with ambassadors and other dignitaries.

BASH South is Five

US-based BASH Theatrical Lighting has announced that BASH Lighting Services South, located in Orlando, Florida, is celebrating its fifth year of service to the entertainment industry. BASH South opened for business on September 3rd, 1991 and supplies the south-eastern region of the United States with entertainment lighting equipment.

Sysco/Gush

Following our news piece last month on the closure of Gush nightclub, Sysco have asked us to add that they have been paid in full for the installation work which they carried out for the venue, all of which was completed and approved as specified, and therefore do not stand to incur any financial loss as a result of the club's closure.

Wholehog Update

In the first year of the life of Flying Pig Systems' Wholehog II lighting console, names such as Michael Jackson, Alanis Morissette, The Stone Roses and The Eagles have joined the list of the major tour credits that have used the desk.

The Wholehog has also been employed on top theatrical shows - from *Big* on Broadway to *Miss Saigon*, *Grease*, *Riverdance* and Walt Disney's *Pocahontas*. In Las Vegas, The MGM Grand, The Rio, and The Golden Nugget casinos and several of the new generation cruise liners are already cruising with Wholehog IIs.

For its second year on the market, Auto FX, a new level of automated programming, has been added to the Wholehog II. It enables the inexperienced operator to create effects such as spirals, fly-aways, cancans, circles, iris chases, ballyhoos, rainbow chases and most lighting effects that normally involve hours of skilled programming, with a few simple button presses. The Auto FX package is now available as a free of charge software upgrade to existing users, it can be down loaded from Flying Pig Web site at: <http://www.flyingpig.com>.

UK Light Jockey 96



UK Light Jockey of the Year Greg Mclenahan with Pino Tinto of Clay Paky.

The Ministry of Sound hosted the UK Light Jockey of the Year Grand Final in late August. The event, sponsored by Clay Paky and Pulsar, drew a large crowd to the club to see Greg Mclenahan emerge as the overall winner after a very tight battle with the other finalists - Richard Warboys (last year's winner), Simon Elliott and Colin Meacher. As the overall champion, Mclenahan received a gold Masterpiece, £500 cash and the UK Light Jockey trophy.

Health & Efficiency

No, we're not referring to a 'Naturist' publication but to two benefits enjoyed by d&b Series 02 users.

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No Sex Please . . .

When the windows of an empty shop in Enfield, North London, were blacked out and a sign appeared declaring 'Specialist Shop Opening September 5th', the local residents let their imaginations get the better of them.

A number of elderly ladies, curious as to what was happening behind the darkened shopfront, began poking their heads round the door, but the 'contractors' could only shrug and plead ignorance. Before long, rumours of the forthcoming 'sex shop' reached the local press. A series of stories followed in several local journals. Finally the Enfield Town Express printed the truth. Alan Paulus, director of theatrical lighting and sound supplier Trafalgar Lighting and erstwhile unhelpful shopfitter, had decided he should put Enfield out of its misery.

Alan told L+SI: "We thought it was hilarious. People kept asking us what was going on - we weren't denying anything. One old lady even insisted it should become a food shop!"

Trafalgar Lighting's new retail outlet, called Stage Door Supplies, is now selling a range of theatrical equipment and special effects.

BSS Audio Awards



BSS Audio MD David Karlin (centre) flanked by his award-winning Swiss distributors, Roland Bricchi (left) and Willi Guenther (right), of Dr. W. Guenther.

BSS Audio Hosted an awards dinner at The Ritz, with David Karlin presenting their international distributors with cut glass decanters and plaques for outstanding achievements.

The winners on the night were Roland Bricchi and Willi Guenther (Dr. W. Guenther, Switzerland), Mex Exner (Audio Vertrieb, Germany), Stefano Cantadori (Audio Link, Italy) and Peter Strueven (Audio Vertrieb).

LETTERS

Dear Editor

Re: Standardisation of Terms

This by way of being a 'cri de cour' from someone whose job it is to both demonstrate and write product brochures on lighting consoles . . . it is a plea for standardisation!

Don't panic, I'm not talking about anything technical, but simply to standardise the industry's use of adjectives. I'll give you an example: in my first paragraph, I hesitated over which word to use - is it a lighting console, desk, controller or board? I've even heard the phrase 'dimmer board' used. FOUR definitions of the same product.

This is not the major gripe however. The definition of what constitutes a 'lighting picture' particularly when it has been memorised into a computer (otherwise called a console, desk, controller) beggars belief.

It is variously called cue, scene, memory, preset or in the USA, a 'look'! The problem is that each one of these descriptions means something different to the user. How many memories make a cue, or vice versa . . . or are they the same thing?

As lighting control becomes more and more complex, so more and more attributes need to be defined and accepted. Standard stage lights have now become 'generics', and the various control mechanisms for moving lights have become 'personalities'. . . the point is that we all know what's meant as the words are now universally accepted, almost by default.

We've managed to standardise over DMX despite various objections, can't we PLEASE do something? How about it PLASA?

Freddy Lloyd
Zero 88

Dear Editor

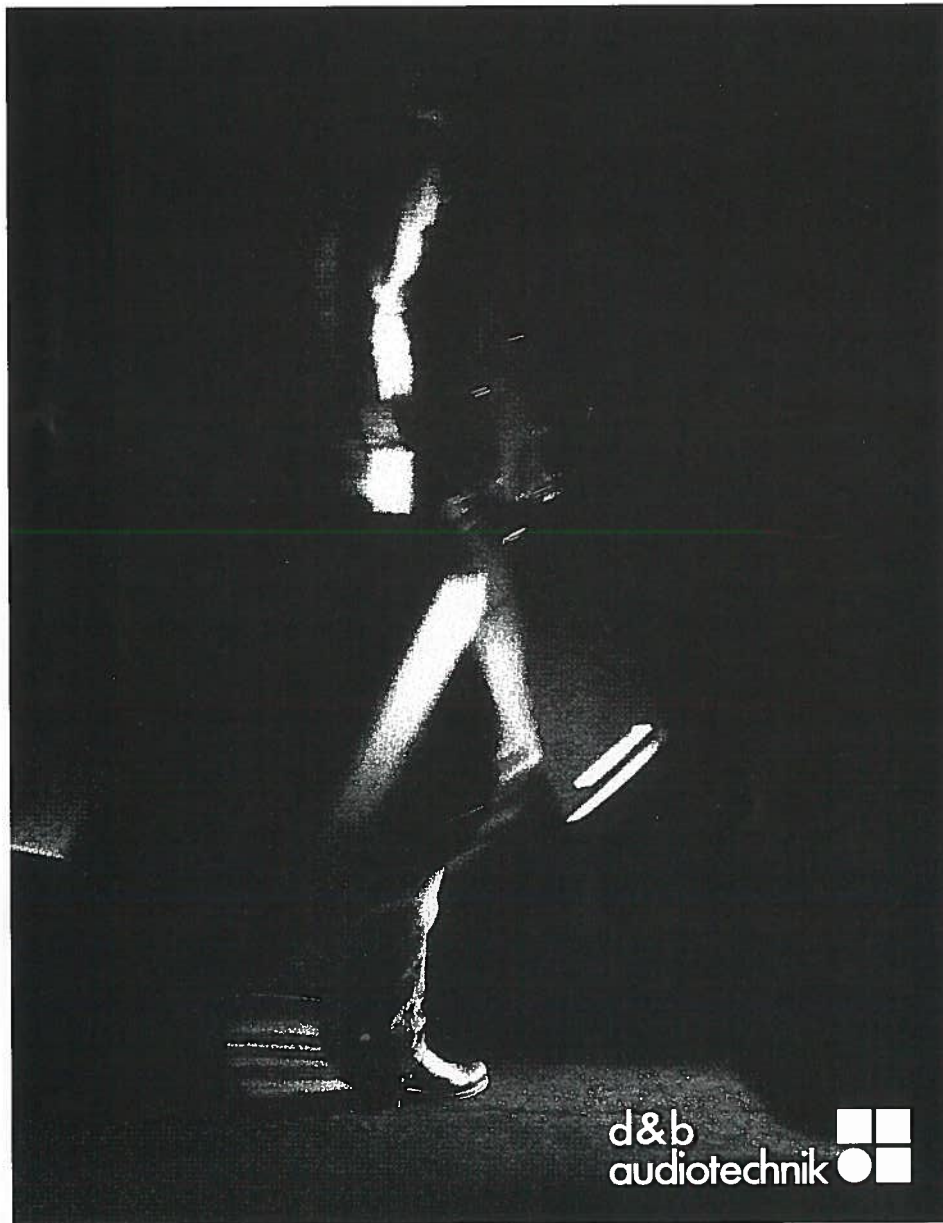
Re: Vintage Lanterns at the Minack

I greatly enjoyed Ruth Rossington's article in the September issue of L+SI about the Minack Theatre in Cornwall. Would you believe that I lit two school productions there - 'A Man for all Seasons' in 1964 and 'The Taming of the Shrew' in 1965! One of the lead parts in the latter was played by a 16-year old schoolgirl by the name of Jane Asher. We also suffered from wet weather.

I couldn't resist responding to the paragraph about the vintage Strand lanterns "so old, in fact, that even the people at Strand don't recall when they were last manufactured."

As someone who went on to work for Strand Electric in the late 60s, I feel qualified to reply. The lanterns in question were Patt 523s and Patt 543s as illustrated on page eight of my 1963/64 Strand catalogue. These lanterns were made up with the interiors of the Patt.23 and Patt.223 with a so-called 'weather-proof housing' but they could get fairly damp inside. As far as I can recall, the Minack Theatre was one of very few customers for these units and they were discontinued in about 1966.

Derek Gilbert
Glantre Engineering

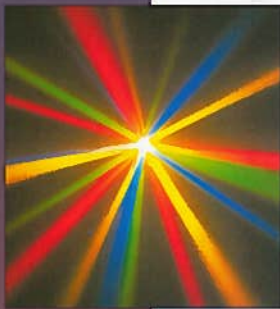


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When, in early June, the final phase of the Liverpool Institute for Performing Arts development programme was acknowledged with the unveiling by Her Majesty the Queen of three new recording studios, it marked exactly a year since Marquee Audio commenced work on the project.



Head of sound, Jon Thornton (left) shows students the Amek Galileo desk.

In equipping the three new suites, the company specified the new 56-chassis Amek Galileo mixing desk in the main control suite, as well as a Soundcraft DC 2020 LCR for mixing in surround sound and two Yamaha 02Rs in the digital suite. At the same time, they completed work on two performance auditoria, which included a 700-frame version of Peavey's new Media-Matrix computer sound system modeller. The same contract is also responsible for one of the largest Tascam installations in Europe, along with racks of effects from proprietary names such as BSS Audio and Focusrite, and top-of-the-range Harris Grant Boxer 4 loudspeakers.

The new complex boasts 20 PC and Apple-based MIDI stations, five recording studios, nearly 30 rehearsal rooms and two auditoria, as well as telecommunications and MATV systems. There is also a separate transfer suite and two and three-machine video editing suites.

Installed in each studio is a 'floating' 24-track Otari MTR 90 Mk2 and 24 tracks of Tascam DA-88s and Digidesign Pro Tools can also be seen in four of the studios, along with the Steinberg Cubase sequencing package. Reference monitors in four of the studios comprise Questeds and Spirit Absolute 2s to enable comparative listening. Harris Grant also specified and installed their Boxer 4 reference monitoring system, satellite studios and remaining facilities.

The main Paul McCartney Auditorium comprises an intelligent lighting array of Cyberlights, Tracksports, Dataflash strobes and Status Cue console, which were donated at the first-phase stage by Texas-based Lightwave Research.

Last month, PLASA organised a special members' visit to LIPA, giving all who made the trip to Liverpool a rare opportunity to see first-hand the complete technical installation and also to meet with members of the LIPA teaching team. LIPA's Head of Learning David Price welcomed the 30-strong group to the Institute, outlining its unique history and the plans for its future. Following lunch, visitors toured the facility and met with students.



Above left, Ruth Jackson (right) head of production, shows one group around the backstage areas, whilst, right, Andy Baker of Marquee (far right) tours another group around the studio facilities.

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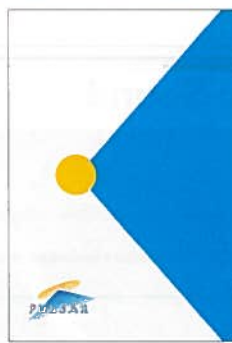
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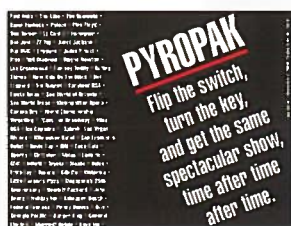


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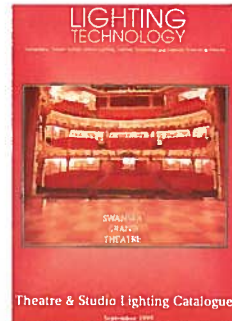
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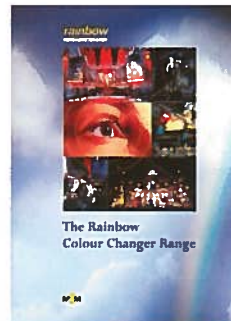
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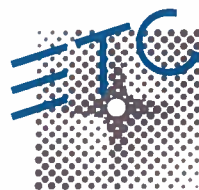


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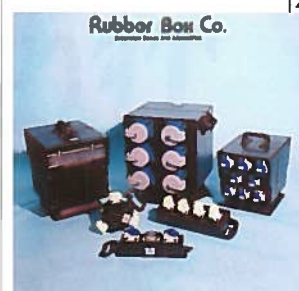
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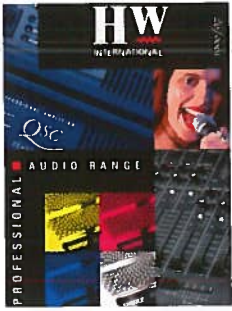
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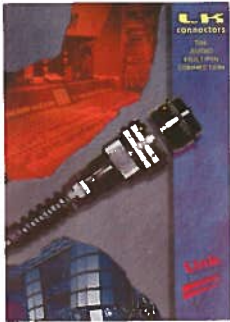
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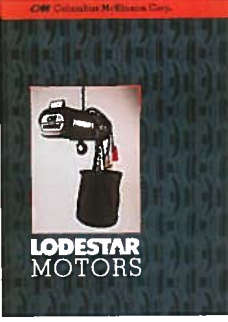
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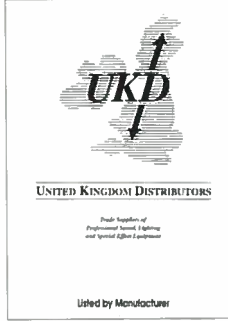
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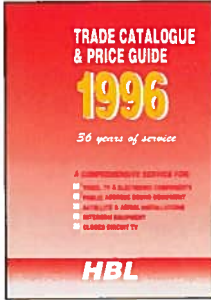
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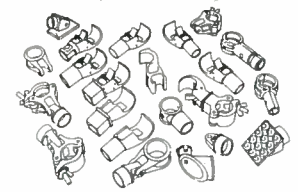


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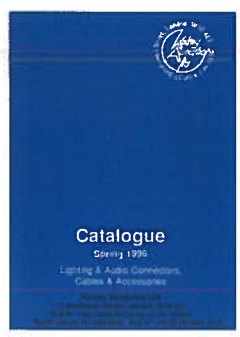
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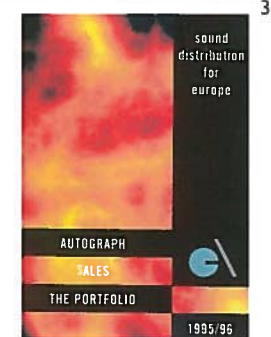
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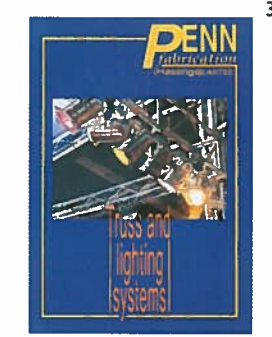
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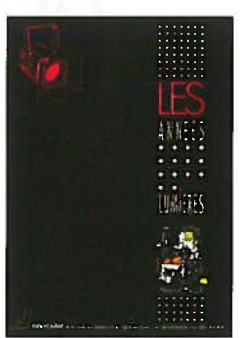
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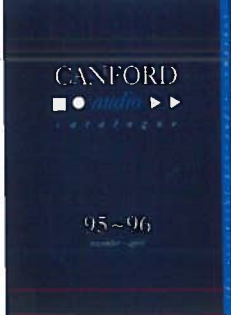
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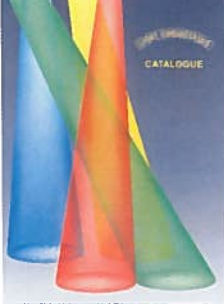
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THE LONG, SHORT & TALL

The best just gets better. PLASA 96 was a runaway success - L+SI offers the definitive coverage of all that took place at Earls Court 1 in September

1996 was always going to be a pivotal year in the history of the PLASA Show. With the move to Earls Court 1 and a seeming steady rise in the general 'feel-good factor', the Show could hardly fail. Statistically, of course, it ran rings round previous shows with the count up on exhibitors, visitors (15,000 plus) and new products, not to mention the fillip proffered by both the British Music Fair and Presentation Technology running alongside. The big issue was always going to be how Earls Court 1 would shape up against the more modern alternative next door. Although, some doubts were expressed, there was a generally optimistic feeling that it can only get better. Like a plant that has outgrown its pot, you can either retrain it, in which event it may die, or transplant it to a bigger container where it should thrive.

While the initial response could be entirely down to our own natural conservatism, there was certainly a feeling of disorientation, either because we had got so used to the previous venue or because the existing system didn't work. Lessons could be learned from supermarkets and shopping malls in this connection. But another question might be whether the basic commercial instinct to out-do your competitor doesn't lead to a position where you have, in effect, a room full of people all trying to shout louder than the next, with the net result that the visitor hears none of them at all.

Like the merchants of San Gimignano in Tuscany in the middle ages, and later the commercial behemoths of Manhattan, it seems to be a natural commercial instinct to want to build a higher tower than the other guy. Thus, we have the exponential growth of our annual show which follows the same rule. Despite famine, pestilence and probably a plague of frogs, individual stands get bigger every year. They can't go upwards so they go outwards instead, and whilst this may mean that visitors are a little more foot-sore than they would wish, it does ensure that the Show looks impressive no matter what the angle of approach. It also guarantees that people are aware, at least, of your presence which is, perhaps, what really matters. If you are not there, the tongues



Crowds start to form at the entrance to Earls Court 1. The total visitor count over the four days was over 15,000.

inevitably start wagging. One brave soul who has grasped this nettle could prove a useful case-study in this context if he is prepared to share the experience with others.

Enough said. Scale is a price worth paying if it yields the many benefits that PLASA 96 did. The seminars seemed to go extremely well, and attendance was high at those I visited. At the Design Talk seminar hosted by the ALD, the assembled (predominantly theatre) lighting designers emerged with a consensus which was strongly resistant to the benefit of automated luminaires, though it wasn't entirely clear whether this was more to do with the high colour temperature lamps and the nasty bright dichroic colours, or the cost-to-benefit ratio. Certainly everybody denied interest in an automated framing spot weighing and costing God knows what and with more attribute

PLASA AWARD WINNERS

The five winners of the Awards for Product Excellence were: Avolites, for the ART Dimmer; Altman, for the Par Plus range of lamps; Lightfactor, UK dealers for High End Systems' Studio Color; Mark IV Audio for the Klark Teknik DN4000 parametric equaliser and delay and Pioneer for the CDJ-50011 professional CD turntable.

Five commendations went to CCT Lighting for the Freedom range of profile spots; Clarke & Smith, for their television sound receiver; ETC Audiovisual for the PIGI Universal Single Scroller; Stage Technologies for the Acrobat 3D! computer control system and Teatro for the Colour Box colour change system.

In the Stand Awards, several companies can congratulate themselves for catching the judges' eyes. The overall winner was Lightfactor, with Navigator held to have put their stand to most imaginative use and Bygone Times Ltd taking the best small stand accolade. Commendations for stand design went to Abstract, ETC, Owl, Unusual Rigging and Vari-Lite.



PLASA played host to groups from both Australia (seen above) and Japan.

channels than the spines on a porcupine. Come on guys, given the millennium money and the application, would you kick it out of bed? The fact is that in the real world such devices have their place, witness Andy Bridge's *Heathcliff* when it comes along this month. And now DHA's making a moving Beamlight...

A new feature this year was the stage area provided by Theatre Projects/Concert Production Lighting, which not only hosted the Gemini DJ competition, but also provided the opportunity to catch the double act of Hersey and Pilbrow plus associates telling Tales from the Production desk. Brian Croft of Vari-Lite had already established the theme by opening

up his own particular box of memories from his years spent on the rock and roll side.

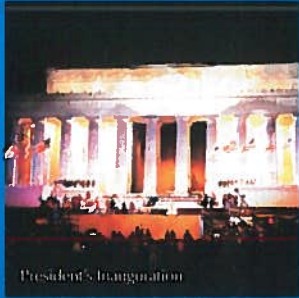
As usual, the awards were hotly contested: on the best stand award front, High End Systems and Lightfactor walked away with the prize. Their winning stand was excellent as usual, but it was the same format as at previous shows so why didn't it win previously? Vari-Lite's commendation was presumably for sheer programming achievement and they would certainly have been my runner-up in the relevant attention-getter department. Personally, I would have liked to see Unusual Rigging get something - their giant two storey high articulating puppet spinning the tale about the company's capabilities far more graphically than anything else that I saw.

Fortunately, I have no quibble with the product awards - Altman's Par Plus, Avolites' ART dimmer, High End Systems' Studio Color, Klark Teknik's parametric EQ and Pioneer's CD turntable. One company who may well be disappointed to miss out is Starlite, whose Lazarus act, in rising from the living dead, has certainly yielded spectacular results. Their new Mk 5, available exclusively from AC Lighting associate Lane Lighting, certainly looks, and is, impressive. Talking of resurrections, the morphing of Pan Command, via Chapter 11 back into a stable Morpheus Lighting is good news; maybe now they will actually be willing and able to supply product to the marketplace!

So, there was plenty of new product. Especially in the moving light department there



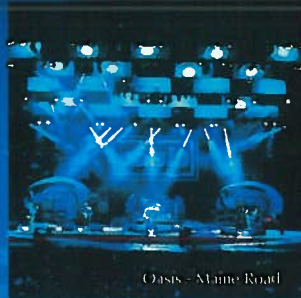
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The PLASA Publishing stand welcomed Terence Rees and David Wilmore to sign copies of their *British Theatrical Patents 1801-1900*.

still seems to be insatiable demand for more and more automated product - Beamlight from **DHA**, Controlite from **Amptown**, MACs and PALs from **Martin Professional**, plastic Madscans from **Mad Lighting**, Move-Its from **La Novalight** and PALs pirouetting into Pirouettes from **Strand**, to name but a few! So there must be a market out there, even if those theatre lighting designers deny it thrice.

With the background of today's live rock and roll industry becoming ever more reliant on compact sound reinforcement technology, probably the most significant theme among audio manufacturers at the Show was the continuing push towards developing lightweight, but high power amplification. Companies such as **Lab Gruppen**, **CAudio** and **Malcolm Hill Associates** have been particularly successful in establishing favourable power-to-weight ratios, while other manufacturers have made notable advances in smaller consoles and loudspeaker systems.

It is also encouraging to note the broadening scale of manufacturers at the show, and with it



Richard Pilbrow, Robert Ornbo, David Hersey and Rob Halliday with *Tales from the Production Desk*.

the increasing diversity of product on offer. More power to the elbows of all R&D departments across the land. One of the big highlights of this year's show was the line-up of entertainment after-hours - the temptations were many and various. Well, the beer comes in many designer labels these days.

A pleasant little boat trip with **Coe-Tech** and **Lumenyte**, the **Avolites/JEM/Live!/Martin/SpotCo** gig at the Shepherds Bush Empire, the traditional evening at the Players Theatre (at which Derek Gilbert and the **Glantre** party were mercilessly teased by the chairman), with dinner courtesy of PLASA Publishing, a delightful supper at L'Odeon with **Mondiale**, and **Pulsar's** illuminate party at the Limelight, which they had illuminated for the occasion.

Given the growth of the Show, four days to get round is becoming an increasingly tight squeeze. It passed in the blinking of an eye and close of play seemed to be upon us before we'd begun. Perhaps next year the giveaways will be roller-skates or foot-spas!

Tony Gottelier



PLASA's John Offord, David Hopkins, Paul Adams (chairman) and Matthew Griffiths with James Brooks-Ward of P&O Events welcomed guests to the opening night reception.

LIGHTING/CONTROL/STAGING/EFFECTS

White Light, celebrating their 25th anniversary with a simple stand featuring an open bar (complete with birthday cake each day), had secured the prominent position next to the main entrance. Many industry figures seemed to get as far as the company's bar stools, and just wait there for other people they wanted to see to float past.

The stand also had a wide range of products from the company's extensive hire stock, including ProSpots (along with representatives from the newly re-energised Morpheus), the Amptown spot and washlights, Martin units, some of Strand's new Pirouette moving lights, Source 4s, CCT Freedoms and more - including, by the final day after it had been rescued from customs, a Morpheus BriteBurst - a big moving head containing a 1200W HMI lamp, a 16" mirror giving a three degree beam, and a fast mechanical shutter, all topped by a scroller. Suffice to say, it lives up to its name!

On the ground, the MacLux Pro lighting program from the Macintosh was joined by Crescit Software's SoftPlot for PC users. Microfloods and

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David Catterall (second, left) and Adam Bennette (centre) of ETC who presented Source Fours to Dominic Le Foe (left), John Page and Chris McCabe (right) of The Players Theatre.



White Light celebrated their 25th anniversary at the Show: MD John Simpson raises a glass with news presenter Martin Lewis.

battens from L&E were attracting interest from many sources. And White Light's own new WaveFX animation unit was producing a stunning effect of a flag blowing in the breeze - and not producing it from the usual effects projector. Certainly this is a use for the Source 4 Par that ETC probably never envisioned.

The equipment on the White Light stand actually seemed to sum up the theme of the show, from a lighting point of view, rather well. There didn't seem to be many products that were completely new and original, but there were developments on the now familiar themes of automated lanterns and the desks to control them. White Light were running their DMX moving lights from the Strand 530, which was also on display across the aisle on Strand's own stand.

This desk has continued to evolve since last September, with useful extra functionality being added in response to user feedback, and still leads the pack of DMX theatre/moving light controllers (you may think that you have no need of a moving light controller, but, whatever scale of theatre you are in, I don't think it will be that long before moving lights reach you). Now that Strand have sorted out the control end (and following their split with Martin, whose products they used to rebadge), they have also decided to move back into making moving lights of their own with a revival of their old PALS system.

Completely re-engineered, now able to run under DMX control and re-christened Pirouette, Strand were showing Alto 2.5k PCs in the moving yoke. The units are very bright, have a huge beam-angle range, and move smoothly. They can be topped with a colour changer (either a scroller or, as on the White Light stand, a Morphous ColorFader) to give a very versatile unit, hampered only by its relatively slow movement. However, they are also relatively inexpensive: you pay your money and take your choice, as they say - and this could be cheap enough to persuade mid-size venues to invest some of their lottery money.

Strand also had an entry to the low-wattage spotlight category: the Brio was launched at LDI last year as the Zoom Leko, but has been renamed

for the European market. It takes the back end from their Leko, adapts it to take a 600W lamp and stuffs it into what looks like the lens tube of the Prelude range. The main innovation isn't the lamp, though, but the sliders for the lenses - these have click-stops along their travel, making it easy to match the focus from one lamp to the next by just counting the number of clicks.

The main rival to both the desk and the Brio were hiding on the other side of the hall, on ETC's stand. The Source 4 range has had a fantastic first year in 240V form - the profile has featured in two big West End musicals and many smaller shows to practically universal acclaim, and the Source 4 Par has been doing very well in theatre and on trade shows. The European versions are now fully CE approved, and light output is also being improved with the introduction of a new, six-filament version of the 240V lamp. Hardened British technicians unused to working with fixed beam angles will also be pleased to hear that zoom lens options are on their way. Also showing in Europe for the first time was the CE, 240V version of the Sensor dimmer (which has dominated the American dimmer market for several years) and the Obsession ML. First demonstrated at LDI last year, this adds moving light functionality to the existing Obsession line of consoles; though it has undergone a number of revisions since last year, and still isn't officially released, ETC have put a lot of thought into this desk.

ADB have also been on the fringe of this lighting control market for several years with their Vision 10 desk - on the fringe because, although the parts of the desk controlling conventional lights have been operating successfully for a while and have already been installed in several venues in the UK, this year's PLASA was the first appearance of a working moving light panel - which is surprisingly good for a first version. The desk has always been slightly hampered, from a British point of view, because its playback philosophy is different from the Strand 'norm' that many British users have grown up with. However, its timing capabilities are incredibly useful for dealing with moving lights. The desk still has some limitations, but it,

too, will become an interesting competitor with time.

The same is true of AVAB's Panther, which also features high quality keypads, moving light functionality and highly versatile timing options, but which is let down by a cluttered display that makes it difficult to comprehend the desk quickly. AVAB (sharing a stand with Transtechnik who now have an 80% stake in the company) were also one of the companies showing products that could be considered 'derivative' of some of the most exciting products of last year - Offstage, a WYSIWYG-like lighting visualisation programme, and StarTracker, an Autopilot-like automatic follow-spotting system, though AVAB's version uses television cameras rather than infra-red transponders used by Wybron's Autopilot - and isn't a finished product yet. It was interesting to see other companies picking up on Wybron's idea - Martin Professional had another version, GAMS Lighting Director, on show on their stand.

Compulite, who have been making DMX moving light desks for several years now, have seen other companies get all of the publicity in the last couple of years. They have responded by re-designing all of their consoles into a slick-looking new family of grey cases, with the larger desks sporting more macro buttons than before. They were also showing CompuCAD, their WYSIWYG look-alike, though it is more Compulite-specific than WYSIWYG, since it can only be connected to the company's consoles through their Ethernet network. However, its inclusion of many standard scenic items - chairs, tables - does make it easier to draw a set plan in the program than on WYSIWYG.

The busiest man on the Compulite and Stagetec stand was Dan Redler who, as well as selling desks, spent much of the show commuting upstairs to the Focal Press stand, where a demonstration of his 'Stage Lighting, the CD-ROM' was running. This looks like a fabulous product because it can actually display lighting in action, rather than just in static photographs.

Compulite have been demonstrating that smaller moving light controls are in demand with



ADB's Jackie Staines (left) demos Vision 10.



David Hersey (centre) and his team get cosy.



Sarah Spencer of ETC collects a stand commendation from PLASA chairman Paul Adams.

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Jim Douglas of Unusual Rigging (right) with Ian James of Helvar Electrosonic.

their little Spark desk for a while now, and others are now starting to move into this market. Celco were one: the Ventura 1000 looking a little like a stretched version of their Pathfinder and Navigator consoles, the extra rotary controls hinting at the desk's ability to deal with up to 100 automated fixtures. However, it operates in a manner that will be familiar to users of Celco's earlier desks, ensuring that they can move up to it quickly, and it is relatively inexpensive, ensuring that they can afford it! **Zero 88** were another: the name of their desk, Sirius 250, clearly shows that they intend it to be as popular for running small moving light rigs as the Sirius is for running small conventional rigs. The desk's main virtue isn't on the surface, but in the software - its method of handling the timing of different functions within cues, using on-screen bars that can be dragged and dropped to time events relative to each other, looks to be incredibly versatile and easy to use.

Also vying for position is the latest addition to LSC's Axiom range - the 48/96 and 60/120 consoles. These desks incorporate many new features, including four-fold memory capacity increase and a pre-programmed library containing all the parameters of a range of moving lights. **ESP**, meanwhile, featured RVE's new range of lighting consoles, available in 24-, 48- or 96-channel versions, as well as the other products in the RVE portfolio.

Still leading the way in features, though, was **Flying Pig's** WholeHog II, on the **AC Lighting** stand. Still as daunting as ever at first glance, still relatively quick to pick up and still gaining new features all the time, the newest being a package of pre-defined effects patterns that can quickly be applied to any function of a moving light. The Auto Effects package provides a stock of 50 pre-made effects, things like sweep out, pan wave or tilt wave around a central point, with the ability to impose rotate adjustments, circle size, colour off-set, and overlay colour chase all on one cue. For the fader hungry, there is now also the Rock Wing available, a 24-fader panel giving access to 42 playbacks.



Andy Stone of Stagetec (right) shows Compulite's new Spark to Richard Cuthbert of Stage Electrics.

The close relationship between the Hog II and WYSIWYG was also clearly visible, though it is a shame that AC (and others) are so reliant on WYSIWYG for demonstrating their desks - it is a superb product, but at the end of the day it should be about dancing lights rather than dancing pixels! **Jands** were actively promoting Jands-Hog, the generic alternative to the family of 'hogs', alongside the Event consoles.

But what to control with all of these controllers? On the moving light front, three new products stood out. **High End** had the Studio Color, for which they picked up an award. The company seem to have sorted out many of the niggles the product still had at the end of last year, and it now seems to be taking the market by storm. Certainly it has a good, clear, bright beam and a great range of colours - though, of course, it is hard to judge a product without direct comparison with its rivals. Fortunately, hidden away in a far corner of the hall, were **MA Lighting**. They were mainly demonstrating their range of lighting controllers, including the LightCommander conventional desk and excellent Scan-Commander moving light desk - but they had also pulled off a coup which, I think, should have instantly won them stand of the year: rigging a Studio Color next to a VL5, with both controlled from the ScanCommander. I hope Vari-Lite's soon-to-be-launched discharge VL5 is all they claim it's going to be!

But, back on track, the second stand-out new product was the Starlite Mk5 from **Starlite Systems** (available via **AC Lighting's Lane Lighting**). This automated yoke spotlight with a 1200W HMI light source (optional 575W also available) attracted much attention at the show with luminaries of the calibre of John McGraw and David Hersey showing great interest. Despite the inherent heat problems of such a powerful lamp, the Mk5 is remarkably small and lightweight - just 35kg - and the head is barely larger than a shoe box. Aimed directly at the professional lighting service industry, it has all the features you'd expect, dimmable, auto-iris, two six-position rotating gobo wheels with varispeed and indexing,



The busy stand of Zero 88 Lighting.

full CYM cross-fade colour mixing and even a prism effect. All effects are separate modules all controlled by identical drive cards which makes the lamp an extremely serviceable item. Optical quality has not been compromised in this tight package: output is claimed to be comparable with a Cyberlight or Golden Scan 3, and the gobo image demonstrated exhibited nothing in the way of aberration in the limited throw area of the stand.

The other major newbie was one with a distinguished theatre pedigree: **DHA's** Digital Beamlight, the main feature of a simple, yet very elegant stand. Having undergone some refinements since their first outing on *Martin Guerre*, these units are now about ready to go out and conquer the theatre world, since they give a very actor-friendly quality of light that none of the rock and roll originated units can match, as well as having smooth and precise movement, even from DMX control.

Not new, but still outstanding for its movement and build quality, is the German-built PML ControLite, a DMX-controlled VL2-look-alike that was on show on both the White Light stand and that of **Amptown Lichttechnik**, its creator. Containing a 1200W HMI lamp, this unit is bright. It is also the smoothest-moving DMX-controlled light I have seen, and both it, and its Washlight sister, deserve more attention than they have received so far. Certainly, it appears smoother than the much-heralded **Martin Professional PAL** moving mirror, and matches it in brightness. PALs were everywhere at the show, though this did mean that many of the exhibitors who were using them had discovered the limits of the unit's built-in framing system: it can't make a triangle, for example.

Vari-Lite actually scored what would have been a good publicity coup if it had happened in public, rather than in the privacy of the fit-up period: while many stands were struggling to sort out DMX issues for tiny rigs, Vari-Lite put in an angled eight-by-eight grid of VL5s running from an Artisan, which went straight in and worked first time, something of a vindication of their system.



A VIP luncheon line-up including Jonathan Park, David Hersey, Richard Pilbrow, Gavin Henderson and PLASA trio of Matthew Griffiths, Paul Adams and David Hopkins.



Colin Whittaker of Celco (left) oversees the first TV sale of the new Ventura 1000 to Romanian Television. The sale was made through Edgar Surin of EST Audio (right) whilst Romanian TV lighting director Victor Stefan looks on.



Thomas Dietrich of ETR, back with the Luna 24.

These 64 lights then gave a stunning display for the duration of the show - clearly proving the winner in the 'dancing light versus dancing pixel' stakes and deservedly picking up a special commendation in the best stand awards for the company and programmer Andy Voller. However, the company do now have to deal with a DMX world, which is why they were showing their new Universal DMX Interface, which runs on the Macintosh that now comes connected to just about every Artisan. It's not a perfect solution, but it does at least let the desk control things like the two Clay Paky Golden Scans that were nestling in amongst the VL5s. The company also had a new medium angle lens for the VL6, which should make that little unit even more useful for theatre work, and the cute little **Irideon AR5** moving, colour-changing architectural fitting which is now nearing final production.

Theatre Projects/Concert Production Lighting launched a brand new CAD service with a WYSIWYG interface. This new AutoCAD 12/13 facility is great for lighting design and blind programming because it enables real-time viewing and programming. Lighting designer John Sinden used the package for the recent M People concerts at Alton Towers and Crystal Palace, and TP/CPL are currently working on an expanded system. They have also picked up the contract for *Heathcliff* which opens mid-October (see L+SI next month for full review).

And for those not (yet) into the world of moving lights? Well, the range of new lanterns was quite limited - companies were mainly refining products that they launched last year. The Source 4 range has already been mentioned, and **Altman** were showing their Shakespeare range, now also CE-marked and already available with zoom lens options, and their new lampholder-plus-mirror that allows the same bulb to be fitted to existing Par cans.

CCT were again showing their Freedom series which, with its range of fixed and zoom lenses and



Vari-Lite Inc's executive VP David Alley cuts the 15th anniversary cake whilst behind, Tom Littrell eyes up the biggest slice.

the capability to add a local dimmer to each light, remains the most interesting of the 575W/600W lanterns - as well as being the only one that can take Silhouette 30 accessories and colour frames. The Freble version - a unit that can have either a Fresnel or a PC lens attached to the front - previewed at the ABTT show, was also on show in a more robust, finalised version.

More traditional, though still superb, lanterns could be found on the **AJS** and **ADB** stands. AJS were showing the **Selecon** range, using the show to launch a new range of Acclaim floods that can either be used singly or bolted together to form four-cell units. Their feeling that many people were being swept up by the designer 'hype' and were therefore ignoring more traditional units that might actually suit them better is true, though, of course, if a lower-wattage bulb and improved design can match the brightness of a higher wattage bulb, then there can be very few arguments for not going down that route - and one suspects that Selecon will also be taking this approach before too long. In the meantime, their existing profile range is superbly engineered and gives out high quality, bright beams. The same is true of the ADB range, this year including the new condenser-optic Europe profiles, which are good quality, traditional lamps.

Also fairly traditional, but not feeling dated thanks to their incredible performance, are the **Robert Juliat** range, which now seem to be finding favour even with some British theatrical institutions, who are perhaps realising that they're only going to get big lottery handouts once and so the equipment they buy with the money had better last! New for the show were a revised 1200W tungsten unit that could be converted to take a 700W MSD bulb, with fading then provided by a new front-mounted DMX-controlled dimmer shutter, and the Digitour V portable dimmer rack.

Tom Mannings of **DeCoupe**, Juliat's UK distributor, has something of a reputation for taking on out-of-the-ordinary products, a



Alan Graham (left) and Gary Pritchard of LSC with Softlink computer patching.

reputation he continued to expand at this show. Firstly he has taken on the **MDG** Atmosphere smoke machine, shown on MDG's own stand (more of this later). More interesting is the Swiss-made Copernik lighting system, a full-range colour mixing system that tackles the problem in a different way from the dichroic glass colour systems used by most moving light manufacturers. These use subtractive mixing; Copernik uses additive mixing, with seven M16 bulbs, two in each of the primary colours, plus a white central unit, mounted with their transformers in a unit that will fit into the back of a Par can. Each set of bulbs can be controlled separately, giving a beautiful range of clean, clear colours - and these can then be cross-faded at any speed, without any limitations imposed by mechanical colour systems. It's a novel approach, and one that I hope DeCoupe succeed in interesting people in.

Directly descended from the Supertrouper, **Strong** (on the AC stand) featured the Supertrouper II, considerably smaller and lighter than its predecessor, but packing a more powerful punch. **Spotlight's** comprehensive range of stage luminaires (also on AC) this year included the new Combi range which features a series of Fresnel lens spotlights and Pebble-Convex lens spotlights ranging from 500W to 2500W. **DeSisti** were showing the Shadowlight series, which comprises the versatile Goya (1.2kW and 2.5/4kW versions) and the Renoir (2kW and 5kW versions), which produce a hard-edged, single shadow effect. The De-Lux range of fluorescent fixtures was on show in two, four and six-lamp versions for the first time in the UK.

New York State-based **Lycian Stage Lighting** were present on the ESTA Pavilion with their well-established range of followspots, from the 1236 Clubspot to the 2000W Xenon.

Away from lamps and control, colour changers are continuing to evolve - and to fall in cost, so becoming more affordable to theatres of all sizes.



Awards aplenty: PLASA's Paul Adams presents awards to Robert Altman and Andy Neal for Par Plus from Altman (left); David Rose of Navigator who picked up an award for most imaginative use of stand space (centre) and David Manners and Don Hindle of CCT, for the Freedom range of profile spots.





The DJ Competition attracted a huge crowd.



A second presentation to the trio from The Players was made by Daryl Vaughan and Keny Whitright of Wybron who donated Colouram colour changers.

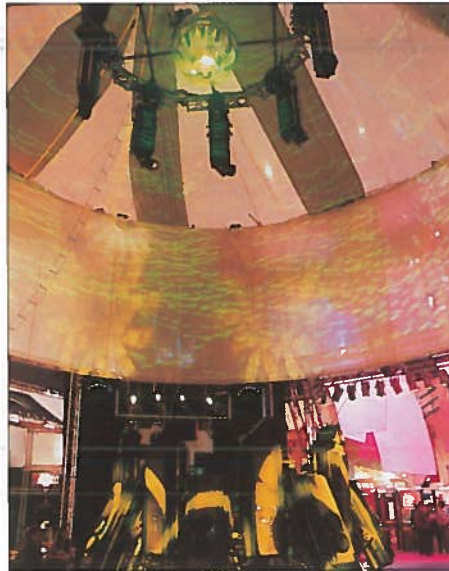
Of most interest to the main users of Rainbow scrollers - probably the standard scroller in the UK - was the release of the next generation of Rainbow on the **M&M** stand; this offers up to 32 colours, easier loading along with automatic calibration and trimming through a new LED control panel, adjustable mounting plate and a larger aperture, allowing its use on large Fresnels - all in a package which is cheaper than the outgoing Rainbow 2-16. It looks like a superb product and M&M have produced a selection of little 'how to . . .' cards to help with the transition.

The Rainbow may be the standard scroller in the UK, but others are gunning for it - most noticeably the low-cost, plastic-bodied Chroma-Q unit on the **AC Lighting** stand, which actually seems to work very well given its low price. And so many other people now have so many other kinds of scrollers that just keeping up with them is hard work, though **Teatro** continue to offer excellent quality with their unusual Colourbox changing system and **Morpheus'** ColorFader colour mixing scroller system stands out from the crowd.

Wybron's range also stands out because theirs is the standard in the US - and they are now determined to increase their presence in the UK as well. Their stand, shared with **US Lights**, had a selection of their products in a wide variety of sizes on show, along with examples from the superb Wildfire UV range that US Lights import, and an Autopilot system set up to follow a remote-controlled car. Despite the hype on other stands, this is still the only working and actually available tracking system. And one that is increasingly finding uses other than automated followspotting.

The most noteworthy of these is its function in tracking the positions of the free-ranging trucks in *Martin Guerre*, and then feeding those positions back to the automation computer (see L+SI August 96). This whole system, now called Explorer!, was designed and created by **Stage Technologies**. Theirs was another beautifully designed stand - simple, yet allowing many of their products, including the Revolution! revolve drive, to be seen in action. The main attraction, though, was the first showing of their new range of 3D control desks - so called because they allow 3D on-screen visualisation of the set movements. Their suite of products, including the new BigFOOT high capacity winch, received a commendation from the PLASA awards panel.

Stage Technologies and another exhibitor, **Triple E**, used the show to announce that they had become "compatible competitors", with Triple E



Coemar had two new lamps to introduce to the UK market: the Nat MM Zoom 2500 HTI and the EHP2500.

becoming the exclusive European distributor for Stage Technologies' TOWTrack track motor, and Stage Technologies in return becoming Triple E's preferred supplier of control systems. Triple E were showing a variety of products on their stand, including a new hook clamp designed for the Royal Opera House, and the M::Stage staging system designed for **Maltbury Staging** and intended to provide a heavier duty, yet easier to store staging system. Sticking with staging companies for the moment, elsewhere in the hall **Steeldeck** were flexing their muscles demonstrating that their staging system was clearly capable of withstanding intense pressures, as proven by the four mammoth performers a.k.a. The Blobendales. While Steeldeck showed its strength, **Mainstage** were content to focus on their agility with the custom-designed Topdeck. Newcomers to the Show, Montreal-based **Stageline** showed a natty range of mobile staging available for rental. Those stalwarts of the impressive design of staging, **Brilliant Stages**, on the Vari-Lite stand, more than proved their expertise by constructing it.

Tracking back to automation, the main competition for the British companies had come up from Australia for the show, almost certainly with the intention of keeping up a UK presence as the tendering for the new installation at the Royal Opera House goes through: **Bytecraft** have a very strong reputation for automation and control in Australasia, and seem keen to spread that reputation into the UK. The company are perhaps best known by the UK lighting community for their Sage lighting protocol converter box, which has proved invaluable to many people in many situations.

Even as the world standardises around DMX control, the need for such converters still exists, and such products were demonstrated by **Gray Interfaces** in the ESTA pavilion, and by the British company **Artistic Licence** - their DMX Dongle is particularly flexible and seems to be able to go from just about anything to just about anything. Their range of DMX widgets is also still gently growing, with new six and 12-channel DMX desks on show for the first time, and with both the MicroScope DMX tester and Scroll Control unit having undergone major software upgrades.

Two other big players in the DMX-widget market are **XTBA** and **Howard Eaton Lighting Ltd**, both of whom make a versatile range of splitters, adapters and DMX network products. Chris Cook of XTBA was joined by Bob Goddard of **Goddard Design**, demonstrating his DMX testers like



Martin Professional - big is beautiful.



MAD Lighting lines up its Madscans.

no-one else can, and by representatives from LuxArt demonstrating the LuxArt lighting CAD package that XTBA distributes. **HELL** had their DMX network products on show, and were handing out a computer disk giving full details of those products. Those interested in advanced uses of DMX should have caught the 'start code multiplexing demonstration' on the **FPF** stand. This is a unique application of DMX512 in which both messages and lighting information are sent via a single DMX512 data stream using data packets with different start codes. In addition, Showdesk - FPF's first major application for the PCDMXT1 and PCDMXR2 - was on display. This is a powerful 512-channel virtual lighting console application for Windows 95.

Other highlights? The stunning projection work on the stands of **Hardware for Xenon** (who launched new Optimal Light Sources, available in 2000W, 5000W and 7000W slide projectors), **E\T\C** (complete with double film scrollers doing spectacular work) and **Pani**, with Pani's products also being demonstrated by **Production Arts Europe**, who seem to be enjoying their first year of life in the UK. There were the usual huge assortment of products on the **Lighting Technology Group** stand, built by for them by **James Thomas**. In a complete break from the past, the stand followed a futuristic sci-fi fantasy world, complete with the actual model of the gruesome Alien from the film of the same name, whilst the stand itself was divided into pods, with each company in the Group - Valiant Lamps, Action Lighting, Lighting Technology and Lighting Technology Projects - having their own area. LT came tops for the brightest pod with an extensive display of its recently extended range of flicker candles. Another wide selection of bits-and-pieces were to be found at **TMB Associates**, and stands galore (including a new Professional Followspot Stand) from **Doughty**. The wacky, wonderful Spiralift tubular thrust screw lifting device - impossible to explain, but fascinating to watch - was shown on the stand of the redoubtable **Glantre Engineering**, whilst software galore abounded in the form of lighting CAD from **Starlite Systems**, with Virtual Light Lab on the **Future Light** stand and Gel File on the **GAM** stand, allowing experimentation with colour mixing and angles on the screen of Macs and PCs respectively. Axon's **ShowCAD** was appearing on more stands at this year's show than ever before. Current developments are towards a Windows 95 version with a Beta release version planned in time for LDI

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Mike Lowe of Teatro receives his commendation 'gobo' from PLASA Chairman Paul Adams.

in Orlando next month. Considerable revisions to the software are taking place which have certainly made the system visually more graphical. With more Windows-oriented features now bedded in, there will presumably be no let-up in its popularity.

British Harlequin showed their full range of floor surfaces, whilst **Harkness Hall** focused on electronic control systems and a new range of pulleys, but also featured their full range of suspension, rigging and scenery fittings. First-timers **Hoffmann Fordertechnik** introduced the Liftket, and also at the Show for the first time, **Tatra** showed their tracking and point hoists.

Real colours were on offer from **Lee, Colourlite** and **Rosco**, the latter launching their new range of colour filters, CalColor, alongside over 300 new gobo designs, whilst scenic selections from **Flint, Gerriets** and **Blackout** also appeared. An oasis of calm was provided by **Navigator Systems** with their relaxing painted garden theme and also **Mushroom Lighting** who seemed quite content to relax after building seven other stands and supplying equipment to a further 14.

Rob Halliday

Clay Paky and **Pulsar** took an open-plan approach, which cost them nothing in presentation as the Golden Scan-led lightshow was as spectacular as ever, highlighting the flexibility of the GS MRGs and HPE 1200s.

For what seems the first time in ages, there are no new products from Pulsar this year, but they have not been idle. Having brought their entire product range up to meet CE standards they are now applying their resources to comply with the Low Voltage Directive and confidently expect to be ready when the regulations become law in the New Year.

On a stand of their own for the first time, **OptiMusic** regularly attracted crowds for demonstrations of their OM - 1 Light to MIDI controller. This interactive controller, triggered by interruption of light beams (reflecting light back to a sensor in the lamp) has seen several software improvements since it first appeared last year on Coe-Tech's stand. Improved sensitivity and intensity measurement, make controlling any MIDI function easy and intuitive.

Distributors **JYG** displayed the latest Victory II scanner from Italian manufacturer **SGM**. This



Phil Norfolk of Lighting Technology, complete with alien friend!



Main attraction on the Stage Technologies stand was the launch of their 3D control desks.

bright 250W 24V auto mirror lamp features 16 colours, four rotating gobos, plus three fixed and a four-facet prism. Dimmable and with strobing, the lamp can be DMX controlled or via SGM's own Pilot 1600. A surprising success on the stand was the Turntable Top, a simple metal cover to customise pro-disco record turntables. Available in several colours, this item proved popular enough to stimulate five figure sales.

Two new lamps from **Mad Lighting**, the Mad 611AR and the Star 511AR, are essentially the same unit with either rotating drum mirror or scanning mirror on the front end. Launched at Rimini earlier in the year, the two lamps feature 150W MBI arc lamp and split colours from a trapezoidal framed dichroic wheel. In prototype form was a new MadScan, nicknamed the 'Plum' due to the colour of the model shown on the first day of the show. This is a new high-impact plastic moulding model (utilising riot shield material) that will soon encase all Mad Lighting products and goes into full production in the New Year.

Giving, arguably, one of the best light shows at the exhibition, **NJD Electronics** had many new products to show, and not just lights, as you'll find from the audio section of this report. Launched in May of this year, the NJD Microbeam is claimed to be the world's smallest scanner. This 100W unit with six colours and five shaped gobos is punchy for its size and yet manages to squeeze in a micro-stepping motor on the mirror head. The Predator MX (575 Metal Halide) and its smaller cousin, the Predator HX (250W Halogen), are two top-of-the-range scanners aimed at the pro market. Controlled by either DMX or 0-10V, the lamps feature eight colours and seven gobos and the excellent quality optics in both units make them exceedingly bright for lamps of their class.

Cerebrum are another dealer with a strong product range and used the show to announce that they have taken on distribution for Avolites products. The ever-expanding range of **Maris** DMX-based control products has been joined this year by version two of the Stinger show controller. This unit, coupled with the Blip (an infra-red control device also from Maris) allows for the control of low-cost domestic IR controlled equipment such as CD players and televisions in a complex multi-media type show environment. With the potential for programming up to 32 'shows', the Stinger and Blip combination means



Hardware's Yves Ruellan (right) and Jean Luc Michaud (left) with LD Martin Kisner of the BBC.



Stephen Jones, Derek Gilbert and Matthew Tonks of Glantre.

highly sophisticated event sequences can be created without recourse to a lot of expensive electronic devices.

The R2D2 is a powerful little DMX lighting controller from **LMP** in Germany. Designed for 19" rack-mounting, the desk will control up to 32 scanners (eight different types simultaneously) plus 200 dimmer channels. As well as the expected chase, scene and sequence modes, the desk also offers a 21-channel music analyser for sound to light triggered shows.

Light Processor's Q Commander is a neat 256-channel lighting desk designed with the moving light operator very much in mind. Programming such multi-channel lights (the Q will accommodate up to 20 channels per fixture) is made easy by push button access to each attribute, each button being automatically assigned by the installation of fixture libraries uploaded from PCMA cards. The card slot also allows for downloading and storage of complete shows. Scenes (512 in total), sequences and even entire shows can be allocated to any one or more of the two banks of 16 buttons and touch-sensitive slider pads (layered on two pages) giving a virtual 64 playback keys. New for this year from stand neighbours **High End** was the Nebula haze maker for accentuating beam shows. This unit has a very low evaporation rate - three days of the exhibition had seen less than one litre of its glycol-based fluid consumed, and it only produces a very light water soluble deposit. With a built-in compressor, this unit could theoretically run forever, only requiring the occasional top-up.

Known for their presence in the movie industry, **MDG** fog and smoke generators employ liquid CO₂ for their propellant. Nothing new in that, you might say, but these units have a reputation for long life and reliability through nothing more complicated than an in-built self-cleaning system. When smoke generation is halted, the gas continues to pass through the heating block purging the contents and preventing residual build and clogging. The same system is employed on their hazing machine, the Atmosphere. So clean is this unit that it has an in-built boxer type fan used to disperse the haze, fitted immediately beneath the delivery nozzle. Maybe more expensive than the norm, but equally more durable.

The Smoke Factory made a haze on the **M&M** stand with their full range of smoke, fog and haze



Graham Thomas and John Lethbridge of Cerebrum - now handling Avolites' range.

machines, whilst **The Smoke Company** created much the same effect, but in greater proportions, with their new **Powerfog Hydrahaze**. Last year **The London Fog Company** launched its **Micro** range, possibly the smallest smoke machines in the world and this year they went one better with **Mini Micro**.

The **Low Smoke Generator** was first shown at **ABTT** earlier in the year, but **Le Maitre** were unable to demonstrate it due to local exhibition regulations. At **PLASA** it ran in all its foggy glory. The **LSG** uses a standard **Le Maitre G300** smoke machine run through a **CO₂** exchanger unit to produce high volume, low dispersal rate **Dry Ice** style fog. The consumption of low pressure **CO₂** is around **3.5kg/min** when full on and the machine will produce a **12ft** wide cascade effect pumped up to **30ft** high.

More smoke from **Jem**, with their **Hydrosonic 2000** haze generator. This is the latest development from their patented **Hot Technology** where instead of heat, sonic transducers are used to produce cracked oil type hazes by agitating the fluid. The machine uses a **5%** glycol solution, is virtually maintenance free and pulls just two amps.

Tomcat are a regular visitor to **PLASA**, but this **US** truss and roofing manufacturer took the opportunity this year to announce the opening of a new **UK** fabrication facility in **Evesham**. **Tomcat's** well known line of fold flat trussing is gaining increasing recognition in the **Far East**, where storage space is at a premium and their outdoor roofing systems are now regularly being used indoors in **Japan** to create theatre-style venues.

In fact, there were more truss manufacturers at the Show than ever before. **Penn Fabrication** introduced the **MSB** system, a completely modular system for constructing stage, rack and wall distribution boxes. On the stand of **Lightstorm Trading** were **MEC Truss**, who were showing their own modular truss system aimed at simplifying rig design. **Lightstorm**, incidentally, offer a wide range of stage, studio and lighting equipment, for **UK** or overseas customers. **Lite Structures**, who once again built the **PLASA Pavilion**, were showing their new **Lite Deck** aluminium staging system, which is strong, light and easily portable, whilst **Slick Systems** were on stand with their distribution arm, **Elephant Stage Systems**. **Structure Systems**, dealers for a number of truss ranges, also featured the **US-based Unipar Lighting** range of coloured spotlights on their stand. Lending a

European touch were both **Eurotruss** and **Prolyte** - Dutch trussing companies. **Prolyte's** multi-purpose corner blocks and conical coupling technique were among the attractions. Meanwhile, from the **Czech Republic**, **Milos** were also demonstrating their truss-ware.

Total Fabrication had a new range of trussing on display. 'Serious Trussing' comes in three sizes - **12"**, **20.5"** and **20" x 30"** - all four sided and all utilising **TF's** 'turnbuckle' connector and seven-gauge tubing. The combination of heavier tubing and the connector's improved mating strength gives a substantial increase in load capacity over the standard truss range. The 'Total Control Panel' is a four-channel hoist control for use with motors that have the direction contactors internally fitted. It features individually locking phase reversal switches on each channel, individual **MCBs** and a secondary remote kill button to allow operators to have another pair of eyes when moving complex systems. **Total Fabs** also announced that the **US** office has just sold a **65ft x 55ft** complete roofing system via a direct inquiry to their web site. Did they get paid in virtual money? They weren't saying.

Pfaff, currently enjoying their most active year to date, also notched up their best **PLASA** ever. The new fall arrest equipment and harnesses proved particularly popular, as did the entire range of **Columbus McKinnon** **Lodestar** motors, also to be seen on **CM's** own stand nearby.

Laser Creations International made a welcome return to **PLASA** this year after a brief absence. Although none of their spectacular water screen laser displays is possible within the confines of **Earls Court**, the photographic exhibition on stand was enough to arouse interest and bring some serious business enquiries.

Taiwan-based disco lighting specialist **Superstar** had a new fogger, the **Super Mini**, on show for the first time and a new range of bi- and tri-head lighting effects to announce (though sadly not show). The **Libra**, **Moonflower** and **Devil Wheel** are all based on an axial rotation device capable of supporting multiple lighting heads and spinning them both radially and axially. The **Libra** has two twin-ended **150W** halogen beam lights, the **Moonflower** uses the same lamp and produces split colour diverging shafts of light, while the **Devil Wheel** is an eight-sided head with fixed colour on each facet.

PLASA Award-winning **Avolites** have now

completed their range of lighting consoles. The **Diamond 3** is the logical conclusion to the range, bringing the power and facility of the larger **Diamond 2** down into a smaller footprint desk that can find space in the smallest of venues. Not only does the **Diamond 3** have the same functionality as the **Diamond 2**, but it also runs on the same code, making show transfer and all future software updates compatible between the two. Overlapping steps and sequential rhythmic chasing has been added to the **Automate** functions of the **Diamond** range.

The **ART Dimmer**, for which they received a **Best Product Award**, is the natural successor to their hugely popular **FD** range of dimmer racks. Shown in prototype form last year, each rack has two mergeable **DMX** inputs, as well as accepting analogue, **100%** duty cycle as standard (perhaps the only real shortcoming of the **FD**) and this chokeless dimmer has a rise time of **450** micro-seconds, making it completely noiseless.

The **Mini Laser** is a Dutch-made product imported by **Light Engineering** of **London**. This tiny unit runs battery (**9V DC**) or mains **PSU** and contains a **5mW** red laser with six in-built patterns that can be sync'd to music. Alternatively, **X** and **Y** functions of scan can be controlled manually. A nice decorative feature, suitable for club, bar or hotel lobby, is the **Bubble Tube**. Self-illuminated with automatic colour changing between red, yellow, blue and green, it comes in two, fluid filled and bubbling sizes - **1.2** and **2** metres high.

Regular exhibitor **Constella** had the new **Chameleon II** colour changing moonflower effect on show. The **100W** sound-activated lamp features **16** colours plus white, produces **21** separate beams and contains six gobos. The **Shockwave** is essentially the same lamp, but with eight built-in pre-programmed memories, it will link and sync' to other units, and off lamp control will be available from a soon-to-be-produced **Constella** controller.

The promised appearance of something truly new to the lighting world never made it to the **Lightmasters UK Ltd** stand. However, the **FAL 1000** and **2000** scanning mirror lights launched last year were on show: both units use a **200W HSD** lamp from **Osram**, the **2000** being the higher featured unit.

The Entertainment Industry of **Taiwan** was represented on the **Geni** stand. Although no products were on display, the large range of



Graham Fathers of **AJS** (left) shows the new **Selecon** range to **Ray Dolby** of **Lighting Tech**.



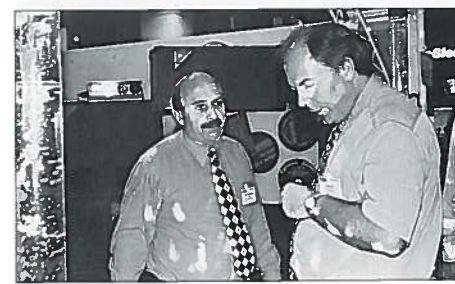
Pfaff Silverblue's **John Jones**, **Klaus Weber**, **Dennis Bramhall** and **Peter Ashford**.



TMB's **Marshall Bissett** (left) and **Tommy Stephenson** (right) show a clean pair of heels, courtesy of **Keny Whitright** of **Wybron**.



Rick Salzedo of **Avolites** with the company's **PLASA Award** for the **ART** dimmer.



Cliff Wilding of **Light Engineering** with **Bob Hall** of **Anytronic**.



More Awards: PLASA's Paul Adams presents a commendation to Steve Watts for the Abstract stand (left); John Hastie collects a product award for Stage Technologies' Acrobat 3D! computer control system (centre) and Ross Ashton and Anne Marie Pavillard of ETC Audiovisuel pick up one for their PIGI scroller.

lighting and sound equipment shown in the many catalogues warranted attention. Products like the CX-12 programmable dimming console from manufacturers Lite Puter were clearly comparable to anything we are used to seeing here. The DMX board featured two 12-channel presets, layered on four pages to give 96-channel control, with 96 scenes, 24 chase programs, LCD display and two independent dipless crossfaders. Meanwhile, Maico Chang and the team at **Kupo** had their usual array of silver Par cans and accessories.

Mobile disco suppliers **PJ Lighting** had two new wind-up stands to demonstrate. Both were rated for 50kg loads at 2.5m and 3.4m high respectively. PJ were also showing a new range of pre-packaged complete systems to go with the stands. Supplied in purpose-built fibre cases, the system comprised four lamps (Par 30 or similar) on pre-wired bars with appropriate control from their range of eight different controllers.

Studio Due devoted their stand to the DMX controlled Stratos Color. Although seen before, the features of this 700W automated yoke lamp have been extended to give full CYM colour mixing and variable beam angle from wide flood to narrow spot and a soft-edged frost filter is also included.

Although a renowned lighting service company, **Light & Sound Design** devoted their entire stand to computer technology rather than lighting. Promoting their new CD ROM, the company invited visitors to view the full range of their services in a virtual environment. Demonstrations were also given of how WYSIWYG can be used to programme their own Icon system lamps via DMX through Mock Icon, LSD's own 'blind' programming software.

Without doubt the largest lighting display of this year's PLASA show was from **Martin Professional** and featured their latest MAC 1200 automated yoke lamp, being seen at PLASA for the first time. This 1200W MSR lamp is certainly bright, produces strong uniform colours from full colour mixing and has six beam sizes from 32 degrees to a startlingly narrow two degrees. Control is by DMX, and the unit is physically much larger than any comparable lamp, but they held up well when Nicky Rowland from P&O Events donned a Martin boiler suit and demonstrated her dancing ability underneath them.

Smaller in scale, the Imagescan is an



Programmer Paul Dodd (left) with Bertini Franco of Studio Due.

excellent little 200W MSD projector with a scanning mirror. Designed to put 35mm slide or large format images onto any surface, the optics are clear and sharp and the simplicity of the machine should make this a winner with shop window display designers, as well as practitioners in the entertainment world.

The Punisher and Destroyer are dedicated disco products featuring multiple revolving beam effects which can be DMX controlled or music responsive. Martin also chose the PLASA Show to announce the addition of **Spot Co** to the Martin Global Network, a touring support network for their professional products. This was underlined by Spot Co's announced acquisition of 50 PAL 1200s, 24 of which will soon be seen on Andy Bridge's design for the musical, *Heathcliff*.

A new Argon red laser from **Laser Science** uses solid state technology to produce a brighter beam (claimed to be three or four times greater intensity) than its 60mW forbear. Small and light, the unit is fan-cooled and the beam generation improvements have extended tube life to 3000 hours. The Laser FX has 32 pre-set patterns and has the potential to be upgraded to work from the company's 'Graphics' control system.

The Eurostar and Supamoon are similar 250W 24V multi-beam colour-changing units from **Ace Lighting**. The Supamoon produces 20 almost laser-like beams in a range of 15 dichroic colours that rotate and change colour to the beat of the music. The Euro is more fully featured - the addition of a prism and four mirrors on the business end produce 60 tight coherent beams.

The Voyager laser control system from control specialists **Laser Innovations** was introduced in the late winter of '95, and has now been upgraded to run in Windows '95. Aimed at large club installations, the Voyager will control up to eight laser heads, as well as taking control of associated smoke machines - in fact any unit accepting DMX.

The Varyscan 4 is the latest addition to the Varyscan range of moving mirror lamps from **JB Lighting** on the **Sympho Audio** stand. This 1200W HMI lamp has twin condenser optics, yet only allows for four gobos (rotating, indexed and vari-speed). Up to 24 fixed colours can be accessed as split beam combos and strobing.

Apollo Spectrum have added an, as yet, unnamed lamp to their extensive range of disco club lighting effects. Similar to a moonflower

effect, the lamp is available in three variants - 200 or 400W MSD or 575 HMI - housed in a four-sided pyramid head of multiple mirrors and dichroic filters producing a huge array of colour beams.

The latest rack-mountable 64-channel light control from **Abstract** is formatted to control up to 16 automated lamps. With 156 programmable scenes, a potential 64 chases and MIDI scene control possible plus time fades, this sophisticated club desk has most of the features you'll ever need. Also included is an automatic light show where the desk will create a show, balanced for colour and beam, where the operator only controls the speed of change. If Abstract's own products are running, then the automatic aspect of the show is carried further by the lamps self co-ordinating via their data links, should the control cable be accidentally pulled from the desk.

The Imperial 4kW Xenon searchlight from **Griven** was launched at Rimini earlier in the year, but this was its first appearance in the UK. To be seen on the stand of new UK distributor **Multiform Technology**, the fully weatherised enclosure contains a gimble-mounted reflector that enables the beam to scan without need for heavy-weight mechanisms to tilt and pan the entire head. Six pre-set sequences of scan are in-built and multiple machines can be linked to produce choreographed displays; the lamp can also be controlled externally via DMX. The Midscan 2 is a new compact scanning mirror lamp from Griven with 300W HTI light source featuring four rotational and four fixed gobos, plus 11 colours and white.

Multiform themselves were celebrating their quarter century by lining up the Zodiac 36 and other desks for 'hands-on' demonstration. New products on stand included the Rakpac 4610, a 12-channel version of the Aquarius 18 and an upgraded version of the Maestro touch controller which now includes an 'autopilot' feature. The company's new 2500W dimmable analogue controlled linear tubed strobe, the Lightning, was vying for 'strobe superstardom' with **Sagitter's** equally powerful DMX-controlled Digiflash, for which the company are also distributors. Sagitter's 'articulate' scanner, Infinity Scan Light 1200 is gaining a strong reputation around the globe as a top-of-the-range touring-ready scan, whilst its Tracer Followspot 1200 is also proving popular.

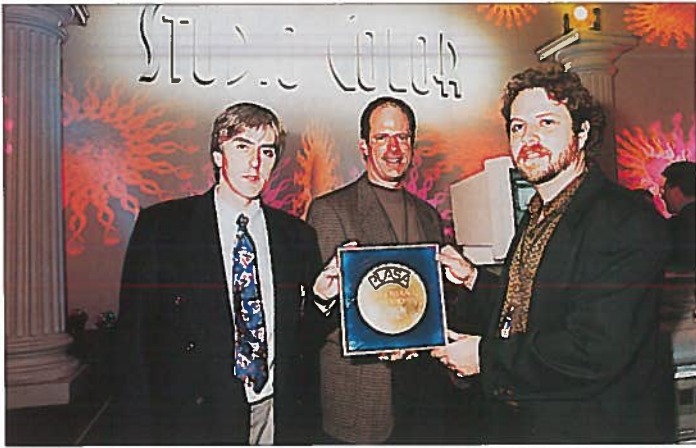
Sta-Flex, the decorative and architectural fibre



The Patent Light from GLP - one of the more unusual lights at the show.



Martin Professional's Ian Kirby (right) welcomes Pete Miles and The Spot Co to their global network.



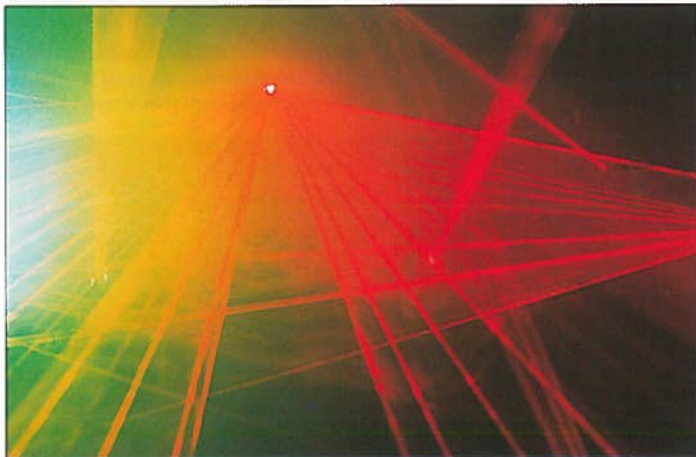
Lightfactor's Mick Hannaford (left) with Bob Schacherl and John McDowell of HES show off their award for product excellence.

optic tool from **Lumenyte**, is now available through **Coe-Tech** distribution. With 150W HMI colour-changing source, this product will run up to 120 feet and is the ideal design tool for creative installation lighting. **Coemar** had two new lamps to introduce to the UK market: the Nat MM Zoom 2500 HTI is almost the same size as the standard Nat MM 2500 moving mirror lamp but additionally gives a variable beam angle between 30 and 15 degrees. The Zoom model retains all the colour mixing and optical features of the standard MM 2500. The EHP2500 is a powerful exhibition projector that takes up to 57mm type D gobos. The lamp has manual zoom (28-45 degrees) and mechanical iris and with the ballast separate is compact and easily positioned. The Discovery and Defender come not from Land Rover, but **Ryger**. The former is available in 400 or 250W HTI versions and features a whopping 20 gobos on a single wheel, 10 dichroic colours and strobing effect. The Defender is only available in 250W version and has just half the number of gobos, but is otherwise the same as the Discovery. Stepper motors are used throughout and the lamps will run on DMX, via MIDI, or from Ryger's own show control protocol.

La Novalight's all new 'Move It' is a fully automated moving yoke beam light and was another unexpected innovation for this year's PLASA. Despite the name, this is not just another disco light: the lamp is an extremely powerful 24V 250W Halogen with a very tight focus that produces a spot of just 2m diameter at 30m distance. A unique dichroic filter device gives full colour mixing and the unit is dimmable. Pan is 320 degrees, tilt 240, all chain-driven, and all functions of the lamp can be controlled by just six channels of DMX. Considering the features and power of the beam, this is a very competitively priced item.

The Omega II from Italian manufacturer **Genius** was one of the new products on the stand of **Batmink**. Like the Omega I, it will pan 300 degrees in either direction but has changed the single 10 gobo static wheel for a pair of gobo wheels holding seven gobos each, one wheel static, one with rotational effect. Light output has also been improved by switching to a 700W HSR. The Genius Super Quark range, Scan, Roller and basic model Super Quark are all based around an A1/259 light source. Each has independently controlled gobo and colour wheels producing infinitely variable moon type effects, either directly, via a scanning mirror or rotating drum mirrors as the three names suggest.

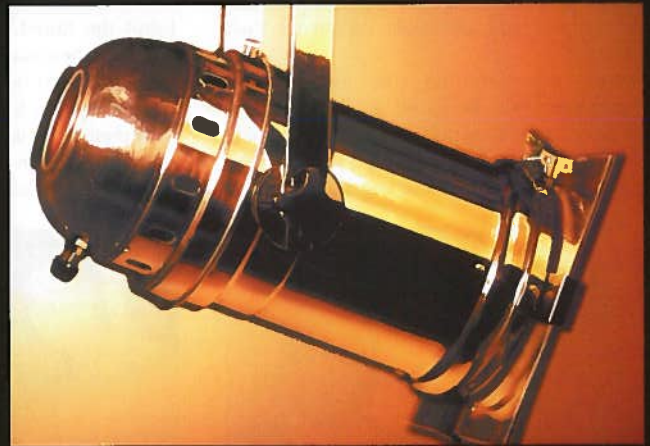
United Kingdom Distributors have recently become dealers for **Programmi & Sistemi Luce** and had this Italian manufacturer's latest ColourPlus effect light on display. The ColourPlus is a 150W MBI colour-changing flood with a seven colour filter wheel, plus twin colour



The stunning Laser Science laser on the Nu-Light stand.



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The Pulsar team of Andy Graves, Paul Mardon, Ken Sewell and Derrick Saunders.

conversion device, to give a total of 24 colours.

Featuring products built by Laser Science, **Nu-Light Systems Ltd** provide a professional service for club owners wanting to install laser technology, right down to dealing with the Health and Safety executive on your behalf. They carry the full range of LS products, including the Graphic FX package and expect to have a PC-based control system available within the next three or four months.

Certainly one of the more unusual lights of the show was the Patent Light from **GLP** of Germany. At first glance this looks like another small-bodied 575W HMI moving mirror lamp, but is curiously mounted directly onto what looks like a rather large power supply. In fact, the mirror head does not tilt only rotates, but the entire lamp body spins axially on the PSU body, displacing the head through a loop of approximately half a metre. The lamp is otherwise highly featured and rotation of the entire head is possible up to a speed of seven rotations per second, making this a distinctly different lamp.

The Performance series from **Coef** is a range of six different scanners designed for the club market. Top-of-the-range 1200HMI version comes in four types with up to 25 colours and rainbow/frost effect, as well as the expected rotating gobo and prism features. The two other versions come with 200 MSD lamps and offer a more compact and affordable variant on their bigger cousins.

Aimed squarely at the mobile DJ, **Technotronics** has produced a clutch of light controllers that give simple solutions to running everything from one pair of hands. The 4CZ and 4CZ M are four-channel switching units designed



Is that the real Michael Jackson welcoming visitors to the JEM stand?

to run off the 4CZ Logic Controller which features audio and speed control, as well as blackout and program run and hold for the in-built patterns. 'System' is a modular triangular steel trussing. Although slightly heavier than aluminium, it is stronger and suited for display booths and small light rigs. It is available in one and two metre lengths as standard, plus corners and Ts.

The F2 Light System is a flash-control device for any form of fluorescent tube lighting. Designed and built by **Smithfield Electronics**, a simple strap-on module for each tube will take straight forward 0-10V control to determine rate of flash. DMX and dimming control are in the pipeline and should be with us by next year.

With the growth in the number of themed bars and nightclubs, it was no surprise to find an increasing number of videowall companies at the Show. **Owl** swooped into PLASA with their 12 monitor videowall which features four 38" monitors across its base and measures over 10 feet wide. Recent projects have taken them to the Boardwalk nightclub in Blackpool (where the company built a 64 monitor videocube which was suspended above the dancefloor), and to TV studios, where their videocolumn is becoming a sought after speciality.

Across the hall, **Electrosonic's** Videocafe was drawing in the punters, not least because they had some innovative gimmicks on stand, including Esbot the Robot. Amongst the many products launched there was a new version of 2xView - 106" of picture with only 32" of depth; a completely new processor, Imagestar 2 which offers a very neat method of image enhancement, and a new Windows-version of their established C-Through videowall control software. The company also



Alfonso Ceccarelli, Laura Piatelli and Luca Ceccarelli on the Coef stand.

launched CADSoft - a new range of digital storage and delivery equipment developed jointly with Cadsot Graphic Systems. Up on the second floor, as part of the Presentation Technology Show, **ProQuip Rentals** were also talking videowalls, notably Pioneer and Toshiba, and the company claim to have recently smashed records with the largest videowall ever used on a live television programme for the BBC's Megalab.

With over 400 exhibitors, it was near-impossible to get round the Show and see everybody, but there were certainly many interesting stop-offs on the way. Power distribution specialists **SES Film & Television** were showing a range of their distro equipment, along with the new Dimrack range of flight-cased Strand dimmers and a variety of accessories. **Cirro-Lite**, meanwhile, focused on the Kino-Flo range of fluorescent units, alongside Lightning Strikes, a massive 250,000W strobe effects unit and their own Micro Mist 2 - an upgrade on the original Micro Mist cracked oil machines, as well as the new MD3 for larger venues.

Masters of all things fibre optic, **Par Opti** once again dazzled with a new range of fittings to enhance effects, plus a special polymer harness for theatre costumes.

Andolite fielded a small, but representative, sample of their wide range of lighting and sound installation equipment, whilst just along the aisle, **Anytronics** featured their strobe/strobe control systems, dimmers and hand-held DMX testers. New products on show included the DS410, a 4 x 10A per channel dimming/switching pack. In the next aisle, **Nitenday** displayed fibre optic remote source illuminators, whilst **Primarc** and **Mico Lighting**, specialists in stage and studio lighting,



Ian Brown of Coe-Tech (right) with Ivor Green of Creative Teknikal Services.



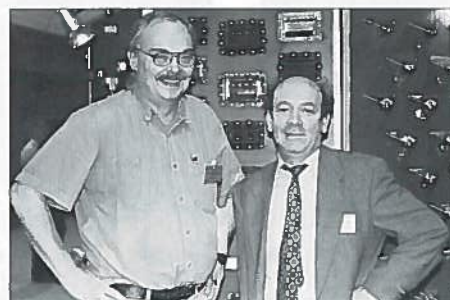
Tyrone Le Mercier of Ryger (left) with Douglas Nelson of Geni.



Tony Kingsley (Multiform), Stefano Previtali (Sagitter) and Ray Wilkinson (Northern Lights).



Paul Raymond of Par Opti (right) invites Michael Copelin of ASD into his emporium.



Roger Willems of Penn Fabrication (right) with Sture Holmberg of Holmberg Cases, Sweden.



Garry Clarke of JYG (second right), complete with turntable top and Dom Marano (Disco World), Mark Joseph (JYG) and Paul Mitolo (Mitolo Group).



Chris Cook of XTBA with BBC LD Geoff Thonger (left) and Bob Goddard of Goddard Design (right).



Chris Aberdeen (Smithfield), Scott and Michelle Peters (Dansatak), Mike Locke (Nightlife), Jeff Carr (GDR) and the Servo Dummie!

concentrated on their lamp collections.

Cardiff M Disco services displayed a small selection from their huge showroom stock, while **Klotz** exhibited their high-end audio and video cable systems for pro audio installations. Their English equivalents, **CEEP** were away over the other side of the hall with a new addition to their multipin circular connectors range.

Winstonlead Cables launched the Titanex TQ - a tough nut which is water resistant, chemical resistant and operable at 750V as well as at temperatures between -35 and +90 degrees. Dutch manufacturer **IES** launched the new EC family of economy dimmers, which were on show with the re-designed Powerbar range of distributed dimming. **APS** was demonstrating its well-established Rental Management Systems, which covers all aspects of a hire service in a complete software package, now running on Windows and Apple PowerPC.

Transtechnik, the German lighting systems manufacturer, launched a number of new products, among them the Tigra transistor dimmer, which handles all kinds of electronic loads, the DMX Link, an intelligent patch and merge processor for DMX signals, and the Focus light control system for moving and conventional lights. Clearly, the alliance with **AVAB** will throw up further benefits for both companies.

Steinigke Showtechnik were offering their services as stockist of lighting, sound and stage accessories, whilst from Poland came **Discotech Pro Light** with their range of club lighting.

Also from Germany were **Buehnenbau Schnakenberg**, a manufacturer of staging systems



Chris van Beem, Henk Versluis and Hubert van Dorne from CCS Lightcontrollers.



LED links for Roger Elliott of Real Color Displays who showed full colour LED message boards and graphic modules.

and machinery, founded almost 120 years ago. Up to date at PLASA, they had on stand the Nivoflex heavy duty adjustable-height staging system and the Vario Series for less demanding applications.

Another company at the show with a few years under its belt was **Waagner-Biró** from Austria, who have manufactured stage machinery for over 100 years. They were demonstrating the Driving Axle, a space-saving drive system that can be fitted into existing counterweight shafts.

From Switzerland came **ETR Lighting**, manufacturer of lighting control equipment, who were showing their Luna 24 desk, a 12/24 channel controller aimed at a wide variety of applications.

On the Presentation Technology floor **Real Color Displays** were showing a product with a great deal of potential - their full colour LED message boards and graphic modules for large screen applications. Using 3mm RGB LED pixels, the graphic modules include LED drive circuitry which is capable of displaying up to 16.7 million colours per pixel. Using the Disney film *The Lion King*, the display ably demonstrated the excellent colour and brightness of these screens, together with the added advantages of shallow depth and wide viewing angles.

Terminal Display Systems launched the Viewpoint projector, manufactured by Lightware, **Arya Systems** showed their complete POI (point of information) and POS (point of sale) kiosks which feature an integrated Philips 14 touch-screen and multi-media PC, and it was also good to see **Sanyo** at the Show with their first digital camera. **LG Electronics**, a subsidiary of the Korean-based LG Group, recently opened a high



David Juby (centre) and Alan Roser of Owl collect their commendation for stand design.



Earls Court Olympia chairman Hugh Scrimgeour (centre) with show director James Brooks-Ward (left) and Philip Norfolk of Lighting Technology.

media division and is currently developing CD-i corporate presentation systems and software packages. LG is also associated with **PIM** (Partners in Multi-Media), a consortium of multi-media companies who launched ImageStar. Theme park experts **Sarner International** were showing their innovative solid state Digital Video machine (DVM), specially designed for applications requiring repetitive performance of video. Unlike most systems, DVM has the advantage of storing and presenting video shots without needing to rely on video tape or laser disc.

Supplying cases to put all the goodies in were the familiar names of **5 Star Cases** (whose 'Test in Base' trunks for Clay Paky fixtures are a great idea), **Adda Super Cases** and **CP Cases**, and the slightly differently-named **Autopia Vanquip** (previously Autopia Terakat). As well as cases, 5 Star were showing their own mains distribution system, and a new shock-mounted 19" rack system. Adda were adding to their comprehensive pro case range with their own CD and record sleeves, and CP Cases had a range of 19" racks and a strong, collapsible trolley called Easimove. Also in the case line were **Premier Flightcases** and **Trifibre Containers**, who have comprehensive ranges for the DJ trade, and **Rufo Ans** from Norway, who specialise in boxes for PA systems as well as racking systems and custom design.

Le Mark TVS had a new range of aluminium flight-cases on stand, along with their varied range of self-adhesive tapes and labels whilst **Proel** came equipped with a large display of self assembly flight cases and a new line of mics.

Steve Moles



Michael Hinks of Bygone Times Ltd with the best small stand award.



Peter Meadows of PIM with ImageStar.



The Turbosound team lined up to launch the new HiLight range.

AUDIO

For this year's show, **Turbosound** went back to its club roots to design a new loudspeaker range that is aimed firmly at the budget club installation market and complements its well-established touring and high end fixed installation products. The new HiLight range was explained by Martin Reid at a special press conference on the Monday morning, Bucks Fizz and all! "The basic mid/high module is the Precision Devices horn-loaded THL-811 with a 1" compression driver, which comes in either trapezoidal format for the majority of applications or in a skeleton version which dispenses with the box. The horn-loaded THL-818 is a single 18" box with a new 4" voice coil and a Precision Devices 400W 18" driver. Two of these stacked on top of each other will equal and match the THL-828."

The same approach applies in a full range box which has all the above and is designed for applications where a system is leased and needs to be moved regularly. The HiLight system has its own controller, the LMS-680, which is two-way stereo and has a mono sub. The new TFM-300 floor monitor comprising a new custom 15" LF loudspeaker and 2" HF driver was also introduced.

Tannoy showed an expanded range of



Stephen Court and John Langley share a joke on the Court Acoustics stand.

loudspeaker products for the PA and contracting markets, including the i12 replacement for the popular CPA-12. Senior engineer Graham Hendry said: "The i12 has a new 12" dual concentric which provides increased LF dynamics. We have an install version, the T12, in an MDF box with flight points only, plus it doubles as a great wedge floor monitor. There is also the new TX2 controller designed for use with these speakers and it provides extended high and low frequency response."

David Lyth was on hand to demonstrate **Volt's** radial chassis loudspeaker with the theme 'How your loudspeakers lose almost half their output when hot'. The demo compared the Volt product with a conventional chassis, and it was shown that the former uses a chassis in front of the cone as a heat sink to make the loudspeaker run cooler, and therefore prolong high output performance. Amazing stuff!

Hot off the press on the **Court Acoustics** stand was Stephen Court and Alan Parsons' Soundcheck 2 CD for audio analysis and alignment by installation contractors and acousticians. The stand also witnessed the launch of the TR50/Sub 600 loudspeaker surround system and a double 15" bass bin addition to the LX range.



Tim Pollard of Celestion with the Contractor installation Series KR10.

Celestion was showing its Road and KR Series speaker systems which were previously launched in Frankfurt in March, and director and general manager Richard Wear was keen to discuss the behind-the-scenes movements: "The company has gone through a major reorganisation and we have now expanded our system assembly capacity and installed a new production line for the components. Commercially, the team has been growing and we have now split Celestion into two distinct commercial divisions: a consumer division which looks after all of the Celestion hi-fi and home entertainment loudspeaker products, and a professional division which concentrates on two parts of our business, the OEM market and also finished goods for the pro-audio market."

Community introduced the Solution Series. A generation on from RS models, the series includes two and three-way horn-loaded loudspeakers which are switchable from passive to bi-amplifiable and designed mainly for installation use. As a result of customer demand, the speakers are designed and finished in white or black. They feature Ferrofluid-cooled proprietary speakers and integral PowerSense protection circuitry. Two new controllers are available for the systems: the analogue SC-21 and digital DSC-42.

710372 DN7103 DN7204 047103

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Delay with EQ



Klark Teknik introduces two powerful new tools, combining equalisation and delay.

Advanced, simple to operate and durable, they're the flexible answer to multi-loudspeaker installations, post production and broadcast applications.

DN7000 Series: Delay with EQ

The DN7103 and DN7204 have millimetre accurate delay, combined with precision Klark

Teknik EQ, with two fully parametric and one HF shelf equaliser per output, and 18 bit linear AD/DA converters for premium audio quality.

The 1 input / 3 output DN7103 provides 1.4 seconds total delay time, while the 2 input / 4 output DN7204 provides 2.8 seconds and user-definable input / output setups, with bypass relays and electronic balancing.

DN4000: EQ with Delay

The dual-channel programmable DN4000 gives you five fully parametric equaliser bands, along with HF and LF shelf equalisers and high and low pass filters for each channel. Dedicated switches allow direct access to all EQ filters.

Each channel also features a delay line with a maximum delay time of 340ms.



Community's Thomas Mettleman and Christine Howze with Martin Bailey of the Sound Dept.



Bev Bigham of Lighting Technology with Richard Rowley, Julian Young and Sandy MacDonald of EAW and Dave South of Concert Sound (centre).



Paul MacCallum of Wembley Loudspeakers.

Some 15 models in the PTP Series of professional chassis loudspeakers, tweeters and horns were displayed by **Wembley Loudspeaker**. They included the 15-190 and 18-190, two powerful 15" and 18" (respectively) sub bass chassis for use in a number of subwoofer applications.

EAW (on the **Lighting Technology** stand) announced sales of more than £400,000 to hire specialists **Concert Sound**, who have substantially added to their brimming stock of stadium array PA systems. An addition to EAW's LA series of Linear Activation systems is the LA-215 two-way full range cabinet which can be used effectively both horizontally as a stage monitor and vertically on a stand in small-to-medium PA applications.

Currently developing a new range of products for 1997, **Wharfedale** was demonstrating the complete range of Force loudspeakers, including the recent 1080, 2180 and 3180 models, and the Force 9 and 10SB sub bass cabinet. Also on the stand was a range of **Fane Acoustics** co-axial speakers with 10-15" chassis for use in FOH and monitor systems rated from 200W upwards.

In a deal co-organised by **LMC Audio**, **Martin Audio** announced the delivery of more than 100 Wavefront 8 loudspeaker cabinets to Capital

Sound Hire, which will be used to complement the company's hire stock of Martin F2s. David Bissett-Powell said: "It is a constant directivity system which allows maximum control. We expect to be delivering Wavefront 8 Compacts to Capital in the near future and look forward to hearing the system out on tour." New additions at PLASA included the compact, full range ICT-500 loudspeaker and the updated EM Series.

On their own stand, **LMC** had, of course, Martin products, alongside the familiar Midas consoles and a range of other kit.

Eminence expanded their ME series with the introduction of the ME12, a 200W low resonance 12" speaker and the 18" ME18. They also debuted the long-awaited PSD3001 2" compression driver.

The stand shared by **Mark IV**, **PAG** and **Shuttlesound** was showing an unprecedented array of new products, many of which, by Electro-Voice and Altec Lansing, were premiered at a uniquely animated demonstration in the Marlborough Suite on the Tuesday afternoon. There were four groupings of Electro-Voice products: five concert sound systems and an electronic controller in the DeltaMax range, the T Series T351 three-way system and compact T180 1000W sub woofer, a powered version of the

System 200 5 x 200, and the world's first ultra-slim THX cinema system, which was demonstrated effectively by clips of George Lucas' greatest flicks. Altec Lansing's products, meanwhile, amounted to the DTS range of under-balcony speakers and systems for fixed installation.

Rane's marketing director Ray Bloom made his first visit to PLASA to give a boost to the new Mojo range of affordable outboard processors and crossovers. "We have incorporated a lot of stereo controls and in the case of the MQ302 stereo one-third octave equaliser, it has a single set of high quality faders." Interestingly, the MQ302 is currently being used by The Neville Brothers specifically to equalise in-ear monitors.

The usual **Midas** console suspects were displayed on Mark IV's share of the stand, along with the **DDA CS3** console and the award-winning **Klark Teknik DN4000** two channel digital parametric equaliser with delay. The DN3698 hand-held remote controller is not particularly new, having been out for a few months, but the wireless WS-01 version of the DN3698 hand-held remote controller was brand new for the show and offers over 100 metres two-way data transfer.

The new **Nexo Alpha** loudspeaker system, designed for concert touring and large festivals,

DN4000

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EQ with Delay



Rotary control for Frequency, Q and Level make setup fast and simple, aided by the large backlit LCD display. MIDI and remote interface ports allow versatile system control of up to 16

DN4000 units from one master. Advanced 20 bit AD/DA conversion gives a dynamic range comparable to that of the best analogue equalisers, while an optional AES/EBU digital audio interface aids use in

a wide range of applications.

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Tony Oates and Paul Ward of Fuzion with the Crown amplifiers.

was featured by **Fuzion**. The boxes on show were, in fact, owned by SSE Hire which purchased a large quantity in July and took them out on the road for T In The Park in Glasgow, among many other shows this summer. Fuzion sales director Paul Ward said: "The Alpha system is still in its early stages and further development will be aided by the close relationship between SSE and Nexo." The Nexo PS-10 amplifier also on display is a three channel amplifier with a built-in processor and allows two PS-10 cabinets and a sub to be run from the one amp.

Fuzion also showed the new Crown Studio Reference 1 & 2 amps, the upgraded versions of the Macro Reference. "The difference between the two models is power rating," added Ward. "In stereo mode, the Reference 1 is 1160W into 4 ohms or 780W into 8 ohms, and the Reference 2 is 550W into 4 ohms or 355W into 8 ohms." In addition, Fuzion was fronting the "rather wacky" Technomad injection-moulded cabinets. The bonus is that they actually sound rather good!

The BR-S range from **Ohm** is now complete, due to the introduction of the BR-218S double 18" sub woofer in a 1400W RMS cabinet. Capable of a peak programme performance of 3kW, the BR-218S boasts the proprietary Plate Array Skeleton construction which helps to deliver an accurate bass performance. Another BR-S addition is the BR-30S full range cabinet which gives 2000W at peak and is well suited to dance venues. Both of these models are now in production.

RCF gave its new 'Unlimited Sound' campaign a further boost and showed its comprehensive Event Series range of loudspeakers which includes the Event 6000, now a popular box with installers and hire companies. RCF's Phil Price and Fausto Davoli announced at PLASA the formation of RCF China which operates from Hong Kong and is headed by Tommy Chow.

JBL on the **Harman** stand used the show as the launchpad for its new Control Contractor Series for sound installation companies. The series comprises three loudspeakers and a sub woofer system, and major features include the patent pending invisiball mounting system which allows the installer to fit the speaker very quickly, thus saving time and money on a project. JBL also added to its EON range the EON 15 bi-amp 15" woofer and showed the TR series of MI/DJ boxes.

The audio division of the Martin Professional Group, **Mach Systems**, was showing a selection



JBL president Mark Terry with the award which the EON series picked up at the DI Awards.

from the 11 models in its Installation Series of loudspeaker cabinets, plus its heavy duty Road Series, complete with accessories such as protection dollies and tripods.

DAS Audio displayed its new ST-2000 touring system which now places the company in the serious pro concert sound market. The three-way active stack consists of the ST-215 mid-high cabinet loaded with two B30 15" drivers and an elliptical horn powered by an ND8 2" neodymium high efficiency compression driver. Completing the stack is the ST-218 folded horn low frequency cabinet with G45 sub woofers featuring long excursion cone drivers and heavy duty coils.

Representing **Renkus-Heinz, Furman** and the **RTS** ranges of theatre and broadcast intercom products was **Audio Projects** of Kent. New for the show was the Furman AR2330, a compact 2U rackmounted 30 amp AC power conditioner designed to comply with current European power regulations. Renkus-Heinz's TRC loudspeaker series fulfils the need for high quality discrete systems and features the new proprietary complex conic horn. Dee Couchman commented: "The TRC 81 has just been specified for use as part of the voice evacuation system in the new Wimbledon centre court installation in a weatherproof version, finished in green!" The design of the Wimbledon system used Renkus-Heinz's EASE software package.

The latest product in **Hz International's** DPX range of MOSFET power amplifiers is the new Smart VIP which complements the DPX-400, 600, 1100 and QPX-1200. According to Bradley Reed, VIP on this occasion stands for 'Virtually Idiot Proof'. Time will tell.

Brett Downing, sales director of **TOA**, announced the arrival of the QA Series of amplifiers which was highlighted by the QA-60, a six balanced input unit with phantom power for most public address applications. The biggest noise, however, was made about TOA's DPA Series of high power, high spec Mosfet amps. There are currently three in the series: the DPA-800 (400 x 400W), DPA-1200 (600 x 600W) and the most powerful amp ever made by TOA, the 1000 x 1000W DPA-2000. "We have taken orders for 300 DPA amps at the show which is something we could not have predicted." Also on show was TOA's range of new microphones and the DSP DP0204 and DP0202 digital signal processing systems.



Phil Price and Fausto Davoli of RCF announce the formation of RCF China.

Directed at the installation market is a completely new range of PPX amplifiers from **Citronic**. Mike Gerrish explained: "All our previous PPX models have been superseded by this new generation which now has improved 2 ohm capability. We have added a dynamic clip protection system which allows the amp to perform at full power without sending clipped signals to the loudspeakers.

"The system has a very fast attack so it will kick in immediately and it has a slow release time, so it's quite unforgiving in that respect. This is a way of preserving some kind of integral control although it can be switched off which may well be desirable in a PA application." The models in the range are the PPX-600, 1300, 2000 and 2400, and each has an extensive status indicator front panel.

To complement the amps, Citronic has also upgraded its loudspeakers and introduced the E-Space range of paint finished two and three-way systems with sub bass and flying fixings as standard. Citronic also showed an engineering prototype of its long-awaited Ethos Live 24-8-2-1 four/eight buss mixing console which is not due to go into production until December.

Crest Audio's V1500 was awarded 'Best Amplifier' in the 20th Disco International Awards during the show and Andy Simmons proudly displayed the trophy on his stand, alongside the newly-launched LMX 22 output monitor console and NexSys 3 software processing system.

Despite the apparent absence of a fanfare, **Peavey** had a large number of new loudspeakers, amps, mixers and audio processors on its stand. Among the mixers were the Production Mixer 1000 for DJs and the Unity Series 4034 34-channel stereo console. The whole HiSys range of speakers is now trapezoidal, and it is joined by the 1MXT monitor wedge and 2XT. At the prototype stage is a dual 18" 1000W sub bass speaker, the DTH-218, and there is also the DTH-118 which is a single 18" folded horn cabinet.

Other new speakers from Peavey are the Impulse 2652 two-way permanent install enclosures and there was also a moulded box in the Impulse range in powered and unpowered versions. One of the main pulling points was the MediaMatrix Mini-frame which provides an all-in-one processor.

Less than one week before it hit the market, the Chameleon 2500D amp had its first-ever showing from **Malcolm Hill Associates**. The company has



Celebrating a major Martin sale were David Bissett-Powell of Martin Audio, Keith Davis of Capital Sound and Dave Wiggins of LMC.



Bob Mundy (left) and David Kirby of Adam Hall.



Shuttlesound's Tim Grey (left) with Ian Westwater and Mike Boylan of Over Audio who were issued with Shuttlesound's 20,000th invoice!



Lightfactor's Dick Carrier with Jack Palacio of DAS Audio.

been progressing its linear power supply technology and, with the 2500D, has achieved 1000W RMS into 4 ohms per channel in a 1U case, 16" deep and weighing 29lbs. Also from Malcolm Hill Associates was the Powerbox loudspeaker system which features a 500W driver and a compression driver inside a trapezoidal cabinet.

Celebrating its fifth anniversary this year, Canon Audio was exhibiting its stylish V-100 and V-200 professional audio installation speakers which are both water-resistant and paintable. With the right amount of imagination, users could add their own designs, therefore enabling the speakers to blend into a venue's decor.

Now distributed by Birmingham's Deco Leisure is the MC2 line of digitally controlled amplifiers. The three units on the Deco stand were the MC450 (450W per channel), MC650 (650W per channel) and the newly-launched 1200W per channel model. All amps in the range include a plug-in crossover card facility, plus computer control and remote operation.

A new generation of C Audio amplification was unveiled by sales manager Richard Moore who announced the SRX Series as a replacement for the existing SR and XR models. At this stage there are three 3U rackmount models: the SRX-3601 (650W per channel), the 3701 (850W per channel) and the 3801, providing 1200W per channel, all at 4 ohms. "All of these amplifiers produce in excess of 50% more power into 2 ohms, so it has what we call a true 2 ohm capability," explained Moore.

On the Autograph Sales stand, it was clear that Lab Gruppen has finally met the demand for a lightweight 2kW per channel amplifier with the introduction of the Lab 4000 which delivers 2100W per channel into 4 ohms and 2500W into 2 ohms. John Adeleke added: "There is a limiter on board called AFS (adaptive fuse saver) which limits the mains current to a safe level according to the time lag of a 16 amp slow blow fuse but does not hinder the dynamic capability of the amp."

On the stand was the new MEGS-3 x 4 Series modular loudspeaker flying system from ATM Fly-Ware, designed for flying clusters of large cabinets which require track or pivotal attachment hardware. Garwood's latest generation of in-ear monitoring products, the System 3, was also on display. A mid-price, high performance UHF system, it comprises a 1U transmitter unit, belt pack receiver and standard IEM11 earpieces. Garwood has also launched the 2U rack-mounted ADA8 antenna distribution system designed to



Bob Salt of RW Salt (left) and his crew, with Harry Greenaway (right) of TOA.

support up to eight diversity radio microphones or 16 non-diversity receivers.

EMO's new CE-approved mains panels, designed with Autograph's input, also attracted interest. Adeleke said: "We used to sell our own mains panel, but we stopped because of the new regulations. This new system has a 32 amp in and out at the front of the rack, three breakers that control two 16 amp outlets and a bank of three 13 amp plug sockets."

Autograph was also representing Meyer Sound, manufacturers of the new PSM-2 wedge monitor which comprises a 12" driver, a 2" compression driver and proprietary horn. Adeleke said: "The unique thing about it is that it is the first powered wedge from Meyer." On the Meyer Sound stand itself was the new two-way HM-1 phantom powered, full range loudspeaker that has a 7" low frequency cone driver and a high frequency horn driver on a wide dispersion horn. Also showing were the new CQ-1 and CQ-2 speakers which Meyer's Karen Anderson described as "powered-up versions of the MSL-2".

Roy Millington of Cloud Electronics commented on the huge interest in the company's CX242 and CX132 zone mixers, and also the CXA4 4-channel amplifier: "The show has been excellent for us. The CX242 is a fairly unique product and reviews have stated that we obviously listen to customers and seek to provide simple solutions to long-standing problems. The operator interface is as simple as you can get."

Getting the big push on the Soundcraft stand was its latest star, the K2 eight buss sound reinforcement console. Andy Brown commented: "We have taken the features from the K3 Standard and combined them with those that were optional, such as the meter bridge, input metering, stereo modules and matrix, and put them all in the K2 as standard. The K2 has eight aux sends and a new equaliser section with a four band EQ which has two sweep mids with switchable Q. The console is also notable for the appearance of a sweepable 100Hz high pass filter that would not normally be seen within this price bracket." The K2, which features the same mic pre-amp as the K3, Vienna and Europa consoles, is available in 24, 32 and 40-channel frame sizes. Also shown by Soundcraft was the D-Mix 1000, DJ-Mix 500 compact non-modular club mixer and Broadway assignable modular theatre console.

Next door to Soundcraft was its younger sibling Spirit with its latest goodies, including its



Harman Audio's Bruno Wayte with the JBL Contractor Series.

top-of-the-range Spirit 8 eight buss live mixer with 16, 24, 32 and 40-channel options. An integral meter bridge comes as standard, along with four band EQ, four mute groups and a 10 x 2 matrix.

In addition to showing established products by Shure, QSC and GAE, HW International played host to the first UK showing of the Cantus digital mixing console, which provides up to a staggering 480 channels over its 2.2m wide surface. It was very effectively demonstrated along with the Nexus digital audio routing and interconnect system in the Cromwell Suite. HW also exhibited the new TS/2 speaker range and the three models in the Hi-Level production mixer series, designed for DJ and club use.

Exactly 20 years since acquiring the legendary Brennell Engineering, Allen & Heath launched its new GL 4000 dual function sound reinforcement mixing console at PLASA. The GL 4000 has 10 auxiliary sends, eight sub groups and four matrices. There is a mute grouping system which has eight dedicated mute groups operating independently from 128 snapshot mute scenes. There is an extensive EQ section on every channel - four band, full sweep with Q switching on the two mids - and the swept low cut filter and four stereo channels are included as standard with microphone capability and stereo line inputs.

R&D manager Carey Davies commented: "A new feature is the ability to switch the outputs of the matrix on to XLR with balanced inserts. The inserts on the GL 4000 are now individual balanced send and return jacks. The 10 auxes have XLR and inserts, and as with the GL4 there is a talkback system which has individual talkback to all the auxes and the matrix, left, right and mono." Also shown were the GL 3000 eight group dual function live console, the GL 2000, GL2 and GL2S, and the GL1 zone mixer.

As seen at recent shows, the Amek stand featured the 501 and Recall consoles by Langley, all with computer control. Also displayed on stand was the range of Octava microphones. Previewed on stand was a new matrix expander system designed initially with use limited to the 501 and Recall. It is yet to go into production.

The Trantec stand featured the S-5000 16-channel UHF system with Windows controlled computer interface, which was demonstrated for the first time at PLASA '95 and has since become an industry standard. Chris Gilbert expanded: "We also have our new S5000 handheld mic available with either omnidirectional, cardioid, hyper-



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New Soundcraft MD, Alison Brett with visitors Dave Kay and Andy Dockerty of AdLib Audio.



Roy Millington of Cloud with Paul Smith of the Music Company.

cardioid condenser or dynamic heads, and they are going down a storm at the moment."

Following on from last year's introduction of **beyerdynamic's** U-600 UHF frequency wireless system, the company has brought out the S-600 hand-held transmitter with switchable UHF frequencies monitored by a built-in LCD display. The system comes with an internal antenna and interchangeable dynamic, electret and condenser capsule. The U-600 is now also complemented by the ZCI-600 Windows controlled software - a concept not a million miles away from Trantec's. The company also represented products from Germany's SPL (Sound Performance Laboratory) including The De-Esser, a sibilance reduction unit for studio and live use, a tube version of The Vitalizer sound processor and also The Charisma, an eight channel tube processor which was initially designed to interface with ADAT recorders where a warm sound is required.

Boundary mics are becoming a major feature of beyerdynamic's sound contracting range. The MPC-65 and MPC-66 are cardioid and omnidirectional boundary mics, available with XLRs or jacks for plugging directly into a conference table, whilst the MPC-22 and MPC-23 are cardioid and omnidirectional flush fitting surface mics. Also from beyerdynamic was **XTA Electronics'** DP-200 and DP-202 digital signal processors designed for live sound reinforcement applications. Completely configurable, they feature parametric EQ, high and low pass filters, and limiters, all controlled by Windows software.

Aiming at budgets which preclude the purchase of the established EM-2004 system is **Sennheiser's** 3000 Series radio microphone system, which comprises a new 16-channel switchable frequency receiver with hand-held and belt-pack transmitter units. The system will be available with either the 19" 1U rackmountable 3031 single channel receiver or dual channel 3032 unit. Sennheiser also showed the Neumann M149 valve microphone. A classic example of Neumann's classic tube technology, it capitalises on the growing retro trends.

Audio Technica launched Unitools, a range of economic problem solving devices for use with microphones in-line. They include feedback suppressors, automatic microphone attenuators, high and low pass filters, limiters and noise traps. Two new VHF radio systems were on display, one including a hand-held transmitter, tie-clip and headworn mics, and a guitar system, all at budget



Canon Audio's V-Series speakers looking pretty wild in their natural habitat!

prices. To complement AT's installation products, a new line in amplification has been introduced, namely the AT-MA60 60W mixer amp and MA-120 120W version.

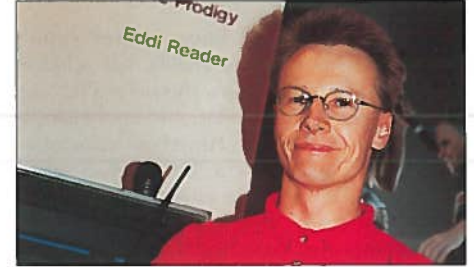
The main feature for **AKG** this year was the WMS-300 microphone which was launched at the Nomis Studios complex in March with Jim Ebdon, Wet Wet Wet's sound engineer. Since then, the mic has been out with The Cure and engineer Jon Lemon, and also The Prodigy, Black Grape and Eddi Reader. It offers UHF technology at a highly competitive price and is switchable to 16 spot frequencies within a given TV channel. There is also the capability within the system for rack mounting with boosters and splitters. Justin Frost commented: "Our main reason for being here is to promote the 300 to more hire companies and bands who are using high quality VHF, but they need to know that they can progress to UHF without any real difference in price. We are also showing the WMS-900 system which has been out this year with Simply Red and that relationship has culminated in an endorsement agreement between the band and AKG." Brand new for PLASA was AKG's entry level VHF radio microphone, the WMS-51.

Of all the stands, award-winning or not, surely one of the most frequently visited was the one occupied by **BSS Audio**. The technically-brilliant Omnidrive and Varicurve aside, everyone had great fun with the Virtual Skiing game and David Neal joked that he had received several enquiries from people wanting to buy one! Highlighted products included the new FDS-380 installer version of the Omnidrive speaker management system which retains identical functions, but has hidden controls to ensure that access is restricted to authorised personnel. It may be configured using the new Windows-based Soundbench front-end control software. Also featured was the DPR-901 Mark II dynamic equaliser for environmental noise reduction which is now being used for an interesting club application.

A revised controller is now in operation with **Denon's** 200 CD autochanger. Simon Curtis reported that the autochanger is now installed in around 20 venues, including the prestigious Hard Rock Cafés in London and Paris. Showing for the first time in the UK was the DN-2500 twin DJ CD player. "It has dragged in a lot of attention because we consider it an industry leader in terms of specification and performance." Denon's other new product was the EMA-100M 100W per



Rob Piddington of Sennheiser with the new 3000 series.



Justin Frost of AKG who focused on the new WMS-300 microphone.

channel (4 ohms) budget integrated amplifier which has a mic mixing function.

Vestax launched its PDXD3, a digitally-controlled, quick start turntable with selectable pitch which can be set between 3, 6 or 12%. A joystick pitch bend function provides slow or fast forward access, and the controller also enables reverse play function. The MW3000 is a new mixer with a built-in four channel sequencer. Andy Williams said: "Twenty different sounds can be assigned to each of the four channels, allowing the DJ to build up his own rhythm. It also has a MIDI output so that it can be used in conjunction with a drum machine or external sequencer." A new twin CD player, the CDX-25 boasts instant start and highly reliable Japanese- designed mechanisms. Also new at the end of this year will be Vestax's HDR-B8 hard disk recorder which replaces the HDR-6 and HDR-8.

Numark's latest product in its Performance Series of DJ mixers is the five channel DM-1920X. Among its features are three phono and two mic inputs, XLR outputs, three band EQ and gain on each input channel, EQ cut, pan control and PFL on each channel, and split cue high power headphone monitoring.

NJD Electronics had many new products to show including the Cobra - a range of four speakers designed primarily for the mobile DJ and WMC markets. As with all NJD products these speakers are all manufactured in-house, three mid/hi units come with 10", 12" and 15" plus horn configuration and the LX600 is a bass unit with 18" speaker. With no EQ these passive crossed speakers are remarkably responsive and sharp.

From **Maris** came the Liberty solid state audio system for recording audio samples. Liberty handles any audio bandwidth from 3kHz to 22kHz and can replay up to eight mono or four stereo samples simultaneously.

When **Formula Sound** decided to add a zoner mixer to its range of products, they didn't want to just imitate other products on the market, they wanted to push the boundaries forward. Following 12 months extensive R&D, they have launched the ZM243, a digital, multi-channel 1U 19" rack mounting mixer. Being digital, the audio switching is performed by computer-type circuits using solid state switches and with two mono and four stereo inputs, it can be used to send multiple mix outputs from any source to any zone in a venue.

With a new range of power amps to debut, **Pagestar** was ready to exhibit under its own brand



Allen & Heath's Bob Goleniowski celebrates the 400th sale of the GL4 console with Lynn Martin, vice-president of the Harman DBX Group.

name for the first time. Of particular interest to their customers were the MTx108, an 8-channel power amp and their new twin tape deck with 200W integrated power amp. They were rewarded with a number of orders, particularly from countries in Europe and Malaysia.

Spanish audio manufacturer Ecler returned to PLASA this year with two new amplifier ranges and a pair of new mixers. The Mac55 is a five channel into two outs (controlled by a single fader) mixer aimed at the small bar/club installation. The desk inputs are switchable two phono, two CD three line and three balanced mic', with Cue output for PFL between channels. The Mac90 is a more fully featured console of similar design.

SPM is a range of three switch power Mosfet amps (named the 360, 560 and 960) with an RMS output into four ohms stereo of 150W, 228W and 408W respectively. The PAM2000 and 2600 are the fourth generation of Ecler's professional amplification range.

Trilogy is a new range of competitively priced mixing consoles from **Studiomaster**. Aimed at the semi and full professional markets, the Trilogy comes in two formats - the 166 is a 10 into four groups with single fader stereo master, the 206 is a 14 into two stereo. Both desks have three band EQ and a pair of separate mono mic'/stereo line inputs which can be used simultaneously. Both boards can be extended by the Trilogy 140EX, giving an additional eight mic'/line inputs plus two more mono mic'/stereo line channels as featured on the other desks.

Diversifying out of the domestic and DJ market, **Gemini Sound Products** had a totally new range of amps aimed at the audio professional on show. The XDR7 range are all two-channel power amps from 300W to 1000W and are all UK designed and built. Seeking to establish benchmark products in the pro-DJ market, **SoundDivision** were propounding the virtues of Akai's Remix 16 phrase sampling and remix workstation, and the Roland MC-303 Groove Box, a machine that has already out-stripped production since its launch three months ago.

Nikkodo (UK) Ltd are specialists in the supply of karaoke equipment. The CDG is their own badged CD graphics player with full karaoke function featuring digital echo, twin mic inputs and individual volume control. Star of their stand was Froglips. Developed and built in Canada this device will hold a catalogue of up to 6,000 songs that can play back through any TV set. Instant processing allows for up to four part harmonies to be over-laid on the performer's voice in real time.

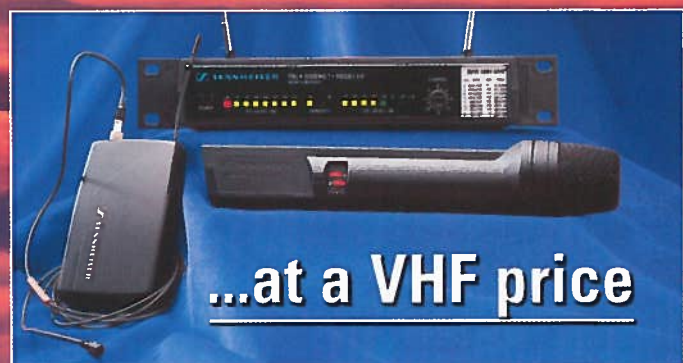
On the **Sympho** stand **Zeck Audio** were exhibiting a range of amplifiers and speakers manufactured in Germany aimed at the club market, the Focus range specifically catering for three sizes of package from 1100 to 3500W RMS per side from sub and mid/high combinations.

Two new products were unveiled by disco music specialists **Lamba**. The GMX4 from KAM is a scratch pro mixer for the DJ giving individual control over three channels of audio with filtering of specific frequency bands. Also from KAM comes the KCD 950 twin head professional CD player featuring individual frame access via a vari-speed knob, auto cue and relay play for continuous shuttle between the two discs.

Gem Sound Corporation from the USA were exhibiting at PLASA for the first time. They produce a full line of DJ equipment, with an enormous variety at the entry level, mobile semi-professional end. They manufacture all their own equipment, including the component elements of their range of speaker cabinets with the exception of Eminence woofers in the bigger cabinets.

There were several new products for the aspiring DJ on the **Pioneer** stand. The DJM 300 is an entry level mixer, two channel with automatic BPM counter and three band EQ on each channel, plus separate gain switches, mics and trim control for each channel. Also featured on stand was the DJM 500 - a four channel version of the above.

Scaling New Heights in UHF Radio



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Simon Curtis of Denon with the DN1400F 200 disc autochanger.

The CS-V 100 is part of a range of very small high power handling speaker cabinets designed to fill those small holes and inaccessible pockets in clubs and bars (if not your own bedroom).

The installation and sound reinforcement sector was very well-represented at this year's show, given a further boost by the first appearance of the specialist sound sector on the first floor. For the audio installation market, Danish company **Jamo** have a wide range of speaker enclosures. The Deco Art launched at PLASA is an attractive speaker cabinet - part of the Life Style range - with a specially commissioned decorative front panel. This is an extremely good looking unit for prominent positioning, but compromises nothing in sound quality. Hopefully it portends a move away from the profusion of boring black boxes.

3G Ltd brought a real cross-section of their range to the show, notably the modular Signet series. However, the main focus of the stand was the company's new flagship 'Fireball' console. This is an automated modular live desk with moving faders, available in fully modular format, allowing exact requirements to be built in as specified. The mainframe sizes are for 24, 40 or 56 input slots, each of which will take either mono or stereo inputs, effects returns or EQ channels.

On their biggest stand to date, **Acoustic Sound Systems** launched several new products based around the original trapezoid MX500 and MX100 models. They also re-branded many of their ASS PA enclosures, which will now go under the Reflekta name.

DNH World-Wide celebrate 50 years in audio this year. Over that time, they have committed themselves to the design of a quality-led range and new products launched at PLASA included the futuristic-looking DP10, a multi-purpose projector and the HP6 miniature horn. This philosophy has certainly paid off and one of the most recent contracts has seen the company supply loudspeakers as part of a complete phased voice evacuation system install at Dublin's largest department store, Arnotts.

Major distributors **Adam Hall** mounted the usual impressive display. Having recently completed the takeover of Fane Acoustics, the company are increasingly a force to be reckoned with. From Fane were the recently launched co-axial models which range from the 10" to 15" model for use with sound reinforcement systems



Mike Henden of Leisurtec (left) and Jonathan Birch of JB's flank David Graham of Soundivision



Formula Sound's trio of Mike Farrell (centre) with Sandra and Tony Cockell.

to monitor systems from 200W- 300W. Adam Hall was showing two of its own new products alongside their full range of case and cabinet hardware: the AHPHI-3 phase tester and the AHMTC-7 cable tester.

Delta Sound PA had a constantly busy stand reporting an increased level of business on the previous year, with several orders being taken on stand. They have certainly established themselves as a leading player in the industrial PA market with their Pyroxox voice alarm system and CM6/T ceiling speakers. Coupled with the fact that they are distributors for both PASO PA systems (who launched the new B500 Series of desk microphones) and RS Components, should guarantee the company continued success.

Notching up their third appearance at PLASA, **Adastra Electronics** showed their ranges of wood cabinet wall-mounting and column speakers, alongside weather-proof metal columns for outdoor and arena use available in both 20W and 40W versions. **Ampetronic** had the new ILD300 audio induction loop driver range on stand. Designed to slot in between the ILD4 and the ILD9, it has an output current of eight amps peak and is supported by a comprehensive range of accessories, including loop monitor receivers, separate microphone pre-amps and cabling.

Since **Metro Audio** emerged from the shadow of C Audio earlier this year, it was the first opportunity for the company to exhibit in its own right at PLASA. In addition to its ever-expanding range of intercom and cue light systems, the company showed a prototype of a new stage manager's audio control system, which has gone into full production since the show.

In their pre-publicity **Audio Design Services** launched the Ambassador and Monarch ranges. These start with a six channel balanced line mixer which comes as standard with variable frequency input adjustment. The 60W, 125W and 250W mixer amplifiers incorporate the facilities of the mixer, but each unit comes complete with sophisticated electronic protection. Whilst others have been in the race to produce the cheapest loudspeaker, ADS have steered their design towards a more generic ceiling speaker - the Sigma range.

Millbank, having not exhibited at last year's Show, returned to launch a raft of new products, including the UPS 30 series of uninterruptable



David Webster of Mark IV and Graham Allen of PAG Direct with the Product Award collected for the Klark Teknik DN4000 digital parametric EQ.



Rob Peck of Gemini congratulates H S Pro - the winner of the DJ competition.

power supplies, a new Digital Voice Announcement Card and a new DC Surveillance module. They also extended their range of Long Line PA systems.

As anticipated, **Baldwin Boxall** launched several new products. Key in this was the new range of Midas integrated amps. As Tony Hinman explained, the emphasis here was to design an amplifier that would be both easy to use and install. Maintaining this theme is the company's new Monopage system, a new compact amplifier that will be welcomed by the PA industry. Its output is 20W at 100v line, making it straightforward to install.

Chevin Research, sharing a stand with UK distributor Showcom Audio, had its full A Series range of compact power amps. The top end of the range includes the Q6 - four channels of 600W per channel, the A3000 - 1600W per channel and the Q900 - four channels of 1600W per channel.

Next Two were rightly promoting the fact that they have been selected by the British Airports Authority to supply voice alarm systems to over 120 BAA sites, including all the major airports. The project, which will extend over a five year period, coincides with the company's current plans for expansion which will give them extra warehousing space, increased production and R&D facilities, as well as more office space. Despite all these 'distractions', the company launched a bevy of new products including the Unicube 6 and 10 modular units, a completely new range of column loudspeakers, alongside the FS20 and Globe 55, both spherical ceiling loudspeakers.

1995 award-winners **Clarke & Smith** were back to collect another product commendation for their television sound receiver, and there was also considerable interest shown in their new Schools Audio range with the launch of the audio centre and the classroom tape player - the Easiplay 5. For **CP Sound**, PLASA 96 was a chance to spread their wings in their own right, and on show were the full complement of CP's own speaker line, ranging from the CP10/25 300W RMS mid-top cabinet to the meaty CP118 800W RMS folded horn sub-bass enclosure. CP also launched the CCX amplifier range.

First-timers **Matrix** took orders from across the world for their Professional and STR ranges of power amplifiers. Their presence at PLASA underlined their intent to enlarge their distributor



Keith Moor, Debbie Riggler and Brian Evans of Millbank Electronics.



Alan Lohead of Tannoy welcomes new recruit Roger Harpum.

network and marks the company's further expansion into the export market.

Eagle launched two new zoning microphones and a six-input mixer, which, according to Kevin Roche, were very well received, whilst **Eurotec** took the opportunity to not only feature their loudspeaker range, but also promote their services to a wider audience. **JET Fabrications** launched the 60FX Total Recall system, a message storage and retrieval system and **JTech** showed their neat flow-tech silent pager.

The most common problems with power distribution units were being addressed by **Kelsey Acoustics** who have designed new units to overcome most of these disadvantages. The PD Series of AC power distribution panels offers either BS4343 16 or 32amp inlet and outlet connectors to allow linking to other units, an AC trip to allow fast restoration of power in the event of overload and an optional retrofit RCBO facility.

Much of **Whiteley's** on-stand interest was directed at their newly launched Pageman, a wall-mounted 100W, 4-input, 2-zone paging amplifier. But the real attraction on the stand was the daily prize draw and the winners were Tom Clarke of GMS Recordings, John Caton of Romers, Jason Dey of Roger Dey and Ken Walker of PLASA Special Projects. Each receives a Sony Walkman - CE Approved!

MTR Ltd courted much interest in their new products, particularly the DI-3GT and the SPA400B, a 200W per side high power amp. Meanwhile, **Audix** announced that they had recently signed a contract valued at £1.2 million with GPT International. The contract is to design, supply and commission all the public address equipment for the rail link stations between Hong Kong and its new airport at Chep Lap Kok. The



Engineers Jim Ebdon and Robbie McGrath, who are now endorsing the Audio Technica-4050.

company also launched a new range of digital amplifiers. The PWM series can house as many as three power packs within a single 1U chassis to provide unrivalled power/size ratio 100V line amplification.

Out Board Electronics got all fishy with the Octopus, an eight input, multiple output automated sound control system for live production work and designed to give the operator eight 'extra hands' to help with repetitive setting and re-setting of levels, signal routing to loudspeakers, effects insertion and sound effects triggering. The company also had their new joystick-controlled QP4 quad panner, a useful tool for controlling the position of a sound source in a quadrophonic PA system, which will undoubtedly find favour in live applications.

Sound Lab's stand was so busy that at times the team had to hand the stand over totally to the numerous visitors wishing to gain hands-on experience of their mixers. The five new DSM range mixers were well received, especially the DSM30, reflected in the number of orders taken. Also on the stand was the re-launched MRT60.

Wintonfield Systems introduced SoundPlus, a two-channel infra-red system by Williams Sound designed for hearing assistive, audio description or simultaneous language translation purposes. They are currently following up the numerous enquiries received.

Terralec, manufacturer, importer and distributor of audio and lighting equipment, found the show a success. They had a marked amount of interest in the BST Wilder Speaker, which sparked a large number of sales and export enquiries. Dean Layen said: "The show marked a considerable improvement for us on last year."

TL (Tony Larking) Audio had their entire range



Mark Walford of Clarke & Smith collects a commendation for their television sound receiver.

of pro-audio equipment on display, including new additions to their Indigo and Crimson range of signal processors.

SCV Electronics recently took on board the Audix ranges of microphones and loudspeakers and was exhibiting them for the first time at PLASA. Also on the stand was the full range of Marantz professional cassette decks and portable recorders for on the road reporting, Fostex's DMT-8 and D-80 digital multitrackers, DAT recorders and mini mixers, and the full ranges of SCV-branded and LA Audio outboard including the GX2 noise gate, CX2 compressor and MX2 mic pre-amp.

Axis Audio exhibited FAR's complete range of studio monitoring loudspeakers, alongside valve microphones and studio electronics from Groove Tubes, and circle sound and surround-sound processing from RSP Technologies.

Marquee Audio, which recently won a contract to supply and install a new sound system for the Questors Theatre in Ealing, showcased a wide range of products from its professional sales portfolio. They included the Soundcraft Ghost and K3, Spirit 168, Yamaha 02R and PM3500, and Allen & Heath GL 4000 consoles, RCF loudspeakers and JBLs from the EON, Control 1 and Soundpower ranges, Crest Audio and Crown amps, the Klark Teknik DN6000 audio analyser, Lexicon PM 80 and 90 processors, EMO graphics and Alesis ADAT eight track digital audio recorder.

BC Technology's expertise has led them to supply their range of entry systems to installations around the UK, including hospitals, schools and commercial premises. Both the Farfisa communication and Axema access control systems were on stand.

HNB Communications was showing the new

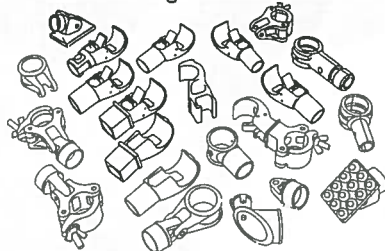
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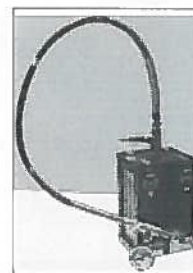
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Genex GX-8000 eight track magneto optical disk recorder for the first time in UK. Ideal for post-production and fixed or location recording, the GX-8000 offers 24-bit resolution with straightforward operation.

Other products from HHB included the Yamaha O2R digital console, Rode Classic Valve microphone, Tascam and Denon recorders, and various DAT and cassette recorders from both Panasonic and Marantz.

Our friends from the north, **John Hornby Skewes**, had many new lines at PLASA to complement their extensive pro audio range. The Classic Series manufactured by HK Audio is a range of compact, lightweight, broad dispersion speaker enclosures designed for nearfield applications. The Ceramic HF drivers deliver silky-smooth treble and the bottom end is punchy and warm, even at low levels.

HK's Classic Pro Series is designed for applications requiring medium to high sound pressure levels. The cabinets are constructed from high density MDF, whilst crossovers and drivers are carefully matched to provide even phase response.

The Scanner radio microphone system range is expanded with the L1 Lavalier non-diversity system and The Scanner S2 diversity system. In fact, on the eve of the Show, the Scanner system received the 'Best New Product' award at the Music Industries Association Award Dinner.

Canford Audio had a host of new products, including Mini Discs and DAT cassettes, Level Limited headphones and the Compact Power amp. If you need oomph! then this latter is probably all the power you need - 30W to be precise in a case so compact you can fit it in the back of an LS3/5A. Several versions are available

with electronic or transformer balanced inputs at mic or line level.

For many years **Neutrik** have been leading the field in audio connectors. Despite the already comprehensive range, the company have added yet more, including Powercon - a new mains connector, based around the Speakon design, Minicon - a 12 pole miniature connector and Nanocon which claims to be the smallest sub miniature three pole connector in the world. Unfortunately, as is now increasingly the case, copies of their Speakon connectors, compete with Neutrik name and logo, are being imported into Europe via Hong Kong. Needless to say, they are of poor quality and anybody offered these cut-price connectors should contact Neutrik.

Deltron showed its new range of 1/4" jack plugs alongside a new range of connectors and the latest modular addition to their range of 10" rack panels, boxes and stage boxes. The main focus of **Quail's** display was their new Matrix communications system, whilst **Clock Audio Projects** were offering a neat line in gooseneck microphones, together with a high tech conference system.

Fulcrum are specialists in the field of 'speech into electronics' products and at the show they had a range of specialised voice products. Consultants **Sound Design**, meanwhile, exhibited a range of acoustic products. **Telecast**, on **MI Broadcast's** stand, specialise in fibre optic links for audio, video and data. Given the nature of the product, it's not surprising that both Adder and Sidewinder presented themselves as suitable names for the 32-channel and two-channel ranges respectively. MI had the Pesa Switching range of video/audio switchers alongside Face Systems' beltbacks and talkback products.

Raper & Wayman showed the new TC

Electronic Wizard effects processor range, which to date comprises the M2000 and the Finaliser, as well as the M5000 digital audio mainframe processor. Also new were a range of automatic mixing products from IRP, including the AM3040 4-channel and AM3080 8-channel microphone mixers, whilst Powerline 1 and Powerline 2 power supplies were shown for the first time.

Cue Pro Audio, one of the few dedicated service companies at the Show, announced that they had been appointed as the authorised service centre for Denon, Sony and Crest Audio. The **TW Electronics** stand featured their specialist range of electro-mechanical components. For them, PLASA proved the ideal forum for meeting and consolidating their business links in the industry.

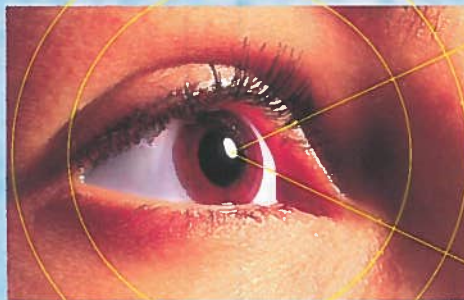
SigNET are one of the leading companies in the life safety audio communication industry. On display was the new LINX single zone voice alarm system, an all-in-one VA system, alongside the new SigNET LS, an intelligent routing and prioritising audio system designed primarily for use in multi-zone buildings.

Roxburgh's name is synonymous with encoders and as might be expected the company displayed a number of new products in the ALPS range of encoders. Last, but not least, **Farnell** were playing the numbers game and have a vast product portfolio with access to a staggering 175,000 products from 1,200 manufacturers. Needless to say, just about everything the engineer could wish for is contained in the company's catalogue - though at 2,000 pages in length, it may take a week to get through. You have been warned!

Mark Cunningham/Steve Moles

A much more detailed sound report appears in L+SI's sister publication S+CSI.

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ON TOUR

by STEVE MOLES
AND PRODUCTION NEWS

Steely Dan

Wembley Arena

LD: Jeff Ravitz

SD: Dave Morgan

This was the first show of the Autumn arena season and possibly the hottest ticket of the year. Thus special thanks are due to agents ITB, and especially Chris Adamson for arranging access to this coveted event. Steely Dan last played London in 1974, at the now sadly dark stage of the Rainbow on Seven Sisters Road. Even in those days, they were not renowned for their heavy touring schedules, preferring instead an almost hermit-like existence in the recording studios. Whatever they lacked in public accessibility, they more than compensated for with a string of albums that are as timeless today as when they were released. Claimed by the intelligentsia as the high brow of rock, Steely Dan did reach a wider audience through a clever blending of jazz, swing, ragtime and a clutch of other influences, with the modern armoury of rock instruments. It's of more than passing significance that many a sound engineer today can still be heard to use Steely Dan recordings to warm up their PA systems.

The dynamic range of their musicianship and the sheer clinical application of technical prowess exacted during the recording process, make them an ideal audio reference tool. That said, Donald Fagin's surreal lyrics and Walter Becker's choppy guitar breaks make for superb pop tunes that demand attention and never let your interest wander. If you want further proof check out the size of the Brinks Mat van that delivers their royalty cheques each month. So, having got the idolatry out the way, how was the show?

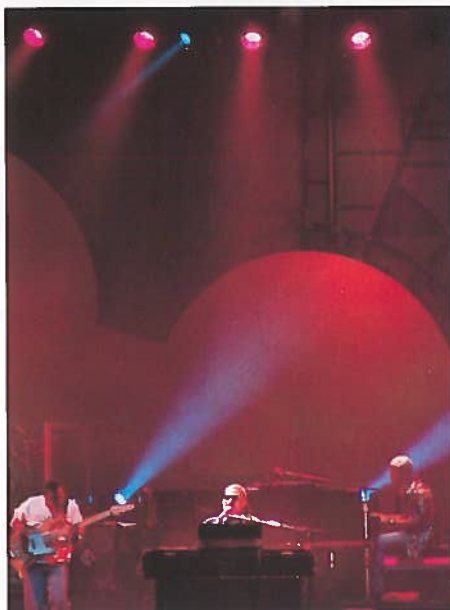
SOUND

As noted, it is 22 years since Steely Dan last appeared in England, and apart from a brief outing around the US in '93, they've hardly done any live work at all. Thus they were a little stiff on stage to say the least, audience banter was of the "... and the soloists in that number were ..." variety. But the band the two maestros had assembled was rich in pedigree and ability.

For front-of-house sound engineer Dave Morgan it was quite obviously a pleasure to mix. The 11-piece band consisted of three horns (two sax and a trumpet), guitar and bass, two female backing vocalists, piano and Hammond organ, with the inimitable Ricky Lawson on drums. (Aficionados of Phil Collins' last tour will be familiar with this larger than life drummer who manages to combine faultless technique with an engaging and friendly manner that manages to transcend the stage and reaches the furthest



Steely Dan: the stage looked a little Hollywood - nothing too elaborate in the way of set, whilst above, there was a fairly modest lighting system with a strongly defined arch of lights as the dominant feature.



corners of the room.) Fagin spends most of the night behind a Fender Rhodes (what fun to hear the old familiar twang as a string snapped during the third number) while Becker stands glued to his spot and defers the majority of guitar solos to Dave Cramps in the band.

Dave Morgan has an S4 PA system out of Clair Brothers shop in Switzerland with 25 cabinets flown each side wide and high, and just a pair sat on either side of the stage. He's steering his ship from the familiar Yamaha PM4000 and has a modest array of effects, including not a few from Tube Tech for that pre-digital sound. It's a measure of the S4's design and durability - both physically and acoustically - that it's of similar vintage to the band's last London show, though the components today are much improved.

Although it didn't sound like the seventies, I could have sworn I heard a thyristor buzz during one lull between songs. From the mix position the sound was bright, sometimes a bit too toppy for my taste, but every instrument and inflexion was clearly discernible amidst the complex musical patterns that characterise this band. Level aside, the sound at the desk was exquisitely defined. However one problem did arise during the show.

During the intermission, a veritable flood of people descended from the rear-most extremities of the side bleachers to complain of overwhelming bass rumble to the exclusion of almost every other part of the mix. Morgan attempted to rectify this by having the amps' powering the 18's that were pointed their way wound down a bit for the second half. But I visited both areas later and although better than described by the punters, the bass rumble was still pronounced. I can only assume some weird coupling effect was in play as the anomaly was common to both sides and distinctly in the same relative area.

As Dave Morgan pointed out to the aggrieved punters, he's trapped at the desk for the show and relies on his crewman to walk the room occasionally to identify such problems. Why walking the room never took place is a mystery to me!

LIGHTING

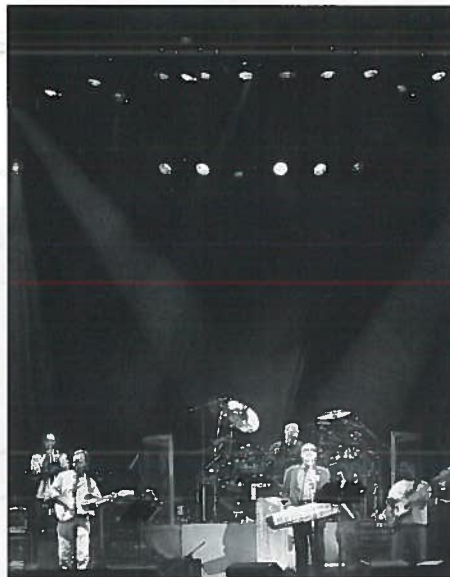
The stage looked a little Hollywood as is befitting - nothing too elaborate in the way of set, just a nice balanced assembly of risers, whilst above, there was a fairly modest lighting system with a strongly defined arch of lights as the dominant feature. On the day I attended, Vari-Lite had just celebrated their fifteenth anniversary at the PLASA Show. How appropriate then that this tour should

employ Morpheus, a lighting company who had the earliest opportunity to take on Vari-Lite and singularly failed.

Fortunately, Morpheus have just emerged from their recent collapse into Chapter 11 in the US, and the revitalised company has seen the departure of one of its founders and senior officers. Whatever the background problems, the Pan Command automated light system developed by Morpheus is good, and the Color Fader in terms of innovation and progress, made a great contribution to the colour changer wars of the eighties. Designed by Jeff Ravitz, the Steely Dan rig contains 58 Fader Beams, 28 PC Spots and 40 Pars fitted with Color Faders.

Greg Maltby, long-time assistant to Ravitz, is lighting director for the tour and he contributed to the programming process in rehearsals. Each band member has their own ellipsoidal and there are three truss spots and four 'Troopers' front of house. Not a huge rig, especially for such a big band, but the stage was never wanting for light, even if the reliance on pale pinks, lavenders and magentas did get a little wearisome after a while ("Dare I say it Jeff, you've been doing too many TV shows, get back out on the road for a couple of weeks and recharge the old 'brash and vulgar' batteries a little").

There were some nice colour combinations occasionally: 'Ricky Don't Lose That Number' featured a lovely mix of green and mauve, but it was transitory, just accompanying a guitar



"Every instrument and inflexion was clearly discernible amidst the complex musical patterns that characterise this band."

flourish. If nothing else, this band break convention, and this could have been reflected in the lighting a lot more. They were lit too much as a lounge band - in fairness a role they can play to

the hilt, but the lighting failed to reflect the inherent humour of their music, a humour which makes it special. The execution was first class though and praise must go to Maltby operating from an Avolites QM and to Troy Garcia on the Pan Command LDS MP500 board for their precision cues. Following tricky time signatures and sudden breaks in an improvisational musical programme certainly kept them on their toes, and they were not found wanting.

In the catering room pre-show, I sat with Bernard Docherty (PR to the 'Stones and Tina Turner to mention just a couple) as he reminisced on how last time Steely Dan had played London, he'd owned a record shop and spent his days accepting psychedelic Woodbines in exchange for playing selected tracks on the shop's stereo. I, for my sins, was driving around the UK in a tatty bus on tour with Be Bop Deluxe heaving up 80' of steel truss and Par cans everyday. Here we were 22 years later, about to see a band only dreamt of in the past.

As is no doubt often the case, the legend built in the imagination during the intervening years caused expectation to exceed reality. Their performance was almost faultless, and although many of the song arrangements were developments of the originals, this didn't detract from the recognition or pleasure.

But in the final analysis, like Pandora, I rather wish they had stayed in the box and retained their mythological status.

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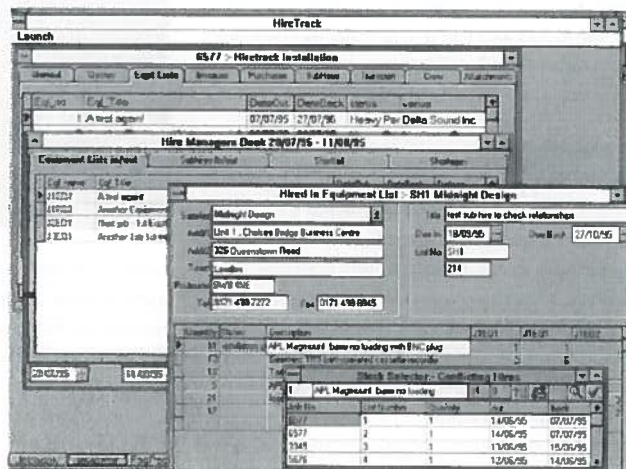
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Global Economy

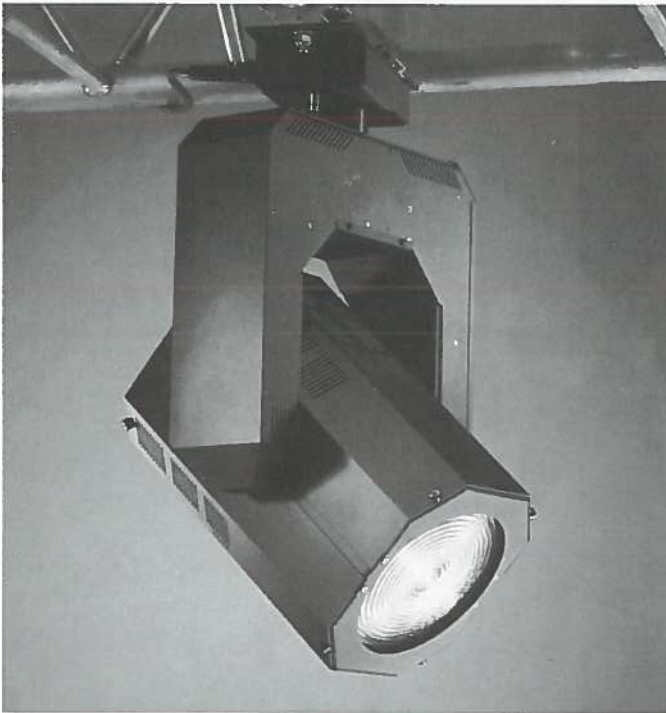
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SOME **MOVING** FACTS...

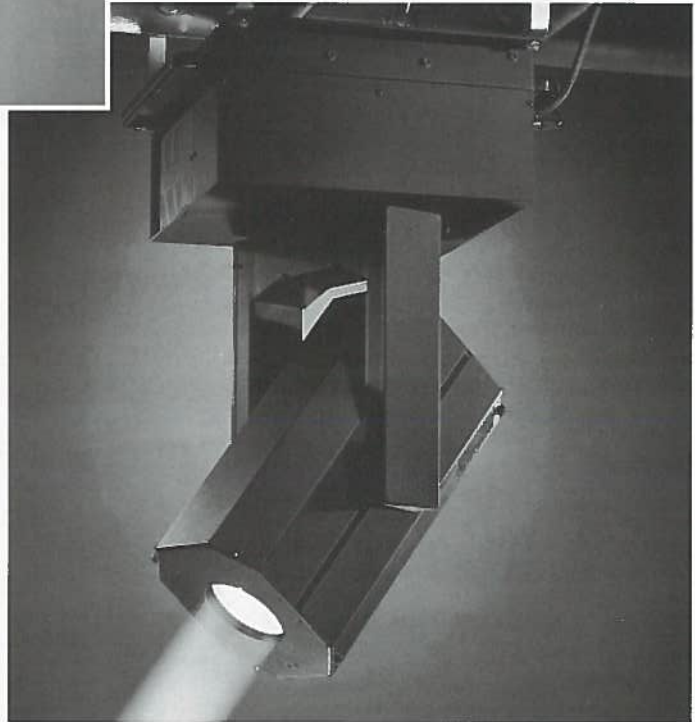


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IN CONCERT

Steve Moles takes a look at the lighting and sound equipment installed in the recently opened Bridgewater Hall, the new home of Manchester's famous Hallé Orchestra

A flurry of coverage in the national press marked the opening of the Bridgewater Hall in mid September. The building, a brand new home for Manchester's famous Hallé Orchestra, was variously described as "architectural ambitions horribly compromised by their commercial origins" - Hugh Pearman, Sunday Times 8/9/96. "Elegant, rather than aggressively angular" - Malcolm Hayes, The Independent 13/9/96. However, one thing they did all agree on was the acoustics: It had some. How they chose to characterise them was another matter all together.

If this leaves you confused, then I admit to feeling the same, which is why I was happy to spend a few hours in the company of Chris Wright, the hall's technical manager. Having served his apprenticeship at the Sands Centre in Carlisle, he then moved on to Manchester and now, to his quite obvious delight, has a brand new £42million toy to nurture and play with to his heart's content.

Entering via the artistes entrance you immediately notice two things: the aroma of new building, particularly the lingering tang of lime from thousands of tons of slowly hardening concrete, and the quiet. The small lobby leads straight into a corridor through oak-skinned doors some six inches thick that would not look amiss in an expensive recording studio. As they silently kiss behind you, you become conscious of entering a separate environment. Starting at the control room - positioned centrally at stalls level beneath the first tier of seats - the facilities within establish the standards that have been applied throughout the hall.

Consultant Sam Wise from TechPlan International specified all aspects of the sound, lighting and stage systems. The control room is luxurious in size but robustly functional, money spent has been focused quite clearly at equipment rather than furniture. The room is divided: to the left is a large open area with desks for visiting production teams and to the right, the main lighting desk - an ADB Vision 10 with a 12 channel sub-master stretch soon to be added. The biggest surprise for me was to discover that allowance has been made for a large frame laser to be brought in - not only is there sufficient power in the room, but also pumped water and a heat exchanger beneath the floor.

The remaining third is partitioned off and is dedicated for sound control. The sound desk, a Crest Century Vx 32:8:2, was originally going to have only 24 channels, but the BBC contributed to the specification and upped the



The glass facade of Manchester's new Bridgewater Hall, which has drawn mixed reactions from the critics.

"I am no connoisseur of what constitutes the perfect sound from someone dragging horse hair across gut strands stretched on a 200-year-old piece of Italian wood, but what I can say is that those elements were clearly identifiable everywhere, and sweet with it."

requirement. There are effectively two PA systems in the hall (in addition to the SPAS system from Baldwin Boxall), one for speech reinforcement with speakers dispersed throughout the room, the other - ten Community 880s - a dedicated stage PA. All are driven by Crest amplification and both systems can be controlled from the Century console.

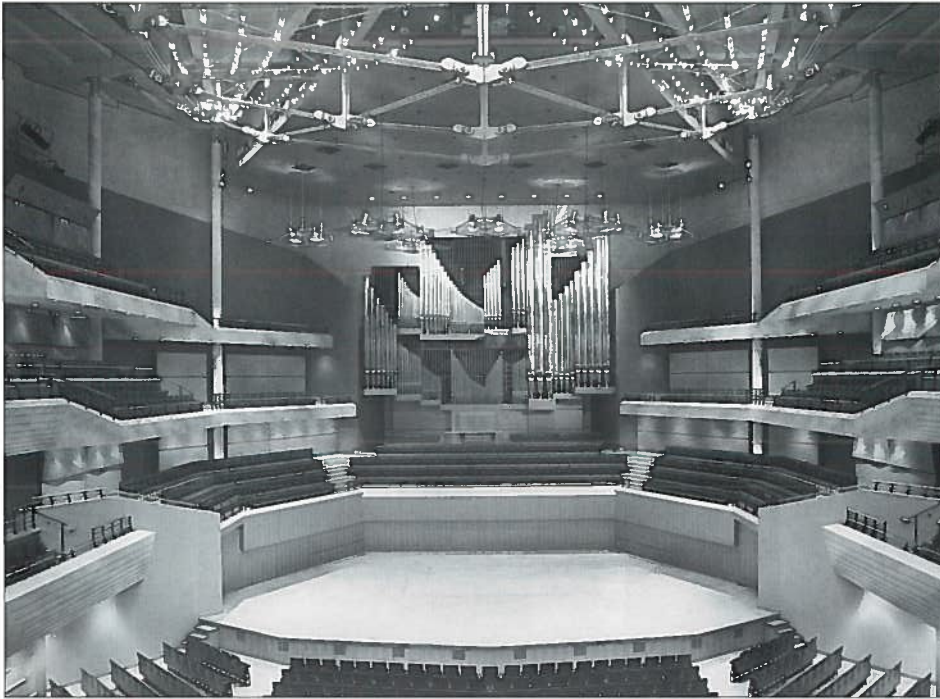
Off-board utilities include Klark Teknik graphics, various quality brand record/ play equipment, a Crest NexSys system to look after the widely dispersed output side of things, an AKG radio microphone system and a Peavey MediaMatrix. This PC-based control system automates control of graphics, gates, limiters compressors and delays. In fact, the Century could be by-passed altogether under the right circumstances.

The entire sound installation was performed by DRV from Cornwall, a major undertaking as there are literally thousands of links and tie-lines everywhere. There are 72 audio lines into the booth with a duplicate set out in the stalls, offering sound engineers a choice of mix position options. They can elect to work behind glass, with the booth window open, or have the front wall of the booth removed and a section of the booth floor supporting the control gear can be rolled down towards the stage so mixing can be performed out in the auditorium.

As with the rest of the building, there are rat-traps facilitating cable runs to all areas. It was an easy matter, for example, when Radio Four's Kaleidoscope chose to run their programme one Friday from the foyer. The whole ethos of technical design is to permit the building to be used for a multitude of functions in virtually any configuration.

So extensive are the rat-traps and tie-line systems that you could mix a rock band playing in the foyer from a position in the roof above the stage if you so wished, and be able to monitor it on closed circuit TV. Link panels abound with ClearCom intercom lines, Thin Ethernet, fibre optic, twisted pair data, OB ties, TV and video, and these are often accompanied by a similar dedicated lighting panel giving remote access to dimmers, non dims and the DMX system.

The auditorium accommodates a seated audience of 2,400 (the seats were supplied by Audience Systems). With very few exceptions,



The main auditorium: above the stage is a bow strung structure delicately laced with nets of lighting - literally hundreds of tiny MR16 reflectors in a fine wire weave. In the centre can be seen the Marcussen organ whose pipes dominate the stage.

all seats have a grille panel in the floor running beneath them that covers both A/C and heat supplies which is intended not only to ensure the comfort off all, but presumably also to provide a uniformity of temperature and thus air density throughout the hall.

All flooring is un-carpeted oak boards and wherever possible, sloped rather than stepped for ease of wheelchair access. There are dedicated positions for wheelchairs and good ones at that, not tucked away at the back of a balcony. If more places are needed, sections of the seating are designed for quick and easy removal. Although essentially the auditorium is a rectangular box, the walls, balconies and roof are a maze of different angles, the larger flat surfaces broken up by contoured ridges.

Empty, the room is bright and has a reverb of 2.4 seconds, reduced to 2.2 when full. I had the opportunity to hear a choir and small orchestra rehearsing later in the day; listening from several different parts of the hall, the sound was both transparent and consistent in terms of clarity and level, even in the remotest of locations. I am no connoisseur of what constitutes the perfect sound from someone dragging horse hair across gut strands stretched on a 200-year-old piece of Italian wood, but what I can say is that those elements were clearly identifiable everywhere, and sweet with it.

PA-wise you can spot elements of the speech system dotted about the inaccessible areas: JBL Control 5s discreetly flush-mounted beneath the balcony overhang and behind the front stage fascia panels. More obviously up in the roof are some large horn flares (fitted with a variety of JBL, Community and EV drivers) arrayed behind a five metre three-sided panel of wire mesh affectionately known

as the tennis racquet. The larger Community 880 system is for temporary install only and was tucked away in a back stage store.

The stage is divided into eight zones, all mounted on worm drive scissor lifts, which can be used to configure a variety of stepped stages rising to 1.2 meters. The larger rear-most section will also descend four metres, giving access to the seat and music stand store. All the lift gear and controls for this were supplied by Tele-Stage Associates Ltd and each lift section has a 250mm deep acoustically deadened fascia panel all round. For high lifts matching sound-proofed panels slot in to retain the reflective integrity of the stage and mask any noise from below.

The lift gear is designed for heavy work, the back stage section will lift 10.4 metric tons and support a weight of twice that as a static load - the other sections are similarly highly rated. Above the playing area, ensemble reflection panels formed in glass help contain a natural acoustic on stage. These panels, shaped like a shallow inverted pyramid, each have four silver Par cans above for stage light, and all can be individually raised and lowered according to who or what is being played beneath.



Technical manager Chris Wright with the Century Vx console. Originally specified as a 24-channel desk, this was upgraded to 32 channels at the request of the BBC.

Control for this function is from the stage left prompt position, whilst for the stage elevators control is from either of the prompt positions, stage left or right, with a multicore remote that can be run out onto stage for tricky set-ups. Each prompt has the previously described tie-line and lighting panels, as well as CCTV with feeds from throughout the building, plus the added luxury of nine channels of satellite for those nights when Pavarotti and Roma FC aren't appearing on the same pitch. Similar connections to all audio and lighting systems are accessible across the back of stage hidden behind lift up oak panels on the rear wall.

In fear of stating the obvious (though these things are always worth emphasising), there are, in common with every other conceivable nook and cranny of the building, dedicated technical power outlets across the back stage wall as well. All the tech' outlets are on the same phase throughout ("we like that purely from the point of view of safety when using power tools") but also this entire ring is on a completely separate earth from the rest of the building. Thus the spectre of electrical interference from a lone technician using an angle grinder up in the roof while the BBC record an interview in the lobby, is relieved.

Backstage facilities as you've now probably figured out for yourselves, leave nothing to be desired: to back stage left is a monitoring room with common tie-ins to the 72 channels of audio, plus everything else. Immediately beyond is the main stage power distribution with four 125A three phase outlets (there is, of course, more power stage right with a 63A and 125A dedicated for sound). Stage right has patch systems for everything bar the lighting which is housed at dimmer central, an ADB rack of Eurodim 2 filled with 2.5 and 5kW modules one floor above stage.

Also stage right is a large store for grand pianos and the business end of the Marcussen (Danish-built) organ whose pipes dominate the stage. Not surprisingly, the room has its own built-in atmosphere control system to keep the instruments close to the same temperature-moisture gradient as the stage proper. The loading dock, slightly to the left of centre, is at tail gate level and is just wide enough to accommodate two trucks, though only at a pinch. The dock is sealed off from stage by a huge steel door which resembles the seal to a nuclear bunker, and is the only vaguely industrial looking fitting I saw in the entire building. In fact, as is consistent with the whole auditorium, the concert hall is separated from all other functional areas of the building by two concentric, but flexibly connected walls, an isolating corridor that effectively forms a lock to the inner sanctum.

The roof was the most exciting place for me. Having worked on concert performances in many orchestral halls - especially the abundance of modern halls that have been built in Germany since their older ones were destroyed by Air Marshall Harris in mid century - I can honestly say I've never been in one with a roof like this before. A vast carapace of multi-faceted concrete, probably weighing hundreds of tons, is suspended from the building's main roof above the hall. Beneath it is a bow strung structure delicately laced with

nets of lighting - literally hundreds of tiny MR16 reflectors in a fine wire weave. Above the concrete, each section of the net is hung from a wire winch to enable lowering for bulb replacement and cleaning.

What startled me, and what separates this roof from all the others, was the allowance made for hanging temporary equipment above the stage (and elsewhere in the roof for that matter). Not only were there purpose-built lighting bridges and gantries, but everywhere large two ton rigging eyes were fixed to the superstructure above the carapace with corresponding apertures below to allow wire rope or chain to descend. As if to underline the confidence of the designers, and the open-mindedness of the hall's managers, they already stock their own CM Lodestar chain hoists and a Total Fabrications' controller. In fact, stored downstairs were several hundred feet of A type truss as well.

Back in 1983 I was once prevented from pre-rigging two CMs above a stage at an orchestral hall near Frankfurt because an orchestra rehearsal would take place prior to our production gaining access to the hall. It was felt that the presence of the two hoists would alter the room's acoustic. Although true, it was a rather precious approach and symptomatic of the attitude of the time. It is therefore refreshing to find a modern venue that not only tolerates temporary rigging, but one which has actually grasped the nettle and in so doing gained control of a potentially thorny issue.

Also in the upper void is the lighting bridge - in this instance fitted out with 10 Strand Altos, hung parked, it's underside forming part of the carapace. Parallel to it, there is an access bridge that allows for focusing to be carried out with the light bridge hanging at any level. No matter where a technician might descend there is a load arrestor and full body harness for them to use. Needless to say, everywhere, both on and off the lighting bridge, were the inevitable tie-ins, DMX lines, non dims and intercom.

Just to put the icing on the cake, down in the basement it is possible to walk around a forest



The auditorium accommodates a seated audience of 2,400. With very few exceptions, all seats have a grille panel in the floor that covers both A/C and heat supplies which not only ensures comfort, but also provides a uniformity of temperature throughout the hall.

of small concrete piers each with a small green and black metal box on top. Lifting the rubber skirt that surrounds these boxes you expose the simple helical springs within. The entire 220,000 tons of the building is sprung and shock mounted to prevent noise penetration, particularly from the nearby MetroLink trams. Even the staircase down into the void is floating at its lower end to prevent transmission of any vibration from the foundations into the building proper.

The building is still new and will no doubt soften given a few years, but internally, the venue already displays a great deal of care and attention. The triumvirate of architects Renton, Howard, Wood, Levine, construction company Langs, and acoustic engineers Arup Acoustics, deserve commending for designing a venue that will serve the city well.

Externally, it's hard to judge as surrounding

areas are currently under re-development and no building looks its best amidst a forest of construction. The Hallé have taken on 50% of the responsibility of running the Bridgewater, forming a management company 'Hallogen' with partners Ogden Entertainments.

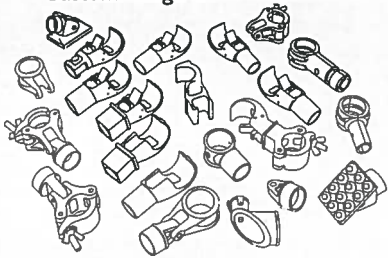
When I visited, the staff to whom I spoke talked proudly of having weathered the storm of the opening few weeks, the receptionist boasted of having served canapés and poured wine until 1.00am at a reception the previous night. As Chris Wright said of his technical team: "They're all new, young and keen. There's no baggage of old bad habits imported into the building," and this sentiment is reflected in the facilities.

With a need to maintain such flexibility and keep the venue busy to pay the rent, they seem to have all the right tools in place.

Venue photos: Len Grant

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Specification for JEM Hydrosonic 2000 incorporating 'HOT technology'.

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SOUND MONOPOLY

Have Soundcraft kissed the Blarney Stone? Do they have a deal with the Leprechauns? Mark Cunningham visited Dublin to find out why their consoles are in such demand on the Emerald Isle

On a recent visit to Dublin, I attended the opening of the IR£2.8 million Temple Bar Music Centre, an impressive building which houses professional-standard rehearsal and recording facilities, training and information centres, and a new mid-size live venue/TV studio. One of the Temple Bar board's prime aims is for the centre to encourage and educate young Irish musicians by providing a quality environment. However, the use of the facilities will also be extended to commercial ventures, such as the 'In The City' international music convention.

U2's production manager and a member of the Temple Bar board, Jake Kennedy has played a major role in the planning and operation of the centre since last year, although the background to the project was formulated almost a decade ago, when several musical enterprises were squatting in the area. With joint public and European funding, it was decided to acquire the buildings to enable the consolidation of these enterprises and provide a cultural centre for music development.

With this background, it was important from the outset of the project that only the best possible sound equipment should be sourced for use in the studios and live venue. Looking around the complex, it was strikingly obvious just how much of an involvement the Harman Group has had in equipping and supporting this venture. Soundcraft, Spirit, BSS and JBL are very well represented by their respective mixing consoles, outboard processing and 12kW live sound reinforcement system, and everything was sold to the Music Centre at cost price.

Jake Kennedy said: "When young students visit, they are amazed by the wealth of technology we have here, and whenever they have set foot in the studio control room, they have quite simply looked open-mouthed and said 'Are we really going to be able to use all this?' Harman will certainly be paid back for their support because a lot of young people are going to be starting their careers using this quality of equipment, they are automatically going to think about using those brands as professionals.

"We recognise that young bands have a need to rehearse and record their material to the highest possible standards in order for them to be successful. We have all lived through how expensive that process can be and there have been huge numbers of extremely talented bands who never got that far because they ran out of money. They've never before had a place like this where they could afford to develop their art."

Joe O'Herlihy, U2's live sound engineer has also been involved as audio design consultant and it was largely his relationship with Harman that led to the centre's equipment specification. "I spoke to Philip Harman about the project and



Left to right: Joe O'Herlihy, Jim Wright and Jake Kennedy with the Soundcraft 3200 recording console in Temple Bar Music Centre's studio control room.



RTE's Dublin Headquarters.

because he is in control of the whole spectrum of products we have been able to secure some very high quality products, such as the 40-channel Soundcraft Vienna desk for the live venue. This is a high-tech building and this is the level of high-tech gear that we need. The combinations of the various different groups of technology as represented by the Harman Group was ideal for this venture, and that's why I was very happy to pursue that."

Having used Soundcraft since his early days as a professional, O'Herlihy felt that the choice of its consoles, which also included the 32-buss 3200 for the studio, was automatic. He commented: "Soundcraft is readily available in a great many venues, so having the kids learn about those products this early on in their careers is a huge bonus.

"I personally haven't used Soundcraft for the last two years. I did get the opportunity to try

out the Europa when it was launched, but we were just about to go out on the road and I didn't want to start familiarising myself with essentially virgin technology at that point.

"I think the EQ is something that Soundcraft has always paid a lot of attention to. It's a very musical EQ, one that is touch sensitive and you can actually see something happening. They have definitely mastered that and regardless of any upgrades they may have introduced, the EQ has always remained true to form. EQ should

be transient and musical. Their desks always seem to achieve what they are there to do, and that is to allow the engineer to get the optimum sound as quickly as possible and with maximum ease. The accessibility never seems to be complicated, and that's because they have concentrated on working with people like myself in the industry who give them constructive feedback."

The Temple Bar team believed it was critical to keep an eye on the future, especially for sound training purposes. Kennedy expanded: "Soundcraft is certainly a futuristic company in that it doesn't just design products for the here and now. When you train people on this type of product you know that the company is going to be with you all the way, or should be, so that any upgrades that develop in the future will be handled on a customer-friendly basis. Once the students are trained on Soundcraft, things



Centred are RTE's Jim Phelan and Des Moraghan, flanked by Soundcraft's Jon Ridel and Simon Sinclair.



One of the many broadcast studios at RTE.

become a lot more easy to comprehend as they move up the scale of the desks. I think Soundcraft is a company that's going to be around for quite some time. It's very rewarding to have a relationship with a manufacturer whereby you have virtually a straight line to the R&D department."

Cabling has been designed and installed to enable a band in one of the rehearsal rooms to have its material recorded remotely in the studio three floors above. Jim Wright, the centre's facilities manager who co-ordinated the massive cable trunking exercise, explained: "This is possible because we have tie lines all around the building and the studio can very easily record a session like that, and simultaneously record a vocal part in another part of the building. Similarly, we can record a gig that is happening in the live venue and at some point in the future it will be possible for the live venue to also operate as a TV studio. We had a bulk cable situation at the install stage and we had miles and miles of various types of cable, including fibre optic."

Temple Bar Music Centre now runs a number of courses, including a full-time City & Guilds accredited course in sound engineering and a part-time evening course for those who are working or studying during the day. Courses also exist in stage production and lighting design, and, in fact, virtually every subject connected with the concert, recording and AV industries. During his time off the road, O'Herlihy often gives informal lectures on seminars. "I feel very supportive of anything that gives people a theoretical grounding in engineering, but I think the practical side of these courses leaves a lot to be desired, although it can't be helped. When you're doing it for real, it's a different thing entirely, and all of those venues have different acoustic properties.

"It is experience and instinct that helps you to deal with how to make them sound good. You can't educate somebody about that kind of thing by just speaking to them. It needs some kind of work experience back-up, where they are taken out into the real world to discover just how people like myself cope with these problems. You only have three minutes in a song to get it right. You can't stop a tape or ask the band to do it one more time!"

The centre will also be offering young promoters attending management courses a

deal whereby they can promote a gig in the live venue with the full support of its staff. Jake Kennedy added: "One of the good things about people being around while the installation work was happening was that they saw what it looks like for a live venue and a studio to have its skirt up, and then try to figure out in their own minds how it would come together."

ATLANTIC 252

The first Soundcraft Ghost mixing console to be installed in Ireland was recently snapped up by the long wave radio station, Atlantic 252, through Dublin-based dealer and engineering consultancy Broadcast Technical Services (BTS). Launched at Frankfurt this year, and used in-house at Atlantic 252 for the recording of its jingles and promo inserts, Ghost features six mono and two stereo aux busses, four stereo return effects units or additional stereo inputs, plus multiple monitor outputs for different sets of speakers and headphones.

Additional features include a MIDI muting system, four MIDI data faders, time code synchronisation, machine transport control, individually switched phantom power and phase reverse. It is the powerful equalisation synonymous with Soundcraft that has made Ghost a hit with BTS's managing director Joe King: "Atlantic 252 was planning to have one of its dubbing studios refurbished and upgraded to a digital multitrack facility, and we were



A Soundcraft GP-1 takes pride of place in RTE's current affairs studio.

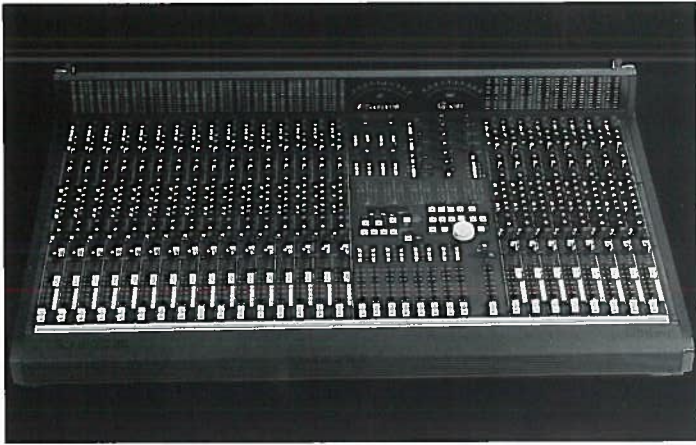
approached to recommend a new desk. We suggested Ghost as the perfect solution for the job, not least because of its superb EQ and host of features."

RTE

Ireland's premier broadcasting organisation, RTE, has also taken on board Soundcraft technology in a big way and at its Dublin HQ there are no fewer than 20 SAC 200 broadcast consoles, 14 LM1 location mixers, two GP1 location broadcast mixers and two 3200s. The decision to expand its stock of these products to the current level was largely prompted by the move to radio presenter self-operation.

Des Moraghan, RTE's former manager of radio production facilities, who since our meeting has retired and moved to America, commented: "A few years ago we had around 33 sound engineers, but now that the presenters are able to handle the programmes themselves we are down to 19, with the engineers now employed in other areas. Self-operation took a lot of negotiation to put in place from the point of view of the operator and the presenter, because they were being asked to do more themselves than they had before. We worked on it and got it through, and Jim Phelan, our engineering design and development project manager, worked closely with them. We also had to make sure that we kept things simple, no equalisers and nothing other than a straight channel. This was to keep the sound operators happy, because they didn't want to see the people using more equipment than they had to at the initial stage. We've got over that now so that we have been able to develop the desks and don't have to hide away the equalisation."

In the main current affairs studio, the original Neve desk remains, although it now benefits from a Soundcraft GP1 stretch mixer. Jim Phelan said: "The presenters here like to play their own CDs and do telephone interviews and the GP1 is a simple device to help them mix with ease. General elections always send this studio into overdrive and there are a lot of outside broadcasts coming through the desk. We've had the GP1 for just over a year and have around five LM1 mixers for outside broadcasts. The LM1 is preferred to the GP1 for OB because of the output monitor section. It busses in a slightly different way and the solo goes to the control room outputs.



Ghost - as recently purchased by Atlantic 252.

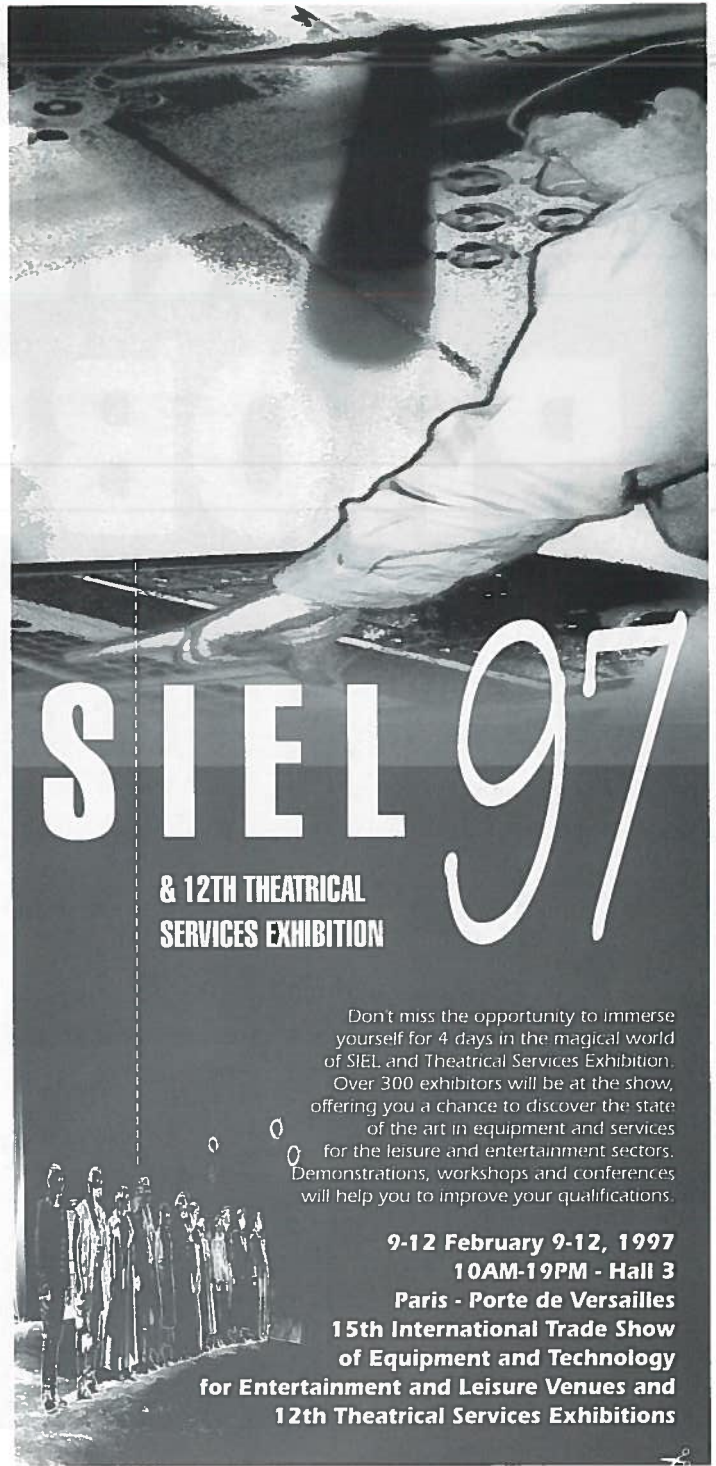
Studio Eight is a recording studio that is used regularly by 2FM for the intake of live music. It was, in fact, the studio from which U2 started their recording career in 1978 when they recorded the radio session that gave them their first break. Phelan added: "A lot of very gifted and famous people have passed through this studio on their way to stardom. It was fully refurbished in 1994 and upgraded with a 24-track digital Sony DASH recorder and a Soundcraft 3200 console, the same desk as used in the National Concert Hall from where we do our symphony concert broadcasts.

"By having the same desk in both areas, the operators will be familiar with the 3200 and they constantly rotate on different programmes, so it aids continuity. We didn't want them starting from scratch every time. That was certainly one reason. The other is to keep the product the same as much as possible throughout the building, which helps from a spares point of view."

Soundcraft was not, however, the only brand of console considered for the studio. The equipment supply was actually put out for tender among a number of installation companies, all of whom responded with different packages. It was the proposal delivered by Terry Cromer of Audio Engineering that was deemed to be the best package. "Once you gear up to have a number of mixers, it makes sense to stay with the same manufacturer wherever possible," Phelan noted, "so in a way you become captive, but that isn't taking anything away from Soundcraft because they make exceptionally good products that are simple to use and reliable. With our set-up, which has a maintenance department, it is very difficult for them to handle mixers from a wide range of manufacturers.

"The 3200 is also important from a commercial hire aspect, because this place is available to outside clients in a small way. Our own in-house people use it a lot. We have a limited number of senior sound engineers for this type of studio and we don't want to get into a situation where we have to employ someone on a full-time basis specifically for this studio because it would not be economically viable. We've done everything from traditional jazz to pop, and the word is out that this place exists."

Following my visit to Dublin, a Soundcraft B800 broadcast console and an SAC 200 has been purchased by RTE for its Cork studio, and further investment in a second B800 has been made by RTE for its Belfast operation.



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FUTURE INTERACTIVE

L+SI looks at the role of design company Kimpton Walker in the newly-opened Segaworld spectacular at London's Trocadero

September marked the much awaited launch of London's newest and most spectacular family attraction: the first Segaworld to be opened outside Japan and the first to be designed as a theme park. Sega Enterprises' £48m galaxy of futuristic experiences boasts four giant floors of state-of-the-art rides, attractions and the latest interactive games.

It is also the first theme park in Europe to build on the phenomenally popular world of computer games, with stars of Sega's Mega-Drive including Sonic, Spiky Fish and the Flying Egg, forming the centrepiece of many of the games and themed areas. Sited in the Trocadero complex, the venue boasts a prime position in the heart of London's Piccadilly Circus - one of Europe's premier tourist destinations. An added attraction is its indoor status, making Segaworld one of the few theme parks that will be boosted by the vagaries of the British weather. As a result, it is expected to attract upwards of 1.75m visitors a year, a large proportion of them tourists, which will put it in the top ranks of UK leisure attractions. It will form the model for a number of further Segaworlds, to be opened across Europe, starting with Stuttgart. For designers Tibbatts Associates and ride and scenic effects contractors Kimpton Walker, Segaworld has broken new ground.

Tibbatts project designer Graham Jones has worked on Segaworld since its inception two years ago. His brief was to create a series of totally original rides and environments capable of appealing to a range of age groups. "Segaworld's scale and sheer complexity has made this one of the most exciting entertainment projects in London. With everything from ghost rides to space travel, futuristic sculptures to ultra-violet light sensitive murals, every ride, floor and themed area is unique."

Leading scenic effects creators Kimpton Walker Ltd, were foremost among those chosen to turn these radical designs into reality. The London-based firm won the £2m plus contract after its work on a variety of related projects including the Museum of the Moving Image, Tower Hill Pageant dark ride and, in 1992, the Circlevision, Autopia and Startours rides at Disneyland Paris, along with a number of hit game shows including ITV's Gladiators.

In partnership with Tibbatts, Kimpton Walker spent some three months working up the construction drawings - matching the designs with the unusual dimensions of the location, choosing suitable materials, helping to create the detailed style and finish and bringing to bear its particular expertise in moving and mechanical effects. Such effects include the celebrated Kinetic sculpture, which continually tracks its way above and across Segaworld's



The Carnival, at the Trocadero's futuristic new Segaworld, projects visitors into a world of make-believe, complete with the latest interactive games and spectacular visual effects.



Segaworld's Sports Arena.

Rocket Escalator entrance. Constructed at Kimpton Walker's engineering studios in Clapham, this intricate steel and fibre glass structure includes two unfolding arms complete with 11 fantasy figures, which are themselves in motion.

The six pre-ride areas and themed environments also bear testament to Kimpton Walker's expertise. Of these, the Carnival combines the colour and feel of Mardi Gras with the light and atmosphere of a circus, whilst the sports arena recreates the crowds, buzz and vitality of a real stadium where you can be the 'star' of the show. Following Tibbatts' designs, Kimpton Walker constructed a whole series of striking scenic effects, including videowalls, 400 metres of painted and light-sensitive murals, as well as giant sculptures of Sega characters and sporting artefacts.

"Our intention was to create a 'cartoon' backdrop to set off the many different games and experiences contained within The Carnival and Sports Arena," says Graham Jones. "The care and detail provided by Kimpton Walker in all the various facets of their work has helped bring these two floors to life."

The eerie entrance to the Ghost Hunt, another of the pre-ride areas constructed by Kimpton Walker, is designed to be an intrinsic part of the entertainment. The engineers and scenic artists have created an enchanted world where every picture, statue and gothic fixture seems strangely alive.

Like the game zones, the pre-ride areas are totally accessible to visitors, many of them small children. Therefore, the design not only needed to be exciting, unusual and aesthetically pleasing, but also meet exacting durability and health and safety criteria. In such an open and interactive environment, every feature has to be safe and secure enough to meet any eventuality, however unlikely.

All the settings were constructed from a total of six tonnes of class O flameproof MDF board, and details often overlooked, such as the hanging American football helmet which was designed and built to withstand the force and weight of several adults swinging from its base. Segaworld's six ride attractions were devised and manufactured by Sega using the latest interactive and virtual reality technology. Space Mission is the first in the UK to use the new light weight Mega Visor Displays. The resulting



On the Mad Bazoooka ride at Segaworld, competitors in Hyper Battle Carts blast each other with machine cannons that fire balls at 90mph. Enclosed within 30 tonnes of steel, the Mad Bazoooka uses some 30 fibre optic sensors connected by 250m of cabling just to keep score.

effect is a 3-D, 360 degree, interactive deep space environment, encompassing everything from joysticks and virtual space suits to circling enemy attack formations.

Kimpton Walker were responsible for the installation of Space mission and four other Segaworld rides. These range from Mad Bazoooka, a fast action, gladiatorial contest fought from the aptly named Hyper Battle Carts to Aqua Planet, a 3-D interactive motion

adventure, set in an outerspace, underwater colony. For Aqua Planet the construction challenges were as much logistical as technical - bringing often huge components through limited access points and fitting them together within the constraints of an indoor environment.

The technology behind the scenes of Mad Bazoooka is as futuristic as the ride itself. A total of 30 fibre optic sensors, connected by 250m

of fibre optic cable to the ceiling, send score information to the control room and back to the battle carts. Sega asked for a total of 70 240v to 100v transformers to be sited around the exhibition and no less than 30 of these, as well as 100m of neon, serve the Mad Bazoooka, to keep it powered and lit.

Control of all the lighting at Segaworld was commissioned to the multi-role control system, ShowCAD. The sizeable project is once again a collaboration between lighting designer Vincent Rice and ShowCAD's creators, Axon Digital Design, continuing the long and successful association which began with the Camden Palace in the 1980s. ShowCAD controls Coemar NATs, Clay Paky Golden Scans, considerable generic lighting, haze machines and Pani projectors among other equipment. It also interfaces with laser, sound control and videowall, conducting an integrated timecoded show.

At the height of the project, some 100 Kimpton Walker personnel were actively involved, both on site and at the firm's scenic engineering workshops. The company used 600 metres of cyclorama painted for the wall cladding and electrical works carried out by the company totalled £500,000 alone.

Looking back at this project, Alan Walker of Kimpton Walker commented: "Segaworld's imaginative designs, along with the technical demands of creating a theme park within an indoor environment make this one of London's most exciting attractions, and in time, perhaps the model for a whole new kind of theme park attraction."

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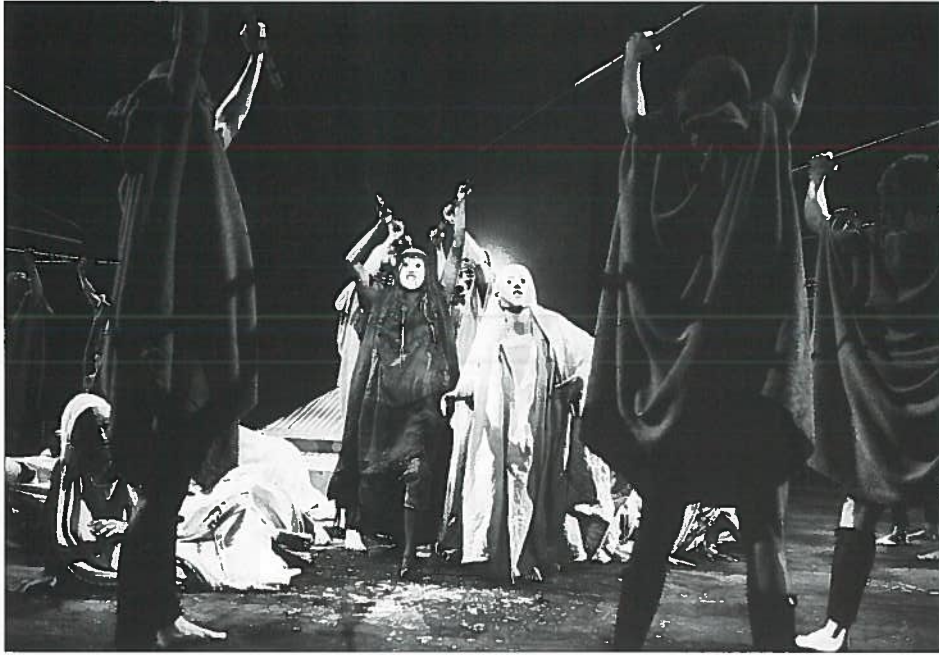
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ABLAZE IN THE STALLS



Peter Hall's *The Oedipus Plays* - a stylised version of the Greek tragedy.

photo: Allan Titmuss

Do safety officers take holidays? An alarming number of the shows I've seen at the end of the summer seem to involve flames of one kind or another, and I'm beginning to wonder whether it's because producers have been waiting for the moment when Fireman Jim, our man with the bucket of sand, takes it (with spade) to Clacton or wherever.

Fire and candlelight have always been staples for directors wanting to make an elemental impression. There's a simple, direct impact in flame that taps straight into our unconscious. They're also a nightmare for the lighting designer who has to provide the real light to back some director's primitive fancy.

I've already mentioned the joy of seeing Toby Gough's Edinburgh Fringe production of *Plant Hunter*, which took place outdoors and relied more and more for its effects on four flaming torches as the natural light eventually faded away. They were signposts, leading us to the next part of the Botanical Garden, special effects, whirled or thrown in the air and stage lighting, homing in on faces or costumes in the twilight. Yes, there was a column of traditional floods to illuminate the show's Tibetan dancers in their final big scene, but even after this, the show's last impression was of being led through the Gardens, again by torchglow, back to reality.

Another fiery Fringe highlight was the astonishing *Carmen Funebre*, a great hit last year, which came back this year to the more imposing setting of Edinburgh University's Old Court, where Ninagawa had such a hit with his *Medea* some years back. The Polish company Teatr Buro Podrozy (the name means Travel Agent Theatre, apparently, because it gets them out and about) are seriously pyromaniac in their depiction of the horrors of war.

Gigantic figures on stilts lay waste to villages with their torches, fiery crosses are lit and in an astonishing climax the whole set - a pair of vast doors leading to escape or imprisonment at

different times in the piece - is torched. Once again, there are floods on columns in a simple touring rig, but the flames do most of the work - apart from a couple of ingenious spots actually carried by the stilted figures, who sweep the audience menacingly with them as if in search of their next victim. Fringe First winners in 1995, this year the Travel Agents picked up the £50,000 Hamada Prize for excellence in Edinburgh, which should make them even more mobile.

In the official festival we were down to candles for Peter Stein's highly atmospheric reading of *Uncle Vanya*, candles whose spill rather irksomely didn't get picked up by the positioning of the stage lighting - but this was endemic to the production. It amazes me that a director with a world reputation for attention to detail could allow such sloppy lighting, with shafts of sunlight from the exterior throwing shadows in the unlikeliest of directions, candles in dark pools with lit areas on the other side of the stage, and so on. But there, this is a director who can put two actors on a set the size of Stamford Bridge and still have one masking the other.

Robert Wilson is another director whose attention to detail is famed, and more justifiably so: in Edinburgh he shared the lighting credit for both the monochrome solo *Orlando* and the highly colourful ensemble piece *Four Saints in Three Acts*, and it was the lighting which contributed much of the sensual pleasure which one takes away from each, especially the latter, a totally wacky Gertrude Stein/Virgil Thompson opera.

Following our theme, the last image in *Four Saints* was again a fiery one, as spontaneous flames engulfed a little house (ark? shrine to one of Ms Stein's saints?) that had been flown in to join the sheep, giraffe's necks and other delightful found objects that cluttered the flies for this surreal show.

On the international circuit, the Romanians

have always been great ones for ritual fire: Andrei Serban's trilogy of Greek tragedies made ample use of both candles and torches, and there are some striking fire effects in Silviu Purcarietes' *Danaids*, coming to Birmingham and Glasgow soon. Another compatriot, Mihai Maniutiu, had his share of candles in the recent version of *Murder in the Cathedral* which was seen at the Almeida.

Towards the end of this production, which is almost unrecognisable as T S Eliot's verse play on the death of Becket but immensely powerful in making its own statements about oppression, the sand-covered stage is planted with a ring of candles, which are then extinguished one by one. Not a fade in sight on the house electrics - one can only assume that this was a deliberate anti-theatre effect, although the suspicion lingers that the board operator had slipped out for a pint . . .

There was an embarrassment of safety officers, it would seem, when the National took Peter Hall's production of *The Oedipus Plays* to the Greek theatre of Epidaurus on the try-out for its September opening in the Olivier. Dionysis Fotopoulos's set for the first play called for a circle of flaming braziers around the orchestra, and the archaeologists in charge of the ancient site were worried that they might succeed where two and a half millennia of weather had failed and destroy the theatre's fabric.

At one point there was a bizarre plan to have an extra chorus of local firemen, each tending a brazier like a chestnut seller. The National crew were half way back to the airport before the locals relented.

As *Oedipus*, Alan Howard was a brave man to take on another lead role in a production involving a ring of flame - his last was the celebrated Gas Ring *Macbeth*, which didn't exactly set the Thames (and at times not even the Olivier stage) on fire with its naff effects. His reward, poor fellow, was to fall off the stage at Epidaurus and break his wrist. By the time Peter Hall's somewhat bruised production did reach the Olivier, it was looking very good, although in a very stylised way that was somewhat undermined by a casual, colloquial translation which sounded more like the bard McGonagall than Greek tragedy.

Mark Henderson can't have been too pleased with some of the less intentional shadows thrown up by the lighting of the main characters on the ramp which is the set's main feature, but his strong, simple use of underlying reds for the bloody *Oedipus the King* and greens for the more pastoral *Oedipus at Colonus* worked well. By the second play, the ominous braziers had been capped in that shiny patterned metal they use to make flight cases - not exactly a pastoral image - but once again their use when lit in the first half was one of the evening's abiding images, as they flared up at tense moments of revelation and died down again when our attention was needed elsewhere.

The Hall production runs until the end of November - looks as if the NT's safety guys get a very good holiday allowance.

Ian Herbert

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

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TOA

STAGE-STRUCK

Robert Halliday goes west to profile Stage Electrics

It's amazing just how much difference a trip along the M4 can make to one's perception of a company. Of course, everyone's heard of Stage Electrics: the lighting hire company with branches in Bristol, Exeter and Plymouth, suppliers of equipment to tours and theatres who produce nice glossy catalogues that appear every now and again with this magazine. Yet somehow many people's perception remains that they are a small, regional outfit hiring out a few lights to local theatres in the west country. Or, as co-founder David Whitehead puts it: "There are an awful lot of people down here with straw in their mouths." But he also immediately sounds a warning to those who persist in believing in that image: "Fine. Let them carry on thinking that, and we'll carry on pinching business behind them."

He can afford to make such remarks because the statistics immediately decry the 'small regional supplier' image: 84 employees spread across three branches that cover over 54,000 square feet between them; a turnover of some £6 million; a fleet of 26 vehicles, including two complete 40ft tractor-trailer units; the largest Strand Lighting dealer in Europe, and a raft of projects ranging from lighting hire for the current tours of *Crazy For You* and *Blood Brothers* to supplying all of the lighting requirements of the Edinburgh International Festival for the ninth consecutive year. A more immediate impression is made by their headquarters building just past Bristol on the M4 - sitting in an Avonmouth industrial estate. At first glance it looks little more than a standard industrial unit, albeit in the company's grey-and-red colour scheme. But inside, it contains a shop full of theatrical, not just lighting, products, a storage area full of clean, new equipment, a huge yet tidy and well organised equipment preparation area and, upstairs, bedrooms for the company's own crew members or visiting electricians. The building was actually custom-designed and built by the company prior to moving their head office to Bristol. Yet, as they have continued to grow, they've needed still more space, and they seem to be quietly taking over the rest of the estate - five units so far, with their eye on more!

It's a long way from the company's roots, which were as a one-man west country band: Maurice Marshal who, having acquired some stage lights from a former employer, became Maurice Marshal Stage Lighting based in Exmouth. Eventually he also started working as a freelancer at the newly-opened Northcott Theatre in Exeter, carrying on his business in his spare time. David Whitehead met Marshal while a schoolboy working on the lighting for school productions and local pantomimes, then went off to LAMDA for two years. "Those



The spectacular *Music of the Night III*.

were the days when you got proper grants," he recalls, "so you could save your grant, and not buy food, but buy sound kit." This investment in equipment created Sounds in Transit, which hired Goodmans speakers and Garrard turntables to clients including LAMDA itself.

For their last term, LAMDA's students were sent out on secondment to employers, and Whitehead chose the Northcott because he "thought it would be cheaper living at home!" However, he enjoyed his time there so much that he ended up staying for seven years, continuing to run his sound company in his spare time. During this period Maurice Marshal became formally employed by the Northcott, and it became clear that the demands of running the two businesses were such that "either we had to do it seriously, or pack it in". In 1979, Whitehead thus left the Northcott, and he and Marshal formed Stage Electrics, operating from a three storey shop in Lower North Street, Exeter, which still exists - though these days it operates as a restaurant. That Marshal decided to remain at the Northcott might seem a little curious, especially given the success the company now enjoys, but not to those who know him. "Maurice enjoys working at the theatre," Whitehead explains, "playing

with lights and that sort of thing. And he hates money. He also runs a training scheme at the Northcott, which he's very enthusiastic about, and the number of staff who have left that scheme and are now doing things in the industry is quite remarkable."

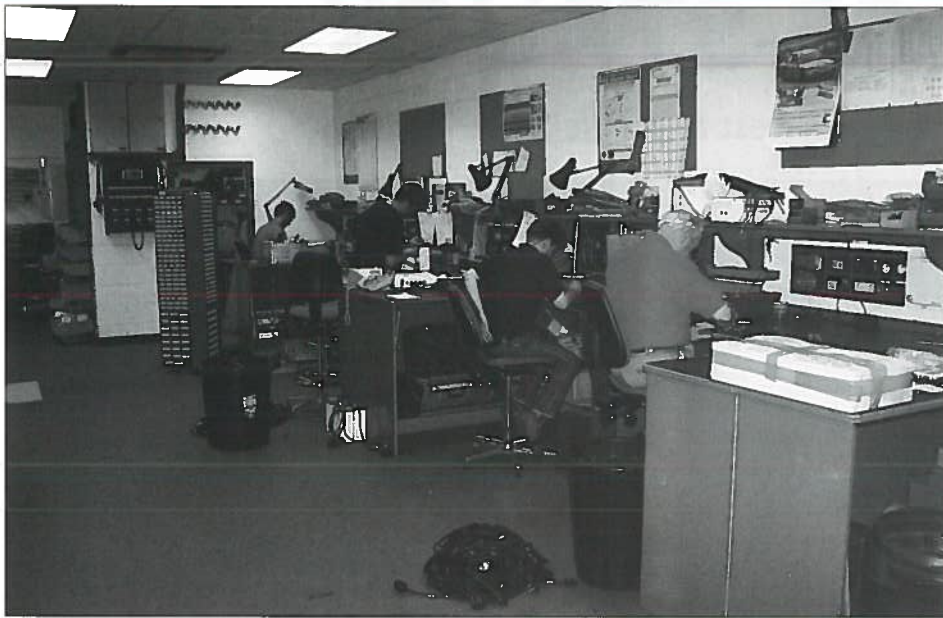
Marshal does, however, remain actively involved in the company, which is still a partnership between himself and Whitehead: he attends meetings regularly, and runs the Exeter shop on Saturday mornings. Perhaps more importantly, he is also a customer who treats Stage Electrics just like any other supplier; as hire manager Adrian Searle notes: "He can be on the phone as the partner of the business, but also saying 'I ordered this kit, where is it, I need it now'." This two-sided interest in the business undoubtedly helps him to ensure that the company always puts a customer's needs first.

The growth from that one Exeter shop has been rapid and impressive, though Whitehead attributes it to grasping opportunities as they arise, rather than to following a master plan. The first such opportunity appeared two years after the company started. Until then, "Strand had a shop in Bristol - a proper, conventional shop selling lanterns right in the middle of the High Street," Whitehead recalls. In 1981 re-structuring at Strand meant that they were no longer interested in supporting the shop and offered it to Stage Electrics, who took on the retail side but also brought some of their hire stock up from Exeter. The Plymouth branch started later, when someone there with an interest in lighting wanted to start hiring equipment. "A shipment of kit would go down and stay there, and he would request some more kit. As that grew, we opened up a small unit on an industrial estate."

From then on, the company has continued to grow, with each unit expanding in turn to match the growth of many of the shows they supply: on the weekend of our visit, the company had three outdoor shows in hand. "Those shows



Stage Electrics' headquarters near Bristol.



The electronic equipment preparation area in Bristol.

used to go out on Maurice's Mini van with a couple of S-63s strapped to the top," Searle notes. "Now it's two 40-footers, a flat bed and seven other cars for staff."

The Bristol unit moved to its present site in 1984, whilst the new Exeter unit was built in 1985 and Plymouth moved to an industrial unit in 1986. By 1990, the new Bristol unit was designed and built, with Plymouth moving to larger premises in the same year. The Bristol and Exeter sites are owned by the company; they bought the land and had the premises built to their specifications. Large scale investments, but not surprising ones from a hire company. "People make money out of hire," Whitehead notes. "The idea is to try and buy . . ."

What is endearing is the kind of gentle vagueness with which Whitehead recounts the company history, seemingly unsure of absolute dates or even the order in which major events took place. He's more interested in the future than in looking back at previous successes. Having bought standard accounting and distribution software packages to run on a mainframe computer, they couldn't find a suitable hire package and so specified one and had it written for them. Today, the system has terminals in all three branches linked by dedicated lines to a central mainframe, which can instantly report on the kit that is in stock and the branch it's presently located in. The software has also been expanded to handle the barcodes which now uniquely identify each piece of the company's equipment, and the PAT testing history of that equipment. Work on the hire system started in 1981 and has clearly been a major investment for the company.

Apart from the high level of computerisation, the two distinctive features of Stage Electrics are its hire stock, which consists almost entirely of fairly new, current-model equipment, and its reputation for being willing and able to tackle every aspect of a project, if required. The stock issue seems to have arisen because Whitehead has taken a different role model for his hire business than many other lighting hire companies: "If you go to a hire company for a car, you wouldn't expect to pick up cars that are five or six years old or

out-of-date models - you'd want the latest one with a P-reg number plate. Hiring lanterns is no different. As soon as the Cantatas come out you just get rid of the whole Harmony range."

That requires a large, and continuous re-investment, though he feels that the investment can pay itself back in many ways. "In theory, you're making more profit if you're hiring out the latest kit that people actually want - and it keeps your efficiency up, since it needs less servicing, less maintenance and has lower repair bills because you can still get the spares. This is far better than bodging some 264s trying to get something to fit because you can't get the proper spares anymore."

The majority of the hire stock is Strand equipment, the result of a relationship going back to the earliest days of MMSL: "When Maurice started there were Strand and Furse in the world. Maurice happened to pick Strand, and we've been Strand dealers ever since. For hire, it means we have to stock fewer spares. For sales, it helps the staff have a focus of mind that if a customer comes into the shop and says 'I want a light', they believe in what they're selling and can say this light will sort you out."

On the other hand, if a customer knows what they want, the company will be happy to sell or hire it to them; in particular it has added large quantities of ETC Source 4s to its hire stock over the past few months to satisfy the demand for that product. Older stock is sold on to installations, schools, smaller theatres and the amateur market.



The main lantern storage and preparation area in Bristol - devoid of equipment on a busy weekend!

As well as sales and hire, the company also has an NICEIC approved installation department and a production services department who often handle all of the technical aspects of shows - as well as a workshop that can develop its own products, and even a complete vehicle maintenance facility. This fully comprehensive range of services seems to have arisen partly because of the practicalities of being the only lighting company in a region, and partly because of the bullishness that that isolation introduces. The installation department's reputation has now grown and spread overseas with current work including the dimming and control installation at London's newly refurbished Lyceum Theatre and projects for Center Parcs in Holland.

Much the same story lies behind the large transport fleet. "Because of the part of the world we are in we have to do a lot of travelling, and we never have one vehicle spare. With the number of vehicles we have it's cheaper to employ your own garage and mechanics so that if vehicles come back faulty you can repair them then and there, rather than booking them in for work somewhere else."

And products? If they see a product that could be improved on, Stage Electrics tend to design their own variant that incorporates those improvements rather than just muddling on with an existing version; their Patt 252 cloud disk offers a number of improvements over others, for example. What is surprising, though, is how subdued they remain about all of their work. Whitehead attests that to some of the earliest business advice he received, from his grandfather: "I remember him saying 'you should never have to advertise in business', the idea being that if you're good enough, word of mouth will spread and you'll get the work." Certainly many customers do keep returning - even if, as with the Edinburgh Festival, the geography involved sometimes seems a little strange. But their real success is in balancing the different areas of their business - the full installation and commissioning of the dimming, control and facilities panels at the Lyceum Theatre with "the amateur people who will come into one of the shops on a Saturday morning and buy a couple of Act 6s and a 12-way desk over the counter". Having those locally-based shops also means that the company picks up the non-lighting trade, the people buying theatrical make-up or guitar strings or lights for a garden party.

The claimed business focus, for now, is to "continue to expand the business and have fun," according to Whitehead. But if an opportunity comes up, he and his team will jump at it - such chances have already seen the creation of Midland Theatre Services, the Sound Department and the set company Set Reaction, and the takeover of Ancient Lights and its metamorphosis into Theatre Direct. They admit that they would like more success in the London market and its world of large scale musicals - especially as improved transport links are bringing other hire companies into their traditional market area. But for the moment, they'd prefer to let the quality of their work quietly carry them into that market, bringing production managers and other decision makers down to Bristol.

They may not have the big West End

shows, but they have long had many of the big touring musicals. Yet: "If a customer wants to come in and hire just one spigot on account, they'll get one spigot on account," says Whitehead. "We try to offer the same level of service from one end to another, and hope that if you come to Stage Electrics the answer's yes whatever the order is." That's an approach no-one can argue with.

MUSIC OF THE NIGHT III

A whirlwind day trip around Stage Electrics' premises in Bristol, Exeter and Plymouth in late July ended with the chance to see the company's considerable resources actually being put into action on a show. 'Music of the Night III' was the third bi-annual musical extravaganza presented by the Royal Artillery in the Royal Citadel, their impressive barracks located just above the Plymouth Hoe.

The show was co-ordinated by Captain Paul Harrison of the Royal Artillery, but immediately below him on the credits list was Mark Buckingham, Stage Electrics' Plymouth production co-ordinator, whose role was described by Adrian Searle as "not producing the artistic side, but everything else - from the concept of the staging through organising everything from probably the portaloos up to the catering." Buckingham did retain one artistic role, though, also serving as the production's lighting designer, with all of the technical staff behind the sound and lighting being Stage Electrics' own. Here the company's many departments combined to get the show on.

For 'Music of the Night III', Seating Contracts installed raked seating along the length of the parade ground that would be the main



The Music of the Night III team of Charles Crowsley (seated), Mark Buckingham, Jon Rimmer and Stuart Miller with the stage behind.

performance area for the dancers, horses, vintage cars and other assorted highlights of the show. Behind this central strip was a rectangular platform housing the band, flanked by seating for the male and female choruses. Above the band platform was a rectangular truss, roofed in case of rain, containing a mixed rig of, predominantly, Par cans, with further Pars installed on frames at either end of the parade ground and at the rear of the seating structure. Dimming, formed largely from Stage Electrics' standard 36-way Celco touring racks, was installed beneath the stage and in a Portacabin beneath the main seating, with power supplied by Aggreko generators. A control structure at the rear of the seating housed further followspots, the Strand 430 used to control all of the lighting and the mixing

desk, controlling a sound system designed and operated by Stuart Miller.

The problem that Buckingham and his team had most dreaded was bad weather, but in fact luck seemed to have been on their side and the fit-up period had done wonders for their tans! By the time of our visit, on the fourth of fifth shows, they were into their stride, with most of the niggles (predominantly the problems of balancing

the sound from the head-mounted radio microphones that some of the cast had insisted on with the rest of the sound rig) sorted out. Taking place in the middle of summer, the show started in daylight with Buckingham's lighting and the laser from Omicron Lasers building in importance during the first half, and really making their mark after the interval; the lighting of the buildings around the parade ground, and their use as a projection surface for gobos in a number paying homage to cinema were particularly effective. And the end of the show with the 1812 Overture backed by the Royal Artillery firing their canons, fireworks timed with split-second precision by Keith Webb and Pyrovision, and SkyTrackers appearing from the car park behind the parade ground, was spectacular.

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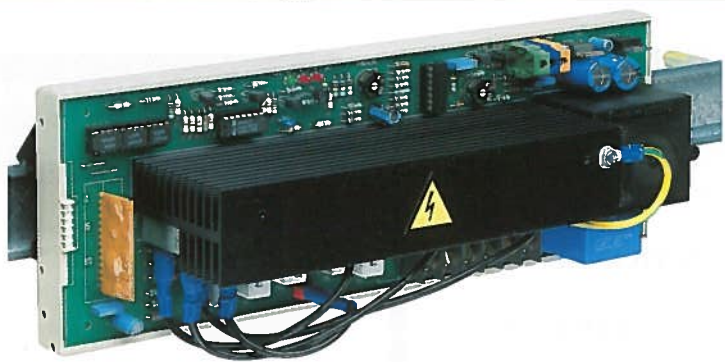
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SECOND TAKE

John Watt's View from Beside the Camera

The PLASA Show at Earl's Court in London is but a pleasant memory, and covered in meticulous detail elsewhere in this issue plus, dare I say it, with (naturally enough) a bit of hype. It seems an important event in the lighting calendar to me, and I am a little surprised at the odd absentee company. I know they all have problems deciding which show to attend, but it seems to me this one has a very wide appeal and may open up niche markets, in addition to the more mainstream ones.

My impressions (before this becomes too much like nepotism) are that I saw a heck of a lot of clever lighting equipment, but no clever lighting at all. Yes, an exhibition is a difficult environment but even so, most stands only get about six out of ten and a footnote from me of 'could do better'. The rock and roll brigade get closest with their big black boxes, but cannot resist using a lot of the rig a lot of the time - this old fogey thinks that in many circumstances more than six lights is an admission of defeat and on the human face more than three, though no-one at the exhibition that I saw was linking lighting to faces. Volume was everything, be it lux or decibels, and you certainly cannot describe the finer points of any equipment whilst trying to compete with too many dBs.

Looking at the month's diary (which I sometimes do, dear readers, as a sort of therapy service for you all, so that you will feel at least life is better for you than that poor sod), I have noticed some common factors. At least four jobs have been in and out in a day, i.e. early start (usually too early), rig and focus (a scramble not least because the designer is playing the same game and you just hope he has got enough up for you to focus on), lunch during which the director describes a few little things he had forgotten to mention, resulting in acute indigestion, then rehearsal on camera once the freelance camera crew get off their mobile phones.

To the uninitiated, a camera rehearsal is a frenetic episode in a director's life which punctuates two long calms of 1) theorising

about programme content and 2) the edit during which the editor will make all his decisions for him, though not about lighting or design, since these two departments are expected to get it right on the day, as no black boxes have yet been invented to reproduce decent portraiture or re-hang a door!

This camera rehearsal is a complete revelation to some directors (not my current batch of course) as looking at common scenes and objects on a monitor causes them to use their eyes for the first time in their lives: "Watty, those jars of coffee appear to get smaller the further they are away - do something about it!" or "Can we put a little block under the dish of water as the surface is sloping in my shot!" These are 100 per cent genuine quotes, and make you feel life is worth living again.

I used to try to focus lamps in a logical geographical order, to save the crews energy in having to zig-zag incessantly all over the grid or wheel the telescope around, complete with illegal man up it. Now I set in priority order, people first, backgrounds second, dressing and fiddly things (and therefore finesse) last. Rehearsals hopefully start with something visible in the frame and the fervent hope that there will be a lull or tea break to continue the rig and focus. If you start to realise that things are getting desperate at about the time the rest of the world is going home for the day, then I suggest you stage manage a lull.

Now, if the rest of the freelance world had the same generosity of spirit that I am about to demonstrate, we would all be nearer to Utopia. I am about to go public with a terrific lull-creating wheeze that is pure poetry and for which I expect a credit each time it's used. First, catch a blue bottle, then, during the tea break, shut it inside the wind shield of a microphone, preferably one of those woolly sausage ones. The bluebottle will remain quiet in the dark and sleepy with the warmth from the studio lights (another reason for never using a pup where a 2k will do).



When rehearsals re-commence and the boom swinger mounts his dolly and swings the mic into action, up wakes the fly and buzzes like a good 'un. Head of sound will then stop rehearsals as he suspects his graphic equaliser is playing up again or mains are getting onto his preview strip. Boom swinger climbs down to check wall box and blue bottle nods off and is silent. "Fault's cleared itself," cries head of sound, mic gets swung into position, fly wakes up crossly starts to buzz again . . . you get the picture. I can focus 20 lamps while this goes on. Patent applied for.

I am not watching television as much as I used to, which is a doubtful characteristic if you work in the business. Programme heads and producers watch an inordinate amount with the aid of their office monitors, or even bank of monitors, and this background becomes a type of shorthand when planning shows. Lighting looks have always been phenomenally difficult to put into words and so its easier to say, as one director did to me recently, "think Letterman." It's difficult to admit you have never seen the Letterman Show, but very useful if you have. If you haven't, I'll explain: it's an American talk show which features fairly regularly on Sky at around Midnight and also on a German Satellite channel suitably dubbed, which is very annoying as the jokes make even less sense than in the American language.

You may not have picked it out as a shining example of photographic lighting, although it travels reasonably well through the up standard converter and given the differing cultural demands of producers and 'the talent' over there, looks OK. So yours truly picks out a few of the better bits, adds a few improvements, makes it more contrasty and a bit less flat and lies to the director that it's an exact copy. If you are beginning to think that lying is part of my trade, then as sure as I am riding this bike as I write, you're wrong.

Lastly, though probably not for the last time on this subject, my colleagues down in that big circular building in Wood Lane seem to have lost their leader again. The head of lighting was the mentor several management shifts ago, and latterly there has been an executive or two to look after their needs, but now they appear to be in limbo after yet another reduction in numbers. A weak picture-making department at the Beeb depresses standards everywhere - someone will explain, I have no doubt!



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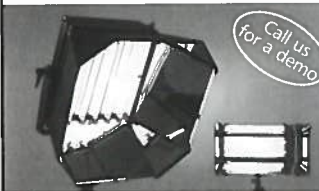
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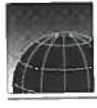
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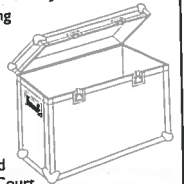
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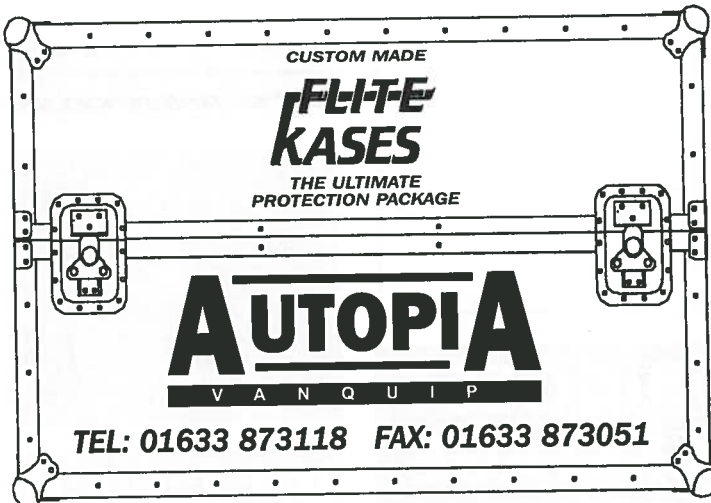
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L+SI talks to Lars Brogard, Production Manager and Sound Engineer

So how does a Dane come to be one of the most prominent production manager/sound engineers on the international touring market? For Lars Brogard it was not from any auspicious beginnings or even as a product of a cherished background. Born and raised in a small two-bedroomed apartment in Copenhagen, Mr and Mrs Brogard made the usual sacrifices expected of parenthood. Brogard's father was an architect, designing agricultural buildings on the family's tiny dinning room table, while his mother - drawing on her training as a nursery teacher - gave up her job to raise Lars and his younger brother Mikel.

Brogard was a sickly child, he had a strong allergy to milk products and suffered badly from eczema in his early years. A modest achiever at school - his best subject was swimming - he was encouraged by an indulgent biology master to stay on an extra year to gain entry to college. But it was not to be. In his early 'teens, as he thankfully grew out of his childhood allergies, he developed a liking for pop music. At 12, he hung out with a local band who modelled themselves on Herman's Hermits. "I tried to play," said Brogard, "but I had no talent whatsoever, so I looked after their equipment instead. In Copenhagen at the time, there were no lighting or sound companies to speak of, so with the help of an American teacher from school, Karl Wullschlegeram, I made some square Par cans."

From these early beginnings Brogard came to hear about fledgeling lighting and sound company ESP in England and even managed to buy some Altman Pars from them. Having made contact, he then pursued his real vocation: "I wrote to Simon Woodroffe at ESP and told him I wanted to be a sound man. Simon wrote back saying forget it, there were no opportunities for me in England."

Lars Brogard is nothing if not tenacious - one of the characteristics that has made him renowned as a production manager - and he simply would not take 'no' as an answer. He moved to England aged 22. "It was a tough decision for me then. I was making good money

as a scaffolder in Copenhagen and, as I was soon to learn, the money for touring in those days was pretty poor."

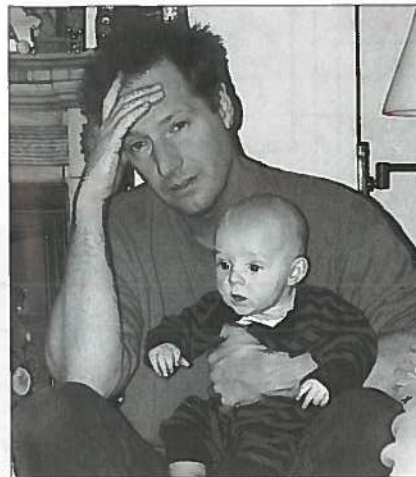
Upon approaching ESP direct, Brogard came across Brian Croft: "You're that bloody persistent Dane," said Croft in his friendly avuncular way. "We'd better give you a job, I suppose." And promptly

put him in the drape store with Gerri Mott.

Having spent a few months familiarising himself with making toofers and helping wire up dimmer racks with Paul Ollet, he finally got to go out on tour with Rush, as third man on the PA crew no less! "Those were the days when you could blow anything up and nobody really minded," said Brogard, and set about the quick, if somewhat expensive, route to finding out how PA systems worked.

Cutting his teeth on opening acts, working on both monitors and FOH, his big break came with ABBA. At that time still in the infancy of their pop success, ABBA contracted ESP, which had by then metamorphosed into TFA Electrosound. Bill Kelsey gave Brogard the chance he was looking for, and he began his tour of the world, growing with the band in both experience and proficiency. Ending up in the USA, and with TFA having opened a branch in Los Angeles, Brogard chose to stay and persuaded company boss Tim Mahonney to file a Green Card application for him.

The next major leap, and probably the one that has done most to put him where he is today, came when Pierre D'Astutues of TFA put Brogard FOH for Rod Stewart in 1985. "A lot of tours didn't really have production managers at that time, someone just used to take charge. Normally it was someone from lighting, probably because they were first in, and generally they didn't care too much about the sound. Rod was really concerned about his



Lars Brogard with his son, Kasper.

sound, so I did it."

It's a job that's proved harder than most for Brogard, who continues in the role of sound engineer and production manager for Rod to this day. Once the role of production manager is assumed, previous responsibilities tend to be handed on, but Rod insists that Brogard still covers both jobs. The pinnacle of his two-handed abilities is exemplified by his taking on both jobs for

a Prince Tour (prior to the name change) and - to the astonishment of his peers - also bringing the tour in on budget during a era when Prince was notorious for over-spends.

When not touring with Rod, Brogard spends his time in England with his wife Annabel and two children, Camilla and Kasper. Unlike many men of middling years in the touring business who have family commitments, he still greatly enjoys travelling: "There's great camaraderie on tour. Eleven years down the road and I still have largely the same team of guys for Rod. It's like having another family."

Despite his love of the road, he would like to return to the US to live for a spell, but working in management, not touring. With Brogard currently utilising the time between Rod's touring commitments producing big shows like the Three Tenors and a major European excursion by Italian Superstar Eros Ramazzotti, seemingly he is already gearing up for that move?

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