

Lighting & Sound INTERNATIONAL

January 1999

The Entertainment Technology Monthly

Royal's Curtain Rises

- Manchester's Royal Exchange Reopens

Sound Signatures

- Profile of Autograph Sound Recording

Visual Glory

- Allied Domecq's Evolution Club in Leeds

World's Apart

- M People and Massive Attack

Hotel Nevada

- Bellagio opens on the Las Vegas Strip

Taming the Shrew

- Shakespeare Al Fresco in Perth

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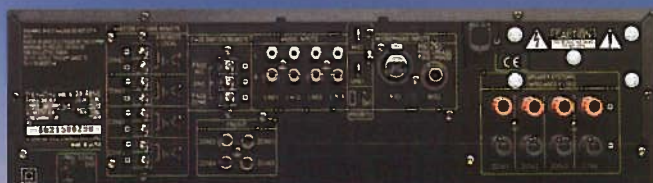
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Lighting & Sound INTERNATIONAL

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Lighting & Sound INTERNATIONAL

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Celco Buy Back Independence

After eight years under the ownership of Helvar/Electrosonic, Celco has re-formed as an independent manufacturer and will resume trading under its former status as Celco Ltd.

Keith Dale will head up the new team as managing director, and Colin Whittaker will assume his previous position as European sales director. They will be joined by Rod Bartholomeusz (also a director of Lightstorm).

Celco have used the change of ownership to announce other positional changes. Pete Sarson has now been appointed international product support, reflecting his increased role within the Celco team, and Mike Rothon and Clive Jenkins will respectively continue to look after product

management and development strategies. This is not only a return to Celco's geographical roots, but also to their commercial past as they will be joined by Mike Fisher, who will become sales and administration manager. Previously Dale, Whittaker, Bartholomeusz and Fisher all worked for - or out of - Cerebrum Lighting.

The move couldn't be more timely with Ventura V2 soon to be released and Fusion sales still increasing - with a new 32A pack due to go on field trials before the end of January. Celco haven't broken entirely from Hawley Mill (the site of Helvar/Electrosonic's head office), since Helvar Lighting control will continue to manufacture all Celco products. Celco can now be contacted on Midas House, 10 Willow Way, London SE26 4QP. Tel +44 (181) 699 6788.

L&SI Relaunches

It's not often we take up valuable space in the magazine to talk about ourselves, but as this issue marks the re-launch of Lighting & Sound International, with a major new design, it seemed only fitting that we should give you a feel for the year ahead, both in terms of our own plans for the magazine and what the industry in general can look forward to in 1999.

For the team at Eastbourne, the coming year will involve the expansion of the Publishing Division and a slightly revised approach to the editorial content of the magazine: as before, L&SI will bring you leading coverage of all the major news within the industry, both in the UK and overseas, but we also intend to reflect more of what goes on at grass roots level. You'll also see more independently-researched news and business-related items filtering into the pages of the mag, along with a growing number of international features and news stories, but we will be cutting back on our trade show coverage, concentrating our focus on new products only.

Aside from traditional print media, we will also be exploring other possibilities now offered by the new media technologies - the first of which will be the launch of a CD-ROM version of the PLASA Yearbook later in the year.

So that's the plan for PLASA Publishing, see page 8 for events in the wider industry . . .

Ruth Rossington : Editor



Brilliant Stages is Sold to Tomcat

Vari-Lite International Inc has announced the sale of its London-based subsidiary Brilliant Stages to a subsidiary of Tomcat Global Corporation.

Details of the transaction were not released. Brilliant Stages is without doubt a world leader in the design and fabrication of custom stage sets with over 18 years

experience in the art and science and building custom sets for touring bands, television shows and trade events around the world. This latest transaction follows a period of intense corporate activity and a reshaping of the future of Vari-Lite International to further focus on its core business areas.

See No Comment this month on page 56.

A New Year Message to R&D Directors from Artistic Licence

Assuming that our advertising works, you will be familiar with the large range of products which are seen in this position each month.

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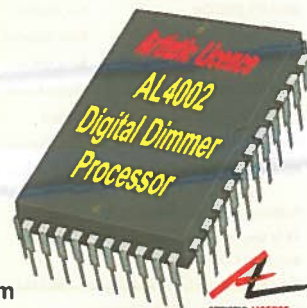
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Admission to the open days is free, but by ticket only as spaces are strictly limited, therefore ticket requests for the event should be made as early as possible. Further information, including ticket requests, can be obtained by contacting Jonathan Walters or Adam Beaumont at

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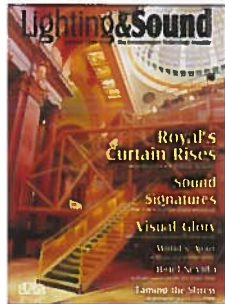
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The Year Ahead . . .



1999 may well be the year of the Dome, the Euro and the Millennium Bug, but with all these now a banned subject in this office, we shan't dwell on these too long.

We now know that a stack of monitors and speakers will represent the crucifixion of

Christ in the Spirit Zone at the Dome - those who don't have a great love of monitors and speakers are lining up to criticise this representation as 'trivia'. Well it's the sort of trivia we love and as our industry seems set to benefit most from the Millennium, we're not complaining. Thousands of Millennium projects will be launching world-wide this year and if you've got an eye for a good investment, maybe now's the time to start buying shares in fireworks companies.

In the world of theatre, it's a busy, busy year with new openings all over the place: reviving the classics seems to be the theme for 1999, with

Macbeth, Troilus and Cressida, Candide, Colleen Baum and Peer Gynt all returning to the stage, whilst Noel Coward's centenary will be marked by a production of Hay Fever in the West End.

Last year's major redevelopments of Manchester's Royal Exchange and Sadlers Wells finally bear fruit: this issue carries extensive coverage of the resurgence of the Royal and in a future issue we'll review the Sadlers Wells makeover. The tail-end of last year also saw the first performance take place at the Shanghai Grand Opera in China and you can read all about this amazing venue in our March issue. Little needs adding to the drama being played out at the Royal Opera House and the cancellation of its entire season, but we can look forward to Britten's Paul Bunyan opening at Sadlers Wells in April. ENO has a new production of Parsifal about to launch and Raymond Gubbay is taking Tosca to the Royal Albert Hall. So everything seems rosy in the garden of theatre and opera.

Will 1999 be the year we finally see the end of the theme venue? Probably not, but there are signs that some themed venue operators are suffering.

Our money's on a new wave of 'event' venues where the punter can actively interact with other human beings and shed loads of technology. We intend to explore this phenomenon and will seek out the latest club, restaurant and bars to see where this trend for branding everything is taking us. We'll also be staying in to consider how entertainment technology is crossing over into the home.

Cinema continues to enjoy a boom period - we'll be looking at BFI's major IMAX cinema which launches this spring in London: meanwhile, films like Titanic have proved so successful that they have spawned a new trend - Movietours. The Titanic Movietour was launched in the US last year, finding its way to Wembley in late December, and even as we speak is navigating its way around Europe. And you can read all about it in the next issue.

As for touring, well lots of small tours coming out, but nothing major on the horizon this year, though we will see the Stones return to the UK in the summer, pre-announced by an indoor arena tour of the US. Possibly the most high profile outing will be All Saints, though this has yet to be confirmed. So plenty to look forward to and in the words of Bette Davis "Fasten your seatbelt, it's going to be a stormy ride."

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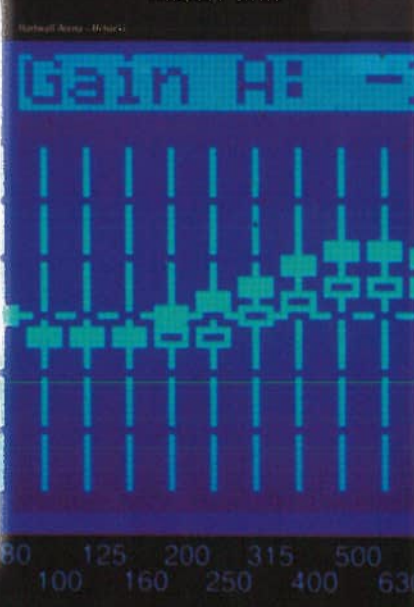
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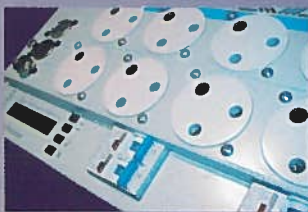
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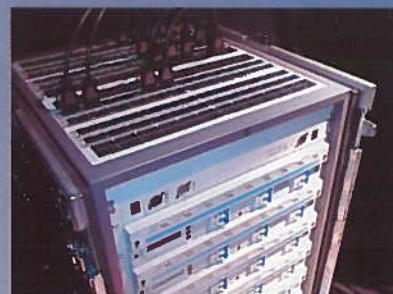
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PLASA Elections

The elections for the PLASA Executive Committee took place at the tail end of last year, with three existing members re-elected and one new member taking his place on the Committee.

These elections attracted the highest ever number of candidates, with a total of 13 representatives of PLASA member companies standing. The response from voters was also the best to date, with 137 voting slips returned - compared with 96 in 1997 and 51 in 1996. Re-elected were David Hopkins OBE of Audio Design Services and Colin Whittaker of Celco for three-year terms, and Sammy DeHavilland of Deco Leisure for a further year. The third three-year term, previously held by Michael Leaver of Adastra, was taken by Chris Kenyon of Delta Sound.

PLASA chairman Paul Adams commented: "This level of support for PLASA, in both the unprecedented number of candidates and of votes fielded, is very encouraging."

Matthew Griffiths, managing director of PLASA, sees these elections as a very positive indication: "It's great that so many were involved - it suggests an increased awareness of the Association and of the part that all members can play within it. For such a number of candidates, the results were very close, and the strength of that field can only benefit the Association."



Chris Kenyon, the latest recruit to the PLASA Committee

Arena Engineering In Administration

Suffolk-based Arena Studio & Stage Engineering is in the hands of an administrator.

The company was established in 1992, manufacturing and installing stage equipment for theatres and television studios worldwide. Until 1996, the company showed a steady period of growth, but by 1997 its accounts were showing a loss. One of the principal reasons for the company's problems listed in the administrator's report was the losses the company incurred on a contract for the National Theatre of Malaysia, which had a total contract value of some £2.5million. These losses, caused in part by the adverse foreign exchange rates due to the weaknesses of the Malaysian Ringgit, continued during 1998. The company is attempting to trade through its difficulties and the administrators are looking to sell it as a going concern.

AC Open Days

AC Lighting's Northern office will be holding a series of open days at the Lawrence Batley Theatre in Huddersfield on the 24th and 25th February 1999.

The open days will highlight a wide range of product lines distributed by AC Lighting, and will feature direct shoot-outs of fixtures, allowing users to see first-hand the strengths of each individual fixture. Admission to the open days is free, but by ticket only, as spaces are limited. AC therefore advise that ticket requests for the event should be made as early as possible. Further information can be obtained from AC Lighting North on 0113-255 7666.

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New Style Arena

After undergoing a multi-million pound refurbishment programme during 1998, London Arena is looking forward to a busy 1999, featuring acts such as Massive Attack, Culture Club and Human League, and events including the Smash Hits Poll Winners Party and The Brit Awards.

Under the new management joint venture between SMG Management, who took over the

venue in 1994, and new partners Anschutz Sports Holdings, the controversial Arena is now gunning for the corporate angle with its 48 luxury hospitality boxes and four hospitality suites.

Other enhancements include new seating for the retained 12,500 capacity with flexible stage and seating configuration, upgraded catering facilities and public areas, new dressing rooms and refurbished foyer and box office.

Light & Sound Shanghai

PLASA Presents Light & Sound Shanghai 99 is set to emulate the success experienced at last year's show with many leading manufacturers and distributors using the show as a platform to increase business in mainland China.

The event will showcase the latest products from a wide range of international companies and will also serve as the forum for a number of

seminars based around the applications of entertainment technology. An extensive direct mail campaign to over 30,000 buyers is underway and a number of delegations are expected to attend the show. These include the buyers from the Beijing Grand Theatre project and over 300 delegates from The China Recording Technician Association.

For further details contact Marcus Bernie at P&O Events on tel: +44 (171) 370 8231.

Pulsar Seminars

Pulsar's service staff have been gearing up for a comprehensive programme of training seminars for 1999 by undertaking regular training visits to Clay Paky's headquarters in Bergamo, Italy.



Topics covered by the training programme will include the programming of Pulsar's Masterpiece control system and the servicing of Clay Paky's latest Stage Line range of luminaires. Pictured above at Clay Paky Headquarters are (left to right) Pulsar engineers Brian Baker and Simon Cox with Clay Paky's technical director Angelo Cavenati and Pulsar's service manager Richard Brown.

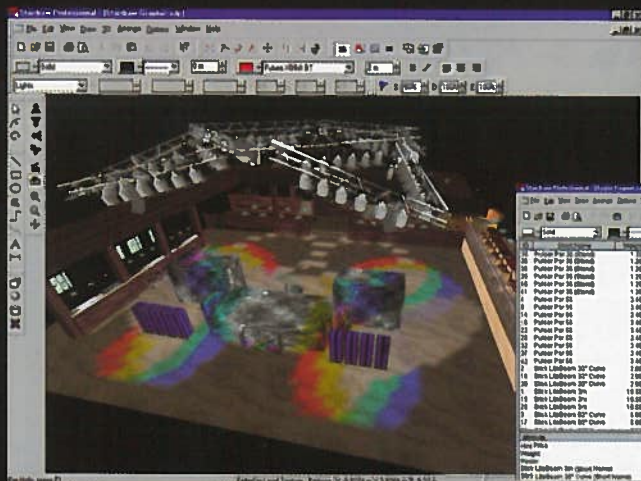
In addition, one-day intensive courses for the Masterpiece range of products will take place at Pulsar's Cambridge offices on 23 February, 27 April, 25 May, 29 June, 3 August, 28 September, 26 October and 30 November. The company are also running Clay Paky Product Days on the 25 February and 28 April.

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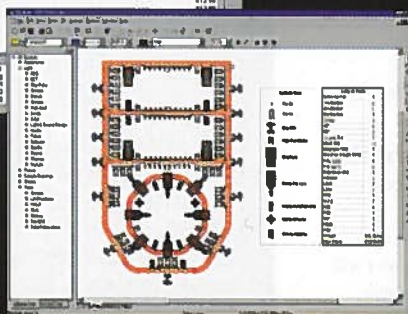
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Pulsar Par 36	1	2.40	2.40	Bulk 1 L117
Pulsar Par 36	1	2.40	2.40	Bulk 1 L117
Pulsar Par 36	1	2.40	2.40	Bulk 1 L117
Pulsar Par 36	1	2.40	2.40	Bulk 1 L117
Pulsar Par 36	1	2.40	2.40	Bulk 1 L117
Pulsar Par 36	1	2.40	2.40	Bulk 1 L117
Steel Lashdown 20" Curve	1	2.00	2.00	Bulk 1 L191
Steel Lashdown 20" Curve	1	2.00	2.00	Bulk 1 L191
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Steel Lashdown 20"	1	16.00	16.00	Bulk 1 L191
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STAGE COLOR 1200 - Washlight

- HMI 1200 hot restrike lamp.
- 4-colour mixing (CMY + Amber).
- Gradual colour temperature correction (GTC).
- 3 levels of diffusion (max. aperture 50°).
- Special colour effects.

STAGE ZOOM 1200 - Effects Projector

- HMI 1200 W/S hot restrike lamp.
- 12°-24° electronic zoom lens.
- Colour mixing: CMY + 2 CTC filters.
- Continuously variable frost (up to 50°).
- Gobo and rotating prism combinations.



WASHLIGHTS ALLOWING TOTAL MASTERY OF COLOUR.

STAGE COLOR 1000 - Washlight

- 1000 W halogen lamp.
- CMY colour mixing.
- New generation 50° frost.
- Electronic dimmer.
- Stopper and strobe.

STAGE COLOR 575 - Washlight

- HMI 575 W/SE hot restrike lamp.
- 4-colour mixing (CMY + Amber).
- Gradual colour temperature correction (GTC).
- 3 levels of diffusion (max. aperture 50°).
- Special colour effects.



PINT-SIZE FIXTURES WITH BIG PERSONALITIES.

STAGE COLOR 300 - Washlight

- HTI 300 or HMD 300 lamp (3000 h).
- CMY colour mixing.
- Continuously variable frost (up to 50°).
- Single-channel dimmer.
- Single-channel stopper.

STAGE LIGHT 300 - Effects Projector

- HTI 300 or HMD 300 lamp (3000 h).
- Manual zoom with electronic focusing.
- 36 colour combinations.
- 6 rotating gobos + three-side prism.
- Mechanical dimmer + high-speed strobe.

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PROFESSIONAL SHOW LIGHTING



Manics Preach to the Converted

The Manic Street Preachers completed their sold-out autumn '98 arena tour with a visual flourish. Lighting designer Bryan Leitch, who has lit the Manics since their inception in the early nineties, used a massive moving rig of 28 VL7s, 32 VL5 Arcs, 32 VL6s, 38 VL5s and eight Martin Professional Mac 500s, controlled through an Avolites Diamond III console.

In addition, Leitch was running 16 Molefay units, 12 ETC Source Four profiles and 18 Megastar strobes with the Diamond III. Leitch was also using for the first time Avolites Stage Visualiser simulation software/hardware package (launched at PLASA 98) and spent five days pre-programming the show.

Using the Visualiser, he was able to set up the basic creative infrastructure of his highly complex show in less than an hour. The Visualiser's reporting functions output directly to MS Excel, and these made checking, patching and ensuring fixtures were assigned to the correct smart repeater, a simple process. The pre-programmed information was then imported into the Diamond III, allowing Leitch the luxury of commencing three days of intense production rehearsals with a large proportion of the show already completed.



Above, The Manic Street Preachers in concert and right, lighting designer Bryan Leitch

The PA rig on the Manic Street Preachers tour was supplied by Britannia Row and features a mixture of Turbosound Floodlight and Flashlight systems, with Midas XL3 consoles front-of-house and on monitors, and effects racks containing a mixture of BSS, Yamaha, Lexicon and DBX units. Video for the tour was provided by the concert division of PSL, and features a massive five screens and six-projector system. The 20ft by 15ft screens are positioned beneath the flown PA rig – three on-stage, two off – with images projected from a mixture of Barco 9200s (centre screens) and digital 5DVs (outer screens). All screens have the ability to take playback material or live camera pictures. The three centre screens feature specially-commissioned background footage and appear either as separate images or as single or multiple stretched effects.

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H A Harman International Company



On 2 December, the Lowry, the imaginative new arts complex taking shape at Salford Quays, was topped out at a ceremony attended by Culture Secretary Chris Smith.



Lowry on Track

The day before, at a press launch in London, the Minister welcomed the development as 'a fine example of how the National Lottery can be used creatively to lead the regeneration of local communities.' The Lowry has been designated the National Landmark Millennium Project for the Arts. It has been awarded £64.3 million of Lottery funds in a unique collaboration between the Arts Council (£41.1m), Millennium Commission (£15.65m) and the Heritage Lottery Fund (£7.65m). The total cost of the project will be £170 million, including a £16.3m contribution from the European Development Fund.

Architect Michael Wilford described the project at the launch. The Lowry will benefit from an integrated transport infrastructure: as well as ample car parking and a road straight up the former dock pier on which it stands, there will be MetroLink trams running direct to the basement, and a riverbus service down the Ship Canal from central Manchester. The complex features a 1,730-seat lyric theatre (which can be reduced to 1,400 seats for drama), back to back with a 430-seater adaptable theatre. Plenty of glass, both in special features like the art gallery and in the theatres' surrounding walkways, will give the building an air of transparency as it sits on the water.

Seen a couple of days after the topping out ceremony, the Lowry site looked very impressive. The concrete shell is almost complete, giving it a Lasdun-like appearance, but the Lowry's rough looks will soon be clad. In the lyric theatre it was possible to admire the closeness of all seats to the

stage, and to note that the flying system and grid were already going in. There will be no sprinkler system - instead a series of vacuums can be created in the building to contain any likely fire risk. The stage height looks a little on the high side seen from the stalls, but this may change when the auditorium is fully fitted. The smaller amphitheatre looks rather like the Stratford Swan at present, but will have the benefit of four huge lifts on the pit floor which can give the auditorium any of five seating combinations. The 'boxes' round the galleries, with their half-height dividers, are modelled, apparently, on the Vauxhall Tea Rooms. Like the Swan, this theatre will have little or no wingspace to speak of when used for endstage productions, but it will have at least some flying facility. With both theatres expecting to take mainly visiting product, there is ample get-in provision: the delivery dock can take three trucks side by side and will have adjustable-height platforms for taking in sets and production equipment.

The latticed 'beacon' which towers above the Lowry and is expected to house some of the quiet Lancastrian's paintings, looks like a mini-gasometer as it awaits its final wrapping of glass. The view from its top is impressive, and it is to be hoped that this will be available to visitors when the Lowry opens. So far it is on time and on budget for the projected opening date of April 28, 2000.

Ian Herbert

Exterior 600 Specifications

Housing	Optional 18° - 25° lens. Optional 65° lens.
Extruded aluminum shell w/ anodized finish.	17,500 lm total luminous flux w/ MSD-575.
6 mm (1/4 in) anti-reflective on coated glass front.	20,000 lm total luminous flux w/ MSR-575/2.
Weather rated to IP 65.	

Hardware	Sources
CMY subtractive color mixing.	Philips MSD-575 (575 W, 78 lm/w, 5700K, 2000 h).
Motorized color wheel: 4 positions + open.	Philips MSR-575/2 (575 W, 85 lm/w, 6100K, 750 h).
Red, green, and blue filters.	

5600K/5200K dichroic CTC filter.	Control
Motorized zoom.	DMX-512 protocol.
Beam-shaping filter.	Built-in light sensor and real time clock for programmable stand-alone mode.
Frost filter.	Address, mode, and personality setting via serial link with the MPBB1 remote uploader.
Full range mechanical dimmer.	
Separate mechanical shutter.	

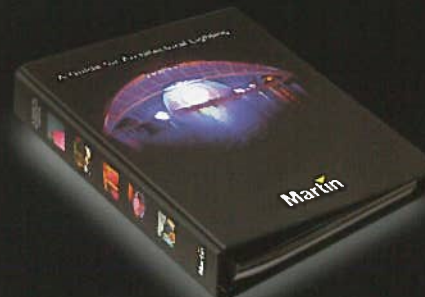
Software	Rigging
Download updates via Internet.	Installs in any orientation.
upload via serial link.	Integrated swivel base tilts +/- 50°; pans 360° when pedestal mounted.
Remote programming, addressing and calibration.	
Remote lamp on/off.	
Variable/random strobe up to 8 Hz.	

Random color change.	Measurements
Automatic position correction of all effect wheels.	Size w/o bracket (LxHxW)
Built-in test of all effects.	678 x 308 x 375 mm (26.7 x 12.2 x 14.8 in).
	Weight: 48 kg (106 lb).

Optics	Power
22° - 38° field angle, (edge of beam = 10% intensity)	AC supply: 200/230/245 V, 50 Hz;
	208/227 V, 60 Hz;
	750 W, 5.4 A @ 230V.



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Technotronics Develop Business Potential

Lighting effects manufacturer TechnoTronics Ltd (TTL) have set up a commercial and international business development department, appointing Michael Brooksbank, formerly of Chrysalis Retail Entertainment and Sofiscotech, to head up the new operation.

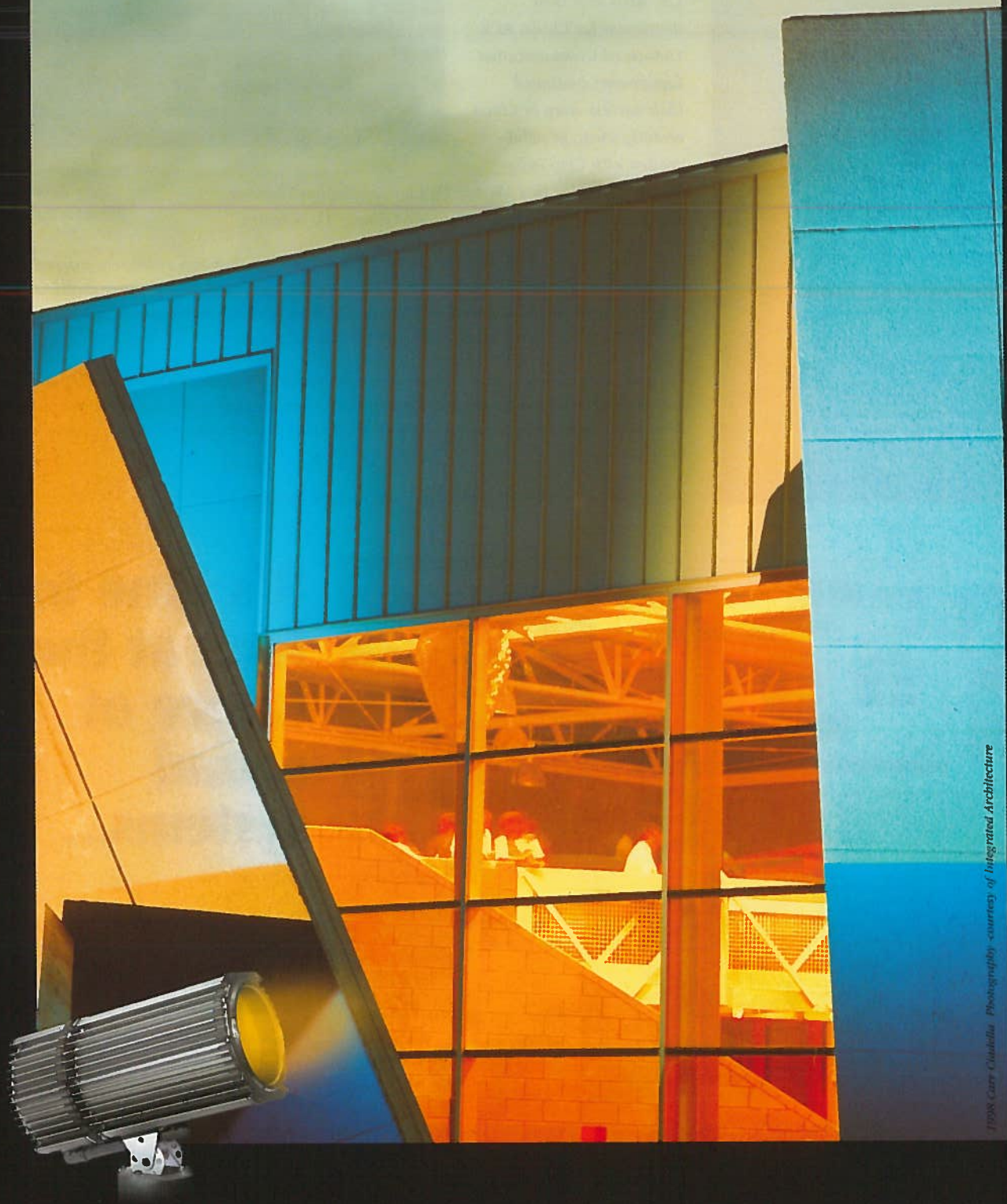
Brooksbank will be aiming to heighten the company's focus on the small venue, mobile DJ and gigging band markets. "Many people seem to have forgotten this area," he told L&S, "and we hope that we can bridge the gap."

To support the new initiative, TTL now occupy larger premises in Featherstone, West Yorkshire, incorporating a new reception area and showroom, as well as increased manufacturing, R&D and storage facilities. Managing director Mike Earnshaw commented: "This is a natural progression for us and the timing couldn't be better."

TTL can be contacted on the new Sales Hotline, +44 (1977) 790055, or on +44 (1977) 600064.

Exterior 600

Brilliant Architectural Outdoor Lighting



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1999 Dates

Live!	London	10-11 Feb
SIEL	Paris	14-17 Feb
Musikmesse	Frankfurt	3-7 Mar
USITT	Toronto	25-27 Mar
SIB Entertainment	Rimini, Italy	28-31 Mar
PLASA Shanghai	China	13-15 April
ABTT	RHS 2, London	21-22 April
NSCA	Nashville, USA	Ap 29- 1 May
ExpoLatina	Miami, USA	5-7 May
AES	Germany	8-11 May
Tile	London	11-13 May
PALA	Singapore	8-10 July
PLASA	Earls Court	5-8 Sep
AES	New York, USA	24-27 Sep
Intermedia	Poland	21-24 Oct
LDI	Orlando, USA	19-21 Nov

Beijing Seminar

LSI-ADB with their distributor for China, ACE (Advanced Communication Equipment) continued their success story in China recently when, in collaboration with Clay Paky, they participated in a 10 day TV Lighting Design/Training seminar to delegates from within the Chinese TV industry.

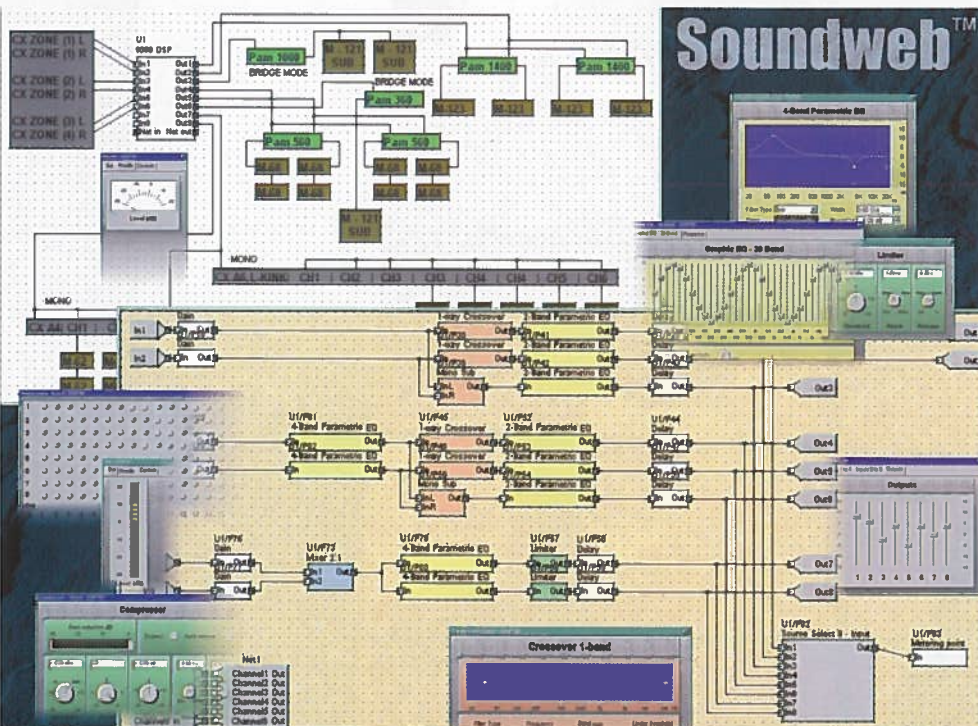


The delegates pictured outside the venue at the end of the course

The delegates, a mix of lighting designers and TV technicians, travelled from 21 different provinces within China to a venue just outside Beijing. The decision to invite LSI-ADB/Clay Paky to participate in this important seminar was announced during the PLASA Exhibition in Shanghai in April last year by Mr. Yu Baofu, Vice President of the Chinese TV Lighting Committee.

The presentations led by ADB were based around all aspects of TV lighting including dimming and control, integrated TV studio design and mechanical suspension systems. Practical workshops, using the ADB/Clay Paky product, were also set up throughout the day and evening to allow the delegates to compare Western and Chinese TV lighting techniques.

(See news on PLASA Presents Light and Sound Shanghai on page 12.)



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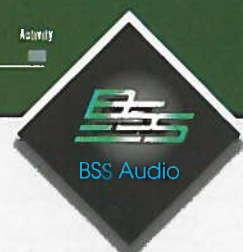
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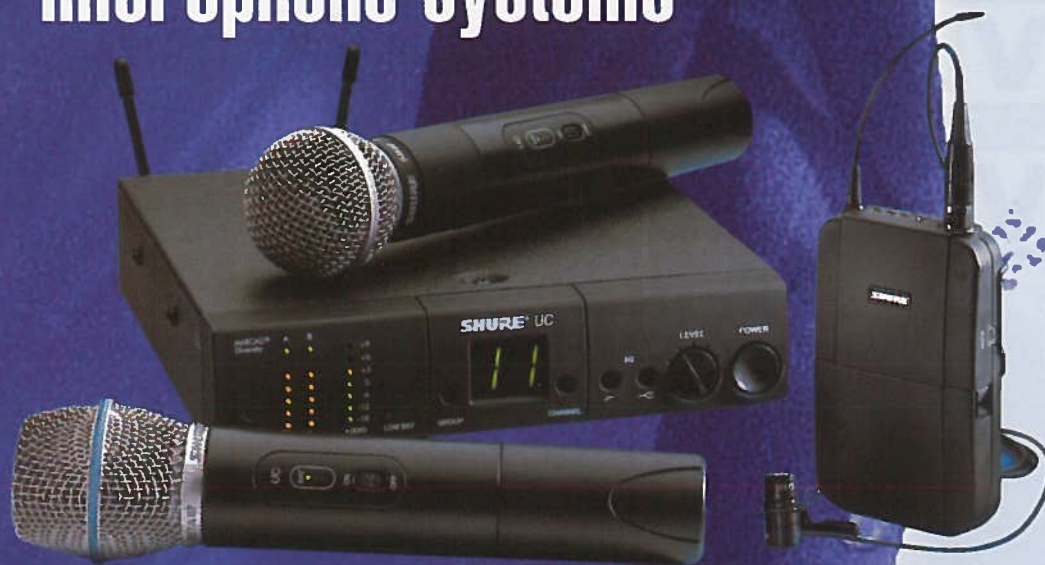


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PLASA Members

Nine more companies have recently been accepted as new members of the Professional Lighting and Sound Association:

UK Members

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Main Business: *software & hardware for show control applications*. A subsidiary of Dataton AB Sweden which was founded in 1973. Specialise in synchronous control of timecode-based devices, intelligent lighting, FX, virtually any video or audio devices, slide projector control systems.

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GEARHOUSE XTC LTD

Main Business: *design and installation of lighting equipment*. Originally formed in 1994 as XTC Event Lighting Ltd, but have been part of Gearhouse Group plc since 1997. The Group is one of the largest equipment hire companies in the world with 68 operations worldwide and an annual turnover of £70 million.

Tel: +44 (1892) 837937

LEAF LTD

Main Business: *pro audio equipment*. Originally formed in 1987 dealing with plastics and electronics, Leaf moved into the pro audio industry in 1997 and bought out 3G. Their current range of pro audio products appears on the market as 3G, Force G and Titan. Tel: +44 (1371) 878060

MC AUDIO LTD

Main Business: *pro audio equipment*. Formed in 1992, manufacturers of power amps, also OEM supplier to leading studio monitor manufacturers. Their range of products is used for diverse applications from conference centres, night clubs and churches through to recording studios around the world.

Tel: +44 (1404) 44633

PROMOTION TIME LTD

Main Business: *design and installation of intelligent lighting and sound reinforcement equipment*. Formed in 1995, the company offer a complete service to the entertainment industry including consultancy, design, installation, commissioning and programming. Tel: +44 (1207) 503648

XTA ELECTRONICS LTD

Main Business: *pro audio equipment*. Formed in 1992, UK based. Manufacturers of analogue and digital audio signal processing equipment for the live and studio markets worldwide. Tel: +44 (0)1299 879977

International Members

AL-TABTABAEI GROUP

Main Business: *distributor/agent of lighting, videowalls, special effects, lasers and smoke effects*. Established in Kuwait in 1992. Agent for companies such as Lampo, Antari, SGM, Genius, Smoke Design, MGC Lamps and Laser Animation. Tel: +965 261 0090/1

BANDIT LITES INC

Main Business: *importer and distributor of theatrical and stage lighting*. Established in Tennessee, USA in 1968, Bandit Lites Inc celebrated 30 years of successful trading in September this year. Offices in London, Dublin, Knoxville, Nashville, San Francisco, Hong Kong and Taiwan. Members of USITT and ESTA. US Tel: +1 (423) 971 3071 UK Tel +44 (01462) 731739
NB: Bandit Lites Ltd, UK is a new Corporate Member. Contact details as above.

CITY THEATRICAL INC

Main Business: *manufacturer of lighting accessories*. Founded in 1986 to serve the Broadway lighting market. Has grown into an award-winning international manufacturer of lighting accessories. Members of USITT, ESTA and Fabricators + Manufacturers Association. Tel: +1 718 292 7932

Becoming part of PLASA opens up a wealth of promotional opportunities and sources of information. Through on-going and open communication between the Association and its members, PLASA aims to enhance the standing of the entertainment technology industry as a whole in the eyes of government, investors, potential customers and new markets at home and abroad. To find out how belonging to PLASA could benefit your business, telephone +44 (1323) 410335.



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White Light Manoeuvres

White Light can look back on 1998 with some satisfaction having supplied equipment and services to just about every major show that opened in the UK, including *Saturday Night Fever*, *Rent*, *Doctor Dolittle*, *Oliver!*, *Jesus Christ Superstar* and *Hey Mr Producer!*. Now, the company are about to stage an opening of their own - after 20 years at their base in Filmer Road, Fulham, they are moving to a new home for 1999.

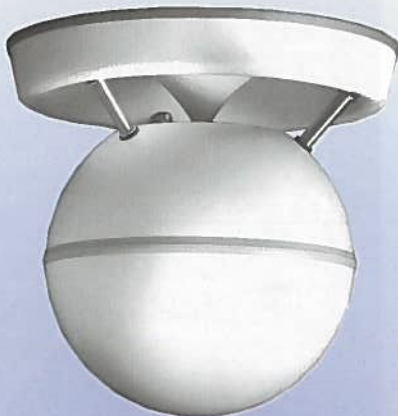
The Group has experienced significant growth over the years, as the lighting industry itself has grown and White Light has formed new companies to serve different areas of the market. At first, finding room for this expansion

meant taking over more and more of the Filmer Road premises, and of the mews buildings behind it. More recently, Group members such as The Moving Light Company and The Service Company have occupied premises in nearby Parsons Green. "This has meant that, as we've become busier, more and more time has been spent just moving staff and equipment between premises," notes general manager Bryan Raven. "And, though we all love our home here, we realised that in order to continue offering the highest level of service to our customers into the next Millennium, the time had come to find somewhere bigger where the Group members could all be under one roof."

A new site has been found and details will be made available once contractual details are finalised. In the meantime, trading will continue as usual.

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The newly-opened multi-purpose Via Funchal venue in Sao Paulo, Brazil is arguably the most technically advanced venue in South America.

Planning commenced two years ago and the technical fit-up stretched seven months from start to finish. Via Funchal's lighting rig consists of over 300 Par 64s in pre-rigged trussing and a selection of moving lights including Cyberlights, Technobeams, Studio Colors, VL5s and 6s. Other features of the venue include a modular removable stage that can be adapted to accommodate different shapes, lifting equipment and hoist-controlled moving house trusses. The orchestra pit is also motorised and can be dropped in and out as required. Three Avolites consoles were brought in to control the lights: a Sapphire was spec'd for the conventional lights, with a Pearl 2000 for the moving fixtures and a Diamond 3 for large shows. Also in the spec was a pair of 48-way Avo dimmer racks and a DMX Splitter Box.

The consoles, together with the rest of the lighting equipment, were supplied and installed by locally based Lighting Productions Ltd (LPL) who represent Avolites in Brazil. The project was overseen by Chris Steel whilst the specification was undertaken by Cesio Lima, Luis Carlos Auricchio and Danny Nolan. The venue has to cater for visiting lighting designers as well as their own house engineers and programmers, the latter including crew chief Oswaldo Herrero, Marcelo Marino and Alessandro Cuevas.



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Live! 99

The 1999 Live! Show will be held at London's Alexandra Palace from 10-11 February. The West Hall will feature a record number of exhibitors from the world of audio, lighting and video and will host top industry professionals for two days of demonstrations, exhibits, seminars and conferences. Light & Sound Design will once again be constructing the main networking hub of the event – the central bar.

Highlights of the Live! Show include the PSA (Production Services Association) AGM and Conference; the ALD (Association of Lighting Designers) Conference and Seminar and the Soundcraft Monitoring Classes, which will be held throughout the first day of the show.

Tickets are free to all in the performance industry. For more information, telephone +44 (1322) 660070.



An African Obsession

The first installation of an ETC Obsession II console on the continent of Africa has been completed by ETC's South African dealer Theatre and Architectural Lighting, a subsidiary of Prosound (Pty) Ltd. The console will soon be controlling the lights at the Opera Theatre, the largest venue in the State Theatre Complex in Pretoria, South Africa.

The Obsession II 750 Dual Processor system was specified by independent theatre consultant Dennis Hutchinson, and made its debut on a double bill of Ronald Hynd's ballet *Rosalinda* and Sir Frederick Ashton's *La Fille Mal Gardée*, and is currently being used for *Buddy*. In addition to the Obsession II, the installation included an Obsession Remote Focus Unit and five ETC Connection 96 modules. Opened in 1981, the Complex houses six venues and a number of rehearsal rooms for the resident orchestra as well as ballet, modern dance and visiting companies. Theatre and Architectural Lighting has also installed an ETC Express 24/48 console to the complex's 150-seat Momentum Theatre.

Icon Ships - The first of Allen & Heath's Icon Series digital live mixers have now rolled off the production line, including the DP 1000 - one of the few digitally-powered mixers on the market. Both the DP 1000 and the unpowered DL 1000 are 10-input, four-output consoles with a number of additional built-in digital resources including gates, compressors, a pair of 10-band graphic EQs and two stereo FX processors. The Icon performance memory system allows users to programme and recall settings for 127 songs, nine sets and 19 venues, with footswitch and MIDI inputs giving remote control mixing capability. Allen & Heath: +44 (1326) 372070

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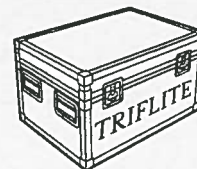
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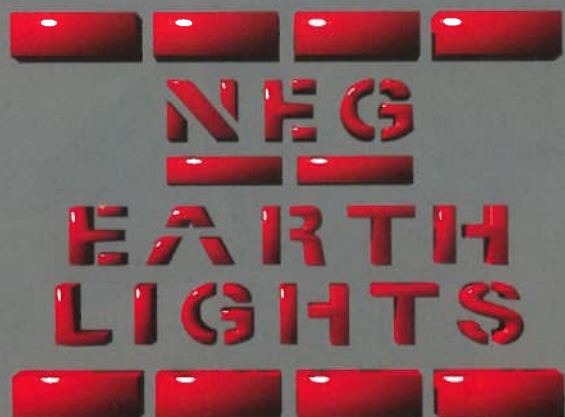


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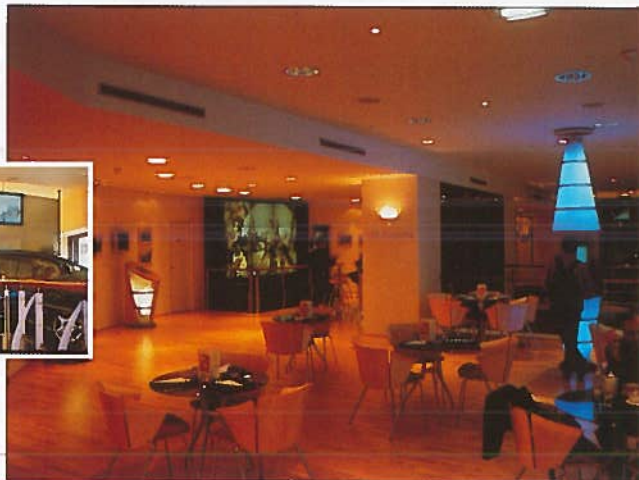
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The Car's the Star

The days of slick car salesmen with hard-sell tactics are definitely coming to an end. Major car manufacturers Toyota are leading the vanguard of change by opening a new style of car showroom - and where better than Paris and the exclusive Champs Elysées. Le Rendez-Vous Toyota features an Internet café, a Bar/Bistro area offering drinks and culinary specialities from around the world, a reading area and a Lexus lounge.



Video clips showing Toyota activities worldwide, new product promotions and motor sports are shown throughout, using flat panel plasma display screens, videowalls and high power video projection. German company Uniplan International were responsible for the concept and realisation of the showroom, sub-contracting Electrosonic to install the audio-visual system. Lava Digitale of Hamburg produced the main video programmes and were responsible for the interactive computer systems. On both the ground floor and first floor, Electrosonic provided 3x3 videowalls using their latest VECTOR image processing. A total of seven flat panel plasma screens from Pioneer are used at the entrance and outside the Lexus lounge, whilst a Barco 9200 projector displays images on a screen which lowers over the front of the building after dusk.

The main video source system consists of an Electrosonic 12-channel MPEG-2 playback system, whilst a comprehensive video routing system allows any source to appear on any screen. Audio is played into six different zones within the showroom, and the audio system includes paging facilities and radio microphones, with a Peavey Media Matrix used for both audio equalisation and audio routing.

Starlite's Sound Bytes

The producer of the Stardraw 2D and Stardraw 3D show design software packages, Starlite Systems Technology, has introduced the Stardraw Data Library for Audio. The library, which is included on the Stardraw CD-ROM, contains over 10,000 2D symbols representing audio products from over 100 pro audio manufacturers.

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News Round-Up

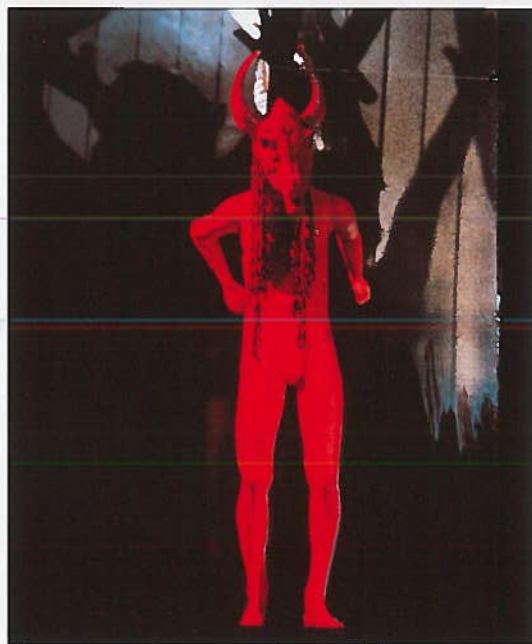


A major new exhibition on Classical Greek Theatre has opened at the Theatre Museum's new ground floor gallery.

A Stage for Dionysos (which runs until 25th April this year) features a display of costumes and masks used in current revivals of Greek plays such as Peter Hall's RNT production of Oresteia and Melina Mercouri's Medea and involves the use of dramatic lighting effects, video and interactive CD programmes. Redevelopment work on the gallery was made possible by a cash grant from the Foundation for Sport and the Arts and assistance from a number of entertainment technology companies which donated their time and equipment. Maltbury installed the staging at the Museum: the installation of two 12m platforms at different heights, covering the existing central ramp in the museum's entrance has converted a once 'redundant' area into around 50sq.ft of additional exhibiting space. The job involved Maltbury staff drilling into the museum's concrete balustrades to place a platform structure over what had previously been a central ramp leading into the exhibits.

Strand Lighting have become major sponsors of the Museum and agreed to supply an extensive inventory of theatrical equipment as part of the Museum's new Theatre Experience Gallery. The company provided the ground floor gallery with a new lighting system comprising a 520i and 510 rackmount control desk with two colour flat screen VDUs, 40 Brio profile spots, 10 x 650W Quartet PC spots, 20 x 650W Quartet Fresnels and 10 x 1200W Cantata profile spots, four wall-mounted LD90 dimmer racks plugged with 96 x 25kW dimmers and an LD90 cased contractor rack, with 24 ways for independent circuits. Trussing was supplied by Tomcat UK and installed by Unusual Rigging with extra display lanterns provided by ELX/Selecon. Doughty Engineering supplied the hook lamps and Rope Assemblies provided safety bonds. The

Stage for Dionysos



David Howe's elegant design for the costumes from Dionysos Fotopoulos' 1991 production of Euripides' *The Bacchae* at The National Theatre of Northern Greece.

lighting design for the project was handled by David Howe of Modelbox with assistant Jason Larcombe and Simon Needle as production electrician. Howe used Rosco filters and gobos in the rig including E-Color and Supergels and over 20 gobos including Bare Branches, Linear lines (for break-up patterns) and The World. The result is a subtle, elegant design using sepia tones and colour correction blues to both recreate daylight and lift out the colours within the costumes. This element is contrasted with Rosco's powerful E-Color reds on costumes from Dionysos Fotopoulos' 1991 production of Euripides' *The Bacchae* at The National Theatre of Northern Greece (as pictured).

SIEL 99: PLASA Mission

This year's SIEL exhibition, which takes place in Paris from 14-17 February, will be divided into three sectors: Theatre, Discotheque and Events.

As usual, the show floor will be busy with a large number of exhibitors and visitors and a programme of related events is also planned. This year, Italy is the guest of honour nation, and the conference programme will reflect this with a session titled 'Bringing Italian theatres into line with European standards'.

PLASA has teamed up with the DTI, the British Embassy and Reed Exhibitions, to organise a two-day mission to Siel. Participating companies will have first-hand exposure to the French market and be presented with well-researched tips on conducting business in France, in addition to use of the PLASA stand throughout the show.

For further details contact Anna Pillow at PLASA on +44 1323 410335.



L&SI Goes Backstage With TMB and City

As promised in our LDI report last issue, L&SI took time out of its busy schedule to pay a couple of backstage visits to TMB Associates on the West Coast of America and City Theatrical on the East Coast.

The name TMB has become something of a byword in the touring industry - if TMB are servicing your tour then as a band you can rightly lay claim to having 'arrived'. Such a reputation amongst the touring fraternity must be gratifying to Marshall Bissett and Colin Waters who became partners in the business (which was originally established by Marshall Bissett) way back in the early eighties. In the intervening years, they have serviced the emerging touring market with one of the largest ranges of lighting, rigging and power distribution equipment sourced from across the world, not to mention the famous, nay legendary, TMB socks. Despite the good-humoured approach taken by Bissett, Colin Waters and Tommy Stephenson, the company are deadly serious about the business and the list of tours they have looked after in the last year alone is as long as your arm. Touring is still a strong market and TMB have an enviable share of it, but as the markets and applications for these technologies have grown, so TMB has expanded too and now the company has warehouse facilities in Los Angeles, London and New York and supplies production companies, dealers and manufacturers throughout the world. The hub of the operation is the Burbank HQ in Los Angeles, on the periphery of Hollywood, where a staff of over 30 work with an inventory of more than 7,000 stock items.

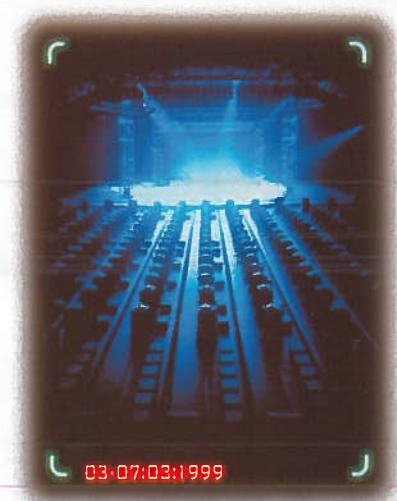
Over in New York, a quite different operation is under way where Gary Fails of City Theatrical is building a growing business on the back of supplying lighting products, fog machines and accessories to just about every show on Broadway. As industry watchers acknowledge, Broadway is very much a revitalised market at the moment and Disney's investment in theatres like the New Amsterdam has only stimulated that growth further. Gary Fails' route into this industry came by chance: he was training to be a doctor, but somehow ended up working as a production assistant on Candid Camera. He then joined the Dance Theater of Harlem as a stage technician and graduated through the ranks of LD to become technical director for the group. It was an apprenticeship that stood him in good stead when he founded City Theatrical in 1986 - now one of the first ports of call for anybody with a technical problem to solve on Broadway. Occasionally these one-off solutions have turned into full production runs and are now part of a growing catalogue of products which includes Lighting Innovation's DMX yoke for ETC's Source Four which can be retro-fitted and the EFX Plus - an effects projector for the Source Four. This is good news for the company recently identified by Dun & Bradstreet as one of the fastest-growing manufacturers in New York State and Fails now has a team of 14, an OEM contract with a major lighting company and has picked up several awards for his products. Aims for the near future include the search for new premises and an expansion of the company's 50-strong dealer network.



Top, Marshall Bissett and Colin Waters at TMB's Burbank HQ. Below, Gary Fails of City Theatrical with a modified Source Four with effects disk



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Trade Fair Explorer Mission

The Department of Trade and Industry (DTI) are preparing to assist smaller businesses who are new to exporting to discover potential interest in their products, in the European arena at the Frankfurt MusikMesse (3-7 March).

The Trade Fair Explorer scheme allows new exporters to find out more about overseas markets first hand. Participants get the chance to talk to potential customers, suppliers and competitors at the MusikMesse, as well as being able to display their products and services on their 'post box' display panel exhibited on the DTI Trade Fair Explorer Display gallery at the exhibition. A free Sector Summary Report (worth £45) will also be provided for participants.

Further information from Martin Ison Associates: +44 (1773) 530 444

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Elektra Lighting designed the Christmas window display lighting schemes for London stores including Liberty & Co, Selfridges, Harvey Nichols, Hamley's and Harrods.

Work on the designs started early in the year, with Elektra's design teams working closely with the stores' visual display teams, and installations for all the stores took place over a hectic two weeks in November.

Elektra specialise in bringing theatrical lighting into retail settings and work closely with clients to combine these with architectural lighting schemes to enhance a variety of commercial settings. This year, Harrods joined the list of clients, using deep blues, reds, golds and twinkling fibre optics to create their striking Christmas look. Selfridges built sets telling fairy tales from around the world, incorporating

flickering flame and rippling water effects, and Harvey Nichols in Knightsbridge and Leeds went for a kaleidoscopic effect with their glitzy window displays, enhanced with starry projections onto the street outside, which faded in and out.

Mainline Arrive With Thunder

A new London-based hire company has been established to supply Thunder Ridge loudspeaker systems.

The Mainline Sound Company has been partially funded by The Prince's Trust in the form of a loan and a bursary, and will cater for the increased demand for Thunder Ridge systems following the brand's success at venues including The End nightclub. Thunder Ridge's touring systems have also been used at Glastonbury and Ashton Court festivals, as well as for acts as diverse as Shirley Bassey, Roni Size Reprazent and Jools Holland.

The product range available includes the XP and SB series for larger scale medium- and long-throw applications; the MX and V-SUB series for short- to medium-throw applications and the Eclipse range, offering a small, high-power configurable enclosure and available as full-range or a mid-high device with changeable dispersion and projection characteristics. The Mainline Sound Company will be based at the Tower Bridge complex, already home to a host of entertainment technology companies (see L&SI November 1998).

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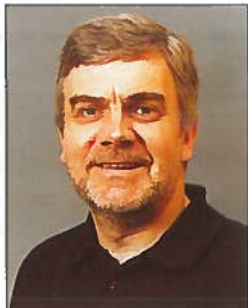




People News

Bill Woods has returned to Turbosound in the newly-created role of sales director, to consolidate the new-look company's penetration of world markets.

L&SI reported Woods' move to Turbosound in August 1997, following his departure from Shuttlesound, but he was to leave the company in April 1998, moving to cable and



Bill Woods

connector company VDC. Then, in July 1998, came the management buy-out at Turbosound, when a group of existing and ex-Turbosound employees bought the company from the Harman Pro Group. The company is currently gearing up for a programme of product launches and Woods will be responsible for all aspects of Turbosound's sales. At the same time, the sales department is also being strengthened by **Teresa Jarrett**, who is transferring from the company's production department.

Bermondsey-based staging specialist Maltbury Ltd has appointed a new hire manager, **Darren Church**. Church, who previously worked as hire manager with building contractors WRM, joins Maltbury at a time of growth: the company recently took on additional office and workshop space, and appointed Aukes Theatertechnik as its sole agent in Holland. **Jason Tucker**, who was previously responsible for hire at Maltbury, will now be able to concentrate on special projects.

JR Clancy, the Syracuse, New York-based theatrical manufacturers and installers, have appointed **Tom Young** as vice-president of sales and marketing. For the past four years, Young's company, Theatre Equipment International, has been JR Clancy's international sales representative, and he will now head up dealer sales direct from JR Clancy.

LMC Audio Systems have appointed **Ian Woodall** as sales manager for their London operation. Woodall returns to LMC after a short break during which he fulfilled his travelling ambitions. **Nick Murton**, formerly of Behringer UK, is also a new recruit to LMC's team and has been specifically employed to concentrate on the development of new business. **Andy Brooks**, previously with the West Yorkshire Playhouse, has joined the new Leeds branch of LMC to assist with the smooth running of the operation.

Gearhouse Group have appointed **John Dale** as a non-executive director. Dale is a main board director of Mars Inc, and has been vice-president of Master Brands Europe, an operating division of Mars Inc, since 1992.

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New Life at the Kilburn National

A new chapter in the history of London's Kilburn National has started with the one-time cinema's metamorphosis into a 2,000-plus capacity dance venue. The new owners, The Carey Group, were able to muster a considerable budget to give the venue's sound system a new lease of life.

The existing system, which served the National's time as a showband music venue catering for the local Irish community, was installed by Avitec and is based around the meaty presence of a Martin Audio F1 concert stack. Peter Brotzman, for 10 years equipment manager at Brit Row, was brought in to upgrade the system in what was his first project as a sole operator. Happy to keep continuity with Martin Audio components, Brotzman specified two EM56s down the room, front and rear of the large bar, on time delays, and at the same time re-processed the main

system to take into account the venue's change in usage. In the smaller, 360-capacity circular room he used four Martin EM76s, processed with the dedicated EMX 1A controller, and refurbished the existing Dynacord sub-bass, which housed a 15" Electro-Voice driver in a folded horn. A wide range of system parameters were required in order to cater for the varied programme of events hosted by the National, while the venue's location in a residential area meant that strict maximum SPL limits had to be ensured. In order to meet these requirements, Brotzman, already familiar with BSS Audio products from his time at Brit Row, specified BSS's Soundweb DSP networked audio system.

The eight-in/eight-out Soundweb splits from the main signal into six channels, on which is stored the Main System Left, Main System Right and four delays, with the gain changeable on any of the six inputs.

New Strands

Redesigned versions of Strand's 500 series lighting control consoles have been launched, along with the latest release (version 2.2) of their Genius Pro/Lightpalette operating software.



The 520i, 530i and 550i desks, which incorporate Pentium II 233MHz processors, offer up to 6,000 channels and 8,192 DMX outputs. The desks can be specified at base level, but are readily extendable with incremental channel upgrades and optional software applications. Other features of the desks include the partitioning of show elements, so that up to five operators can work simultaneously on different parts of a single show.

Strand's new Reporter software provides notification of dimmer status when used in conjunction with Strand's reporting dimmers, the EC90SV and CD80SV. All the latest fixture libraries are also included.

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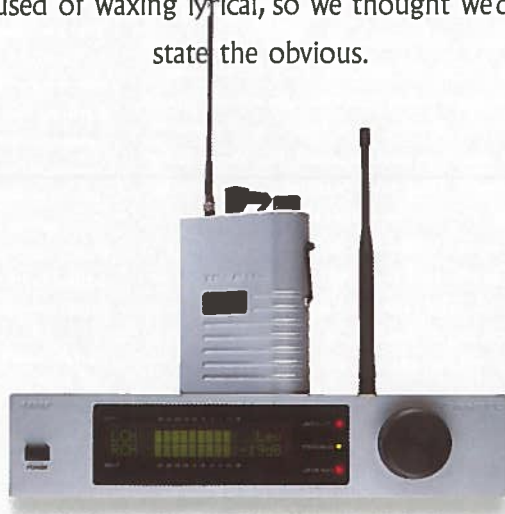
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Royal's Curtain Rises Again . . .

Following a two-year sabbatical, imposed by an IRA bombing in 1996, the Royal Exchange Theatre in Manchester is back. Ian Herbert offers a critic's view whilst TPC's Andy Hayles provides the technical perspective

In 1977 Sheridan Morley, never one to resist a hyperbole, called it 'an achievement which must be rated as one of the greatest advances in theatre architecture of all time'. He was referring to the creation of Manchester's Royal Exchange theatre, Richard Negri's space-capsule sitting inside the huge old cotton trading hall, which had opened in September of the year before. It cost £1.2 million, and followed various temporary expedients used by the 69 Theatre Company.

On 15th June 1996, at 11.15am, the IRA exploded a 1500 kilo bomb just outside the building. Some excellent police work meant that no lives were lost, but the middle of Manchester was in a bit of a mess. Marks and Spencers had to be demolished, and the Arndale shopping centre offered quite an opportunity for rebuilding. At first it looked as if the Exchange had got off rather lightly. All the glass had been blown out, some of it finishing up stuck like spears into office walls after a journey which would have literally made mincemeat of the technical staff if they hadn't been evacuated, but the theatre module looked unscathed. That day's performances of *Hindle Wakes* were cancelled, then the next week's, then, as the whole area remained sealed off by the police, the Exchange directorate began to realise that it might be some time before they could resume at all. When they did get back in, it had been found that the ceiling of the Exchange building itself was coming away, and the state of the whole fabric was in question.

Not every theatre company can call on a spare theatre in such circumstances, but the existence of the Royal Exchange's Mobile Auditorium meant that the next production, *The Philadelphia Story*, could go on, almost as programmed, in the congenial surroundings of Upper Campfield Market where the Mobile had formed the centrepiece of the SBTD's *Making Space!* exhibition two years before. Then the Exchange team settled down to rebuild their theatre - and its surrounds.

On 8th December 1998, the national critics were invited to the opening night, not only of the refurbished main auditorium (with, of course, the *Hindle Wakes* that was so rudely interrupted) but also of a new play by Kevin Elyot, *So Special*, in a completely new 100ish-seater space, the *Selfridge Studio*, a flexible Gunter-blue box hacked out of the theatre's old workshop. The oohs and aahs were genuine: the auditorium didn't look all that different at first sight, but the gloomy old Exchange that contained it had been transformed, with the glorious nineteenth century stucco ceilings and walls repainted in campy pastels and the fine fake marble pillars gleaming like new. Above, the three domes glowed with the

blue glass panes that now replaced their shattered predecessor; below, the wood-block floor of maple and walnut (isn't that an ice cream?) had been enhanced with oak, giving the whole area the appearance of a vast, dream ballroom. Round the galleries, Amber Hiscott's delicate stained glass glowed in the laylights and clerestory windows (I got that from her press release - but the windows, whatever they're called, did look really super). Where before, your attention was all on the theatre, now you could enjoy its surroundings as well.

I hung about near the smart new bar (where else) looking out for Andy Hayles of Theatre Projects Consultants, who was to initiate me into the mysteries of the building. This gave me a chance to observe the variations in the bar's neon-lit title - Andy had told me that it was running under the name of 'Bar Chang', but as I arrived it had graduated to the full title of 'Bar Exchange'. Not for long - by the time he arrived we were in 'Ba ange'. Not exactly Damien Hirst's Pharmacy, still . . . I asked why there was a spotlight shining into the faces of us barflies, and a passing Vince Herbert (the Exchange's head of lighting, and no relation) said something not very printable. Several of my critical colleagues asked me where the Studio was - the four-metre high blue neon sign saying 'Studio' was there all right in the corner of the hall, but not achieving much success as an indicator. Soundproof strips were still being added to the main auditorium doors as the cast gathered for final notes inside.

Performance-wise, the evening went well, even if my perch on the high stool (a reworking of the original seats of the old Exchange) at the far corner of the Studio's seating didn't give me much of a view. I was able to admire the studio's first-ever flying, when a couple of columns unexpectedly shot through the elaborate ceiling that had been, up to that point, the main feature of Liz Ascroft's set. So that's what the guy in the corner with the suitcase on stilts was doing.

Later, in the main house, there was more surprise flying, when Lez Brotherston's set for the first scene rose, with much clanking and an actress on board, to the roof. I learned later that with the new winch system the move could have been completely silent, but the director wanted to keep the sound effect. No great disasters to gloat over, apart from the moment when the lighting operator got one cue ahead of himself and dipped out a whole scene. Since he was surrounded at the time by the cream of Strand and Stage Electrics, plus his boss, all wishing him well at a rather close proximity, he can be forgiven. The critics didn't notice anyway - think they were too busy admiring the bite-size satanic mills, complete with working chimneys, that clad the first gallery.

Next morning Andy kindly showed me round, and I began to discover what has gone into making the Royal Exchange virtually a new theatre. In spite of the beautiful new interior



THEATRE

decorations, most of the biggest changes aren't visible: it's only when you dig around a bit that you discover just how much improvement has been made.

Our first call was on project manager Michael Williams, who was there in 1976 lighting some of the company's first productions and very happy to be back. He explained that a Lottery bid for £17million was already in hand when the bomb struck; its effects raised the total to £31million (£18.5million of that going in construction cost). The insurance money recovered for the bomb damage - the building is owned

by Prudential, but it seemed indelicate to ask whether they were also the insurers - was allowed as matching funding, leaving the Exchange with only one million to find.

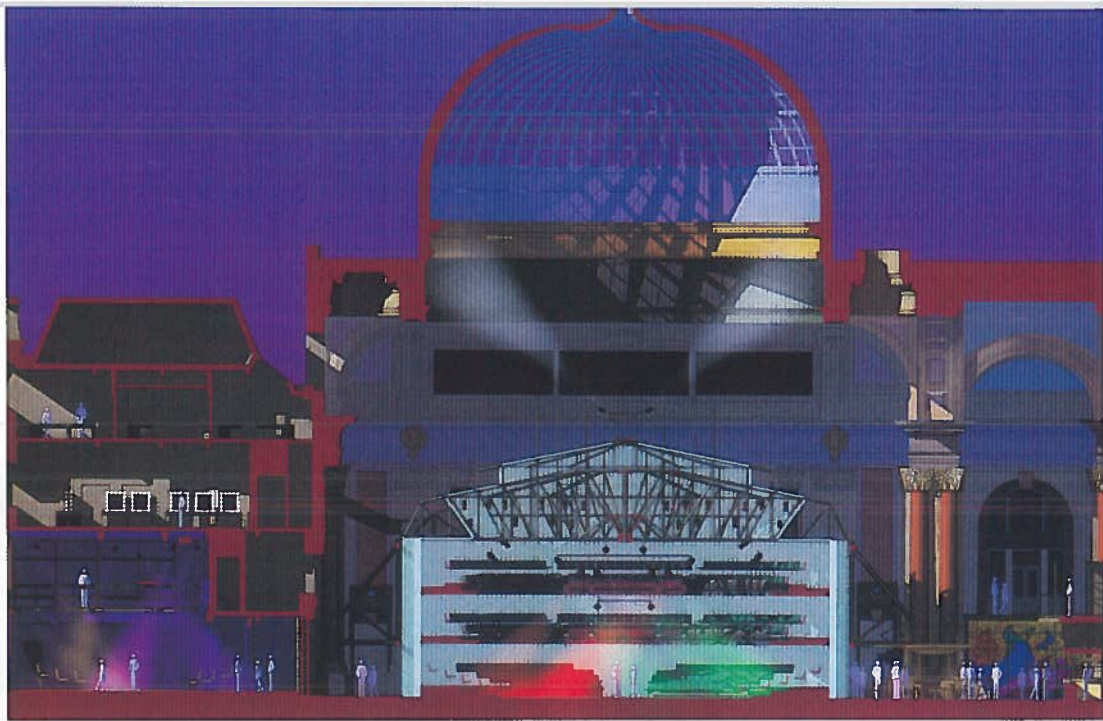
£3million goes to a new satellite workshop and scene-storage building, freeing space for the new Studio. The Exchange have also been able to buy a new 25-year lease on the hall. Levitt Bernstein, the original architects, were in charge, with Max Fordhams back as services engineers and Theatre Projects Consultants looking after the technical elements. Work started in May 1997 and it's all come in on time and to budget, albeit with a few minor glitches.

Up on the top of the module we could look down on the big in-out air-conditioning ducts which serve it. The system has been completely rejigged and now only one of the two is needed, leaving the other as a handy containment conduit for the electrics. We could also check out technical manager Pete Goodwin's versatile new winches. Designed to his requirements by Mike Barnett and Theatre Projects, with control by Stage Technologies, these nifty little beggars can be placed anywhere on the grid. In tight corners, they will operate on their side. The roof of the theatre can now be winched silently open, too.

Flying is controlled by these suitcase jobs, a system called Nomad, and the two controls can be used in either the module or the studio to control 40 axes. (Covent Garden is going to have 10 of them for 218). Steve Trainer of Stage Technologies has programmed a custom system of control, by which the winches can be raised and lowered to tolerances of millimetres - the loss of manual control from the old counterweight system means that a lot more safety features have to be built into the computerised replacement, but it works a treat and can do a heck of a lot more. There have been a lot of changes up here to the lighting circuitry too, with miles of cable now out of sight in tidy trunking - you can redirect the power for the 100 circuits in the basket above the stage to over 300 circuits around the module and hall via two hard patches.

Some of the most interesting changes have been in the way power is directed around the building. The new distribution system uses Ethernet connections, with the addition of a distributed power network, meaning that you can put posh new moving lights and scrollers where you like without strewing ugly black boxes around. At the foot of every pillar outside the module is a light and sound box, into which you can plug the wherewithal for effects outside the stage area.

Coming down through the auditorium you will notice that the lanterns at the back of the upper gallery are a shade close to the seating, but this is mitigated by the tilt of the seats themselves, which force you to lean forward. The principle of varied seat heights used in the theatre before is retained, which means that the folk in the front row stalls sit on pasha-style low thrones with their feet sticking out. All the seats themselves are brand new, and more than comfortable.



Cross section through Manchester's Royal Exchange Theatre

The Control Room, on gallery level two, has a custom-built Cadac sound board (plus a Midi keyboard for sound effects triggering). Lighting control is (for the moment) through a Strand 550 board, and there is a separate control for working lights, by Stage Electrics, which Andy has repeated at the Stage Door so that directors can come in and get going on morning rehearsals without having to wake up some poor lighting operator who's been focusing all night. All the control room screens are flat LCDs, saving valuable inches in depth. An Oxford Sound Company cuelight system can alert each of the many possible stage entrances to the arena stage.

The keynote flexibility of the new Exchange is evident in the lighting control possibilities - you can plug a board into any one of a hundred locations for plotting or show control, with the central server safe in Vince Herbert's office. (You can also plug in your laptop, with the right software, and see what the main board is doing.) Herbert himself has had a big hand in developing the board which will shortly replace the theatre's current 550: the new board, which will be a full production model, and probably be called the 550di, is due in 18 months. It will have a dual keypad like the Galaxy, plus full WYSIWIG plotting capability. He has specified the classiest dimmer modules for the theatre, EC90s at over £20K each - the Studio has to make do with some cheaper ones.

While Vince and I were chatting we were joined by Clive Richards, production manager, and Laurie Dennett, head of design. Both have long relationships with the Exchange, and both are fiercely proud, like Vince, of their theatre. Dennett is a passionate fan of theatre-in-the-round, which he will defend against two-dimensional theatres as the most challenging but also the truest environment in which to test your design concepts. The mini fly-tower in the Studio is his idea, something which you hardly notice when sitting there (indeed the bulk of the lanterns are uncomfortably below the main three-metre ceiling height of the surrounding space) but which will make the space much more interesting as a testing ground for the theatre's young designers and directors.

Steve Brown, head of sound, whom we tracked down in the new, superbly fitted sound studio (Oxford Sound Co again), is just as proud. "It's the best theatre in Britain for sound," he said, echoing Vince's statement that it was the best theatre in Britain to light - no doubt Laurie would have said the same for sets if asked. In the studio is £100K of the latest digital kit including a seven-speaker set-up which can show designers and directors the effect of their work in-the-round. Still, my eyebrows were raised at the cost until Steve pointed out that it wouldn't take many hours of studio hire fees to equal that cost.

Back in the theatre, daylight gave the opportunity to appreciate that stained glass in natural light, and to



"On 15th June 1996, at 11.15am, the IRA exploded a 1500 kilo bomb just outside the building. At first it looked as if the Exchange had got off rather lightly"

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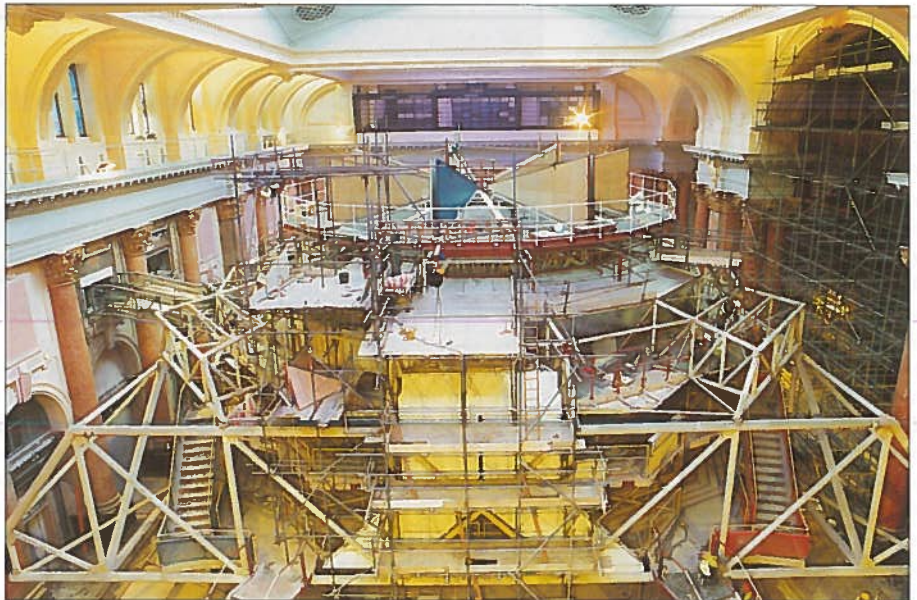
- The Royal Exchange Theatre
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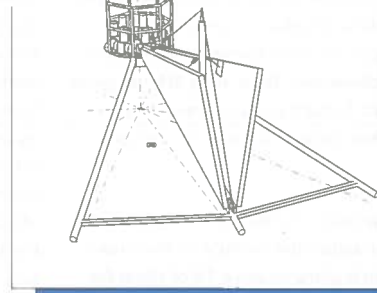
confirm just how spacious the Exchange looks now that the surrounding area has been hollowed out for the bookshop, box office and various attendant catering enterprises - there's lots of space to entertain sponsors, a sure sign of the times. I could also get a proper look at the most prestigious and the most controversial item in Levitt and Bernstein's second-stage project. The major lighting for the Exchange Hall is six

Think of that Christmas cake you stuffed down a couple of weeks ago. Remember how heavy it was; the audacious cramming of ingredients into one dense package. Now imagine trying to get even more cherries, sultanas, rum, mincemeat and marzipan into that cake without it looking any bigger!



Above, refurbishment work underway at the Royal Exchange. In the centre, the triangular roof panels are shown open. Right, a perspective of the crow's nest again shown with the roof doors open

socking great canisters hanging from the ceiling, called, I am reliably informed, Pelk lamps. They work on a sulphur plasma principle which I won't explain now (I can't, actually) but seems to mean that you get a lot of light for a low power cost. They spill out light from both ends. A seventh Pelk sits on top of the theatre's 'crow's nest' and illuminates the whole central dome. The problem with the other six Pelks is that they don't actually give out much light, and what they do produce is a rather unacceptable colour - the Exchange lighting department had rigged some filters to make it less offensive, but, of course, this reduces the candle-power even more.



This is but one minor snag in a very exciting set of spaces, both public and theatrical, which (along with some equally exciting programming for the next 12 months) puts Manchester back into serious contention with Leeds for the title 'National Theatre of the North'. Snag? It could be worse - Andy's proper job while escorting me round was 'snagging', noting down those little niggles that need to be put right before the theatre is officially declared acceptable by the client. When I left, his list had reached 63 pages of fax paper - but I'm sure it's all been sorted by now . . .

Ian Herbert

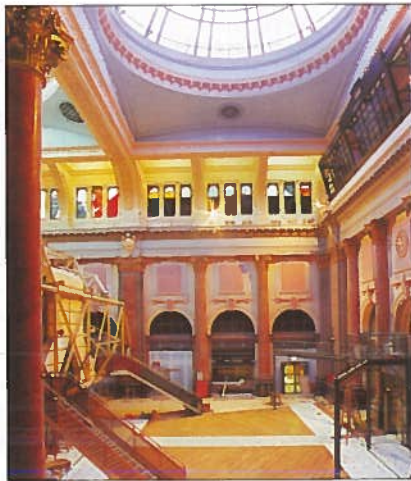
Well, that was exactly Theatre Projects Consultants' challenge with the Manchester Royal Exchange Theatre refurbishment. Working closely with the theatre's technical staff, the architect Levitt Bernstein Associates and the electrical services designer Max Fordham & Partners, we set out to squeeze a 21st century infrastructure

into an existing skeletal structure with no false ceilings and no floor voids, where every surface is visible to the audience and which had been originally designed for the technical demands of a previous generation. The inclusion of a powered flying system and a fully equipped studio theatre were the icing on this particular cake!

Where there's a wire, there's a way! Setting out to increase the service provision by a factor of three meant creating service routes through hollow steel sections, diverting air flow to use old ductwork routes for new cable and introducing a 'racetrack' of containment around the Hall half a metre wide, but only 40mm deep. Using structural conduit for both the mounting and support for facility panels, as well as the cable ways feeding them, became an oft-used technique.

One particular problem was installing services to the tier fronts. This area is vital in theatre-in-the-round, as it forms one of the few vertical fixing points for set and must also accommodate the main sound reinforcement speaker rigging points

and flatter angle lighting positions. As competition is fierce for this space, the rigging bars are demountable, but their fixings are reusable for attaching set. The facility panels also had to be invisible to the audience so as not to detract from the show-specific elements. The electrical isolation required for lighting and sound wiring meant that six separate compartments of containment were required to feed the tier front positions.



The solution was to use the existing structure within the floors forming the tiers, and weld a number of additional steel flats and tees in place to provide a 30mm deep six-section containment route, with the maximum separation between sensitive sound cabling and 'noisy' dimmed mains cable. TPC then designed a series of triangular facility panels - the 'cheese boxes'! These had punch-outs in their back plates which aligned with the six compartments of the containment above, allowing Stage Electrics and the Oxford Sound Company to knock out the one or two wire ways required to feed each relevant cheese box. Much time was spent refining the lighting cheese box design by Jonathan Porter-Goff of Stage Electrics (who also manufactured them) in order to fit a 32Amp socket outlet and MCBs in a box which is only 70mm deep at its most accessible point. Richard Eliot of the Oxford Sound Company also modified the sound faceplate's ergonomics in order to ease the path of bulky bi-amp speaker cable.

This is one example of the many triumphs of design and co-ordination between all the contractors. If you should happen to visit the theatre module, marvel at the stainless steel facility panels around its external perimeter, delight at the elegance of the hidden mountings for facility panels, and take a moment to consider that many of the design and construction achievements on this project are entirely invisible!

Vince Herbert, head of lighting at the theatre for over 10 years, has been inspirational in the concept of the lighting systems at the RET. Over the first of many design-driven beers, he spelt out his wishes for the RET to lead the theatre industry in not only the quality of the shows and obvious class of lighting designs, but also in the excellence of infrastructure which enable his crew to put on shows more easily and safely in a tough, but rewarding venue.

- **INCREASING** dimmer ways: now there are over 400 ways from an original 180, all featuring RCD protection for added safety.
- **INTRODUCING** hard patches for less used circuits: now over 1,200 socket outlets are available around the building through two hard patches, utilising Weill and three-pole patch cords to keep patch panel sizes manageable.
- **STATE-OF-THE-ART** control systems were required: TPC designed a two-tier system. Primary lighting console-to-dimmer links use ethernet via nodes housed in a single patch bay located in the dimmer room. Over 100 ethernet outlets around the theatre enable lighting boards to be plugged in anywhere. Using the specially-developed portable nodes as an interface, any DMX-driven equipment can also be connected to the network. A secondary level of control for scrollers and moving lights is via a distributed scroller power system, providing 24 volts DC across pins 4 and 5 of a 5-pin XLR canon connector. Howard Eaton and Peter Willis were instrumental in developing this system, which also allows remote DMX switching of the zoned power supplies enabling operators to reset scrollers or moving



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lights from the board. Indeed, if the power supplies are switched off, the system allows the telines to be used for DMX distribution.

- **21ST Century Galaxy replacement:** Vince Herbert wanted a lighting console combining the user-friendliness of Galaxy with a moving light and scroller interface to rival ETC's Obsession - a challenge for Stage Electrics, TPC and Strand Lighting. Strand are developing a new board for the RET which is ethernet ready, and fulfils all of Herbert's needs. The first stage, providing a production lighting network, a server and two control surfaces which rely on a remote rack-mounted 'board-in-a-box' with tracking back-up, has already formed the basis of the installation. In the new year, a second dedicated memory keypad will appear on the control surfaces to be followed by WYSIWYG compatibility and other moving light features. Taras Cochran, Vince's deputy, is impressed with the Radio Remote Riggers which allows him to address the board from outside the theatre - particularly useful when focusing and rigging luminaires in the Hall.

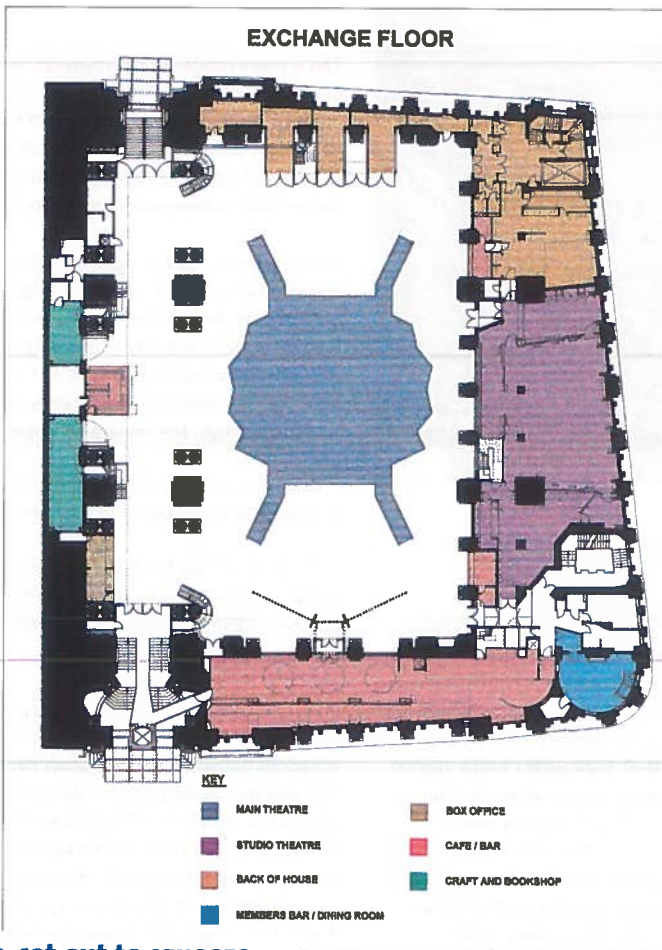
- **PROGRAMMABLE** worklight system that can cope with astronomical timed architectural lighting schemes in the Hall: with TPC's input, Stage Electrics have developed a bespoke AMX solution which features LCD touchscreen technology for programming, with latching LED backlit buttons for operation. This system has already proved a favourite with Herbert's crew for its ease of operation, its layers of complexity and its bullet-proof reliability.

- **LUMINAIRES:** one of Herbert's main concerns was the reduction of the RET's future hire bills. 90 ETC Source Four Zooms (supplied by Action Lighting of Manchester) now form the core of the rig and greatly increase the possibilities open to the lighting designers. The Exchange is also home to 70 ETC Source Four Pars. In addition, eight Martin 500s and seven Strand Pirouettes has meant that 14 moving lights can be permanently rigged on the module's 14 steel 'spokes'. These have already been used to great effect in the first show, though improvements to their acoustic performance will still have to be made. Another purchase to make any chief electrician's mouth water was that of four Robert Juliat 2.5kW HMI profiles.

- **STUDIO THEATRE:** it is anticipated that this space will be staffed by a single technician, so it is important that rigging a lamp and turning it on is as easy as possible. A forest of demountable internally-wired bars terminating at a hard patch bay identical to that in the module, an identical board to the main house (allowing cross-staffing) and a simple worklight control system zoning will make this venue friendly to in-house and visiting electricians alike.

Steve Brown will be known to many from both his freelance career and his stint at the National Theatre. Brown is a perfectionist which has proved both a trial and a joy for TPC and the Oxford Sound Company! His attention to detail in developing a brief for the system, and his understanding of the wide range of directorial styles within the theatre, guided TPC in their design and resulted in a number of innovations.

- **BLANKET WIRING:** Brown's wish for connection cables to be no longer than a metre resulted in a few head-scratching moments for Richard Borkum of TPC. Sound, perhaps more than lighting, often requires outlandish rigging positions, and many of these have been accommodated within the



"We set out to squeeze a 21st century infra-structure into an existing skeletal structure designed for the previous generation."

interface for complex live playback mixing exists ("Better a bespoke Cadac than an off-the-shelf O2R, however digital" he says). The control area was reworked to improve the operator's position and the noisy Cadac power supply was moved to the Module exterior.

- **RECORDING STUDIO:** one of the previous problems of playing back sound effects and music to directors in the recording studio was that a single pair of monitors did not adequately reflect the feeling given in the module of something panning around over 30 speakers. The new studio features seven monitor speakers mounted around the listener/engineer in a similar geometry to the Module's seven sides, affording an excellent aural picture of any sound design. The studio also features Protocols driving a Yamaha O2R, as well as another Akai S6000 sampler, Minidisc, CDR, digital effects and graphics and numerous analogue sources. A soundproof vocal booth has also been added.

- **RADIO MICROPHONES:** Brown wanted a reliable radio mic system for use on the occasional musical production and for other varied events taking place at the theatre. He opted for four lapel versions and two hand-held versions of Trantec's UHF S5000 system.

- **CUE LIGHT SYSTEM:** The Oxford Sound Company have produced a PC-based programmable cue light desk with a manual override, to TPC and RET's specification, greatly simplifying the stage manager's task. (Even the ushers are cued to open and shut doors, as these are the main actors' entrances!)

- **STUDIO THEATRE:** though a more basic, stand-alone system, the Oxford Sound Company took a great deal of pride in supplying a number of tailor-made flightcases incorporating lighting and stage management, as well as sound control surfaces. This modular, but connectable solution, greatly enhances the studio's operational possibilities, where all manner of staging alternatives are expected.

Pete Goodwin, the theatre's technical manager and Clive Richards, overall production manager, had quite specific ideas for the proposed powered flying system. Goodwin, in particular, has become somewhat of an expert in drives and controls during the project! His insistence on a low self weight, virtually silent hoist, proved an irresistible challenge to George Ellerington of TPC, Mike Barnett and John Hastie of Stage Technologies. Having liaised with the architect in providing a new permanent rigging grid, TPC also designed a means of opening the roof panels, which like all of the stage engineering equipment was specified to be virtually silent.

infrastructure design. Audience members at the first show, *Hindle Wakes*, will have heard the distant echo of a barking dog, but few will have realised that the speaker providing the effect was located 10m outside the module and six in the air (but with only a one metre connection cable). In all, over 50km of sound cable has been installed.

- **NEW SPEAKER SYSTEM:** Meyer UPMs and installed Tannoy bass bins, which can in turn be supplemented by further loose Meyer sub-woofer cabinets, form the heart of the speaker system, along with many additional spot effect speakers large and small.

- **ALL-DIGITAL PLAYBACK (ALMOST!):** the latest Akai S6000 sampler, Denon Minidisc record/playback machines and digital graphic equalisers are housed in the new control area, together with Timax sequencing automation software which all integrate with the refurbished custom-made Cadac mixer. Though digital mixing is to be found in the recording studio, Brown is yet to be convinced that a digital operator

- **PORTABLE POINT HOIST:** RET almost always fly a piece of set for a show, as it is the primary means of a designer's expression. Previously, this was done using single purchase counterweight sets, diverted via death-defyingly rigged pulleys to the module exterior, where the operator had virtually no sight of the flying piece. The principle behind the point hoist system is for two people to place it in position on the new grid, directly above the pick-up point - what could be more simple? Unfortunately, due to the roofline, this meant that at the outer edges of the grid, the hoist needs to operate on its side; and as the same hoist is used in the studio theatre, it has to fix vertically to a steel section. Fortunately, the load-bearing capacity is low at 125kg per hoist, as in both spaces flown pieces are relatively lightweight (chandeliers, etc) or multi-pick-up (ceiling pieces, etc), which helped both in the portability of the unit and in achieving the specified acoustic performance. Mike Barnett and Stage Technologies carried out exhaustive tests to ensure the correct combination of drive, motor, gearbox and brakes and to alleviate as much mechanical noise as possible. This proved to be a lengthy process, and fully justified TPC's recommendations that a prototype hoist be developed and approved prior to manufacture, particularly as the hoist units are positioned only a few metres above the heads of the audience. The Module has 28 of these hoists with multiple plug-in points at various levels throughout the theatre.

- **ROOF PANEL WINCHES:** these larger units were based on the same acoustic principles as the portable point hoists, although fixed with millimetre tolerances on the new 'crow's nest' at the roof's apex. They haul the 14,300kg doors in pairs using 8mm stainless steel rope through custom-made stainless steel yachting pulley blocks from local stage engineering firm AS Green. The control of these can be overridden locally, or addressed directly from the Nomad show control system, enabling them to be plotted into cues.

- **POWERED FLYING CONTROL SYSTEM:** a portable briefcase houses the Nomad control console, and this particularly impressed the RET stage staff when they viewed it prior to the 1997 PLASA Show, where it won product of the year. It has already proved intuitive, safe and time-saving and utilises impressive network technology affording multiple control positions and room for future expansion.

- **STUDIO THEATRE:** this features identical equipment to the Module, with the added benefit that all the drives and control equipment are flightcased. This enables the Module's 28 winches to be supplemented by a further 12; or indeed allows for the 12 studio winches to be taken out on tour.



- **MECHANICAL RIGGING DEVICES:** in addition to the more glamorous aspects of the installation, Scott Lloyd of AS Green has also installed manual winches to the five Pelk light fittings in the hall, the Angel Wings, on which lights and set are rigged outside the module, as well as providing hemp and winch sets to the studio theatre.

The quality of the theatre's new technical installations and the forward-looking design is a tribute to the quality of the theatre's resident staff and their high expectations. TPC have considered it a privilege to respond to such exciting challenges and to work alongside such dedicated, innovative contractors.

Andy Hayles



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Sound Signatures

AUTOGRAPH

Robert Halliday reflects

on Autograph Sound's 25 Years of Audio Success

This is a profile of Autograph Sound Recording who, by the time you read this, will probably just be putting the parties and jollity of their silver-jubilee year behind them and getting started on their 26th year in business.

But first, a little detour for some history. In 1956, a bright young thing called Richard Pilbrow founded a company, renting lighting equipment while also offering his services as a lighting designer. Over the years, the company thrived, establishing many of the techniques that are now taken for granted in the British theatre and also collecting together an enviable team of lighting designers - the likes of David Hersey, Andrew Bridge, Robert Bryan and Robert Ormbo, who would progress from assistant to co-designer to sole designer in projects. Eventually, the company over-expanded and the design team went their own separate ways. Pilbrow himself, reflecting on this in his recent book, remembers thinking "Perhaps our designers would do better independently, out in the real world," though also adding that "sadly, a unique laboratory atmosphere was lost."

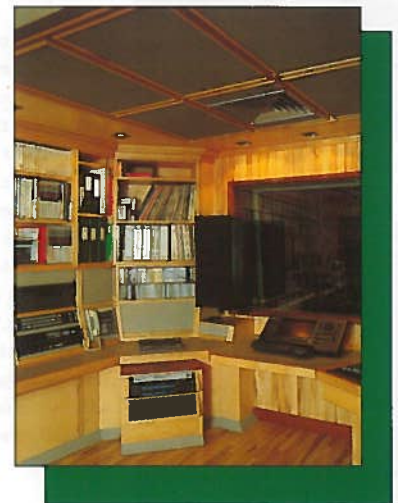
The reason for that little diversion? Well, though the lighting laboratory has vanished, the same sort of thing seems to be thriving today at Autograph's North London headquarters, where founder Andrew Bruce has gathered around him a team of talented designers and engineers. The ethos is the same: sound engineers working as assistant sound designers, then perhaps co-designing rigs before moving on to design complete shows on their own, and with those designs backed up by Autograph's superb support staff and comprehensive hire stock.

A quick glance at Autograph's list of credits - or the posters spread around their offices - confirm that this 'sound laboratory' is thriving. During 1998 alone, new design projects included a production of *Les Miserables* in Antwerp, a *Les Miserables* concert in Cardiff, the *Oliver!* UK tour, the arena production of *Madam Butterfly*, the

Hey Mr Producer! concert and Peter Hall's new production of *Amadeus* at the Old Vic, while new and ongoing hire projects include *Rent*, *Saturday Night Fever*, *Showboat*, *Beauty and the Beast*, *Cats*, *Smokey Joe's Café*, *Miss Saigon*, *Les Miserables*, *Grease*, *Starlight Express* and the current UK tour of *The Phantom of the Opera*, amongst many others.

Time for a little more history, then, this time back to the late sixties. Though now seen as a leader in sound systems for large-scale commercial musicals, Autograph's roots lie in a completely different field, though one they have returned to in recent years: opera. Having spent a spell in America working as a photographer, Andrew Bruce returned home and, combining his schoolboy interests in music and theatre, found himself a job at his local theatre: Glyndebourne. After a tour and a summer season for them, he heard that the Royal Opera House in London was recruiting heavily following the introduction of a new shift-working system. In the first of many instances of being in the right place at the right time, the theatre's chief electrician overheard Bruce asking for work at the stage door and took him on.

Bruce ended up working in the sound department at the ROH, making effects for shows and looking after communications and CCTV. The head of the sound department was Phil Clifford and in 1973, the pair of them hatched a plan. "The Opera House had a rental budget for shows, but not a large capital budget," Bruce recalls. At the time, the ROH regularly rented from TSL and Stage Sound, but Bruce and Clifford saw an alternative, though they felt a little unsure about it. "We went to the production manager cheekily asking if he would object if we personally bought some equipment and rent it back to the ROH when they required it. He agreed, so we went and bought a Revox." ➤



Autograph's London HQ and main recording studio



COMPANY PROFILE

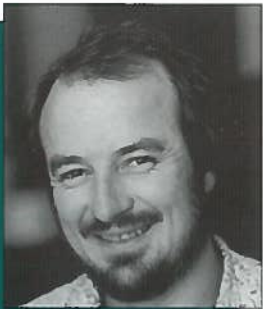
THE PEOPLE . . .



Andrew Bruce



Julian Beech - now retired



Terry Saunders



Matt McKenzie



Bobby Aitken

Thus Autograph was born, though the full name Bruce and Clifford gave their offspring - Autograph Sound Recording - suggests that they had plans other than simply renting equipment, with Bruce expecting them to expand rapidly into classical music recording. But this part-time operation quickly attracted outside attention: producer Michael Codron contacted the ROH sound department for some impartial advice about sound equipment, since he felt the equipment he'd been renting from London's established suppliers was of poor quality. Bruce and Clifford took it upon themselves to visit Codron's shows, reporting back that, though much of the equipment was fairly antiquated, it was possibly all he was likely to get for his money.

The pair were taken aback by Codron's response to their verdict. "I remember that he stood there as we were leaving the office, and basically said that if we ever thought of opening up our own hire company to let him know and we could do all his work!" This seemed to be one of those fateful moments which the pair decided they could not ignore . . .

This also meant that the operation started to demand full-time attention, and it moved into what Bruce describes as an "upstairs garret" in Primrose Hill. A hallmark of this early period as Bruce recalls was "complete fearlessness - neither of us ever thought 'what will we do if our plans don't work?'". In part, this was because they "hadn't invested enormous amounts of money in it: we built things up slowly, sub-hiring when we needed to. I remember buying XLRs in ones and twos, because that was all we could afford." Early customers from this period still continue to return to Autograph, though: Tupperware shows helped the company early on and have taken them all over the world in the years since.

Autograph continued to pick up theatre clients, renting bits and pieces of equipment as needed but, even then, looking beyond then-current techniques and at new equipment that could help them establish a new approach to sound. Doctor Who and the Daleks saw them using cart machines for the first time: "The whole show revolved around the sound effects, zaps and pows, and we took a bold step and put the operator in the auditorium because all the cues were visual. We needed instant start and everything had to be quiet, so no clunky old Revoxes." Though Bruce also recalls that "by the time we'd filled the box behind the desk with 136 different cartridges the noise of the operator - Jonathan Deans, who eventually became a full-time member of staff - clattering through the cartridges had to be heard to be believed!"

A big breakthrough came shortly afterwards, with a 1976 play called City Sugar starring Adam Faith. "It featured a disc jockey at his console in the centre of the stage throughout the entire play playing records - an enormous amount of recorded music was being used." Autograph won the battle that they, rather than the leading actor, should control the sound effects, and everything seemed to be going well. Until Adam Faith insisted that his friend Joe Brown of rock and roll company Tasco supply the sound equipment. "Robert Fox and Andrew Treagus, the show's general and production manager, were very embarrassed but had no option but to ask us to step aside. We thought it was very unfair but we agreed to go.

"Three or four days later, they phoned us and said 'if we asked you to come back how soon could you get here?' The show was already in the theatre by this point:

Autograph had to install their rig overnight, then had just one day to rehearse. The new technology won the day.

It also acted as an important calling card for the company when, a few months later, Abe Jacob, a leading American sound designer (as well as personal engineer to stars such as Jimi Hendrix) came to London to decide upon the equipment supplier for the UK production of the Broadway hit A Chorus Line. "He went to see a show of TPs, he went to see a show of TSLs and he came to see City Sugar," Bruce recalls, "and apparently decided that we were the people for him." He pauses. "And the rest is history . . ."

Certainly that decision set the company onto the course they have sailed ever since. Jacob had an enormous influence on both Autograph and Andrew Bruce personally, teaching them "how to do a big musical in a big theatre, how to communicate with Americans at long distance, how to get what they wanted or turn them round to what we had."

A few years later Jacob would also bring to the company a product which has been central to their work ever since, though the path to the Meyer UPA-1 loudspeaker wasn't a direct one. Selected as sound suppliers for Evita (in part, curiously, thanks to Julian Beech, who would later join Autograph but was then head of sound at the National and suggested Autograph to Evita's production managers, Richard Bullimore and Martin McCallum), Autograph received Jacob's spec which called for JM-1s, JM-2s and JM-3s, available only for rental from an American company called McCunne Sound. Later, quoting for another Jacob job - The Little Whorehouse in Texas at the Theatre Royal Drury Lane - the request had changed to new loudspeakers tagged UPA-1s from a company called Meyer Sound, designed by one John Meyer - the JM of the earlier designs. "They looked exactly the same then as they do now," Bruce notes. "They were also eye-wateringly expensive and we bought them without ever hearing them. I remember thinking 'these had better be good!'" Eight boxes duly turned up, were plugged in and turned on: "We were very impressed: they had an incredible combination of power and clarity in a compact box. They were ideal for theatre."

Jacob specified the same loudspeakers for Cats, an unexpected little hit that is still bringing rental income into Autograph 17 years on! The show also brought Bruce a new partner. Phil Clifford left Autograph in 1978, subsequently moving to the Manchester Royal Exchange and more recently on to South Africa, and Julian Beech arrived the following year, with a gentleman's agreement that if he and Bruce got on they might one day become partners. Then Abe Jacob specified a Midas mixer for Cats: "£36,000 worth - money which we didn't have." So Autograph went to the bank, told them the amount and, as Bruce recalls, they said: "We are going to need your house as security . . . and we are going to need another house." Bruce and Beech adjourned to another room for a short discussion. And as a result Autograph got the money, the contract, the desk, a new shareholder and have never looked back. Beech stayed with the company until the beginning of 1998, when he took early retirement due to ill health. Much of the credit for the company's financial stability is due to his role as financial director, but he also kept an active interest in the core function of the company, designing the sound for Five Guys Named Moe, The Sound of Music, 42nd Street and others.

The Midas deal also introduced Autograph to David Solari, then working for the mixing desk manufacturer: Autograph respected him for the care he took of their important order, and he was impressed by the performance of the Meyer loudspeakers. The result was that he was lured across to form Autograph Sales, initially as European distributor for Meyer products and later for products from many other manufacturers as well. Solari ran the sales operation until 1991 when he moved to San Francisco and founded amplifier manufacturer Cyberlogic; the sales operation is now headed by Graham Paddon.

As Cats moved across to New York, another new figure entered the Autograph story: artistic differences between Andrew Lloyd

Webber and Abe Jacob led to Lloyd Webber bringing in Martin Levan, who had been recording engineer for many of the composer's cast albums. Levan was subsequently appointed sound designer for *Little Shop of Horrors* in London and, through him, Autograph discovered the second part of what is now often considered their 'standard' system: Cadac mixing consoles. Cadac were then a manufacturer of studio consoles, which Bruce remembers "seeing at the APRS shows, when we were searching for a new console for the Opera House in the early seventies. They were enormous things!"

Martin Levan had used Cadacs in recording studios, and wanted to use one for *Little Shop*, which was to be produced at the Comedy Theatre - a tiny auditorium, with the seating at the rear of the stalls particularly cramped. Levan and Autograph therefore persuaded Clive Green of Cadac to drop everything and make a one-off special desk for the show, designed to occupy just one row of seats. "Because of its shape, it was nicknamed the Coffin," Bruce recalls. "Cadac designed and built it in just over four weeks from start to finish, including oddly-shaped PCBs, metalwork and screen-printed front panels. It was astounding."

So impressive was Cadac's work that Levan and Autograph turned to them again for the next show, *Starlight Express*, where the demanding sound requirements - 21 radio mics on a cast roller-skating out and around the audience - led Levan to request a desk with computerised routing and fader level recall (though not moving faders). Cadac built the desk and, though the fader level recall never quite worked properly, the rest of it was a triumph and is still running the show 14 years on. After that, it should make an interesting exhibit for technology scholars: "It was specially built for that show, and when *Starlight* is finally over there will be no other use for it, except perhaps at the Theatre Museum." Subsequently, Autograph and Cadac collaborated to design more flexible modular products and the results - the A, B, C, E and F Type consoles, as well as the more recent J Type, are now found on productions of all types across the world.

Starlight also marked a milestone in Autograph's development into a 'grown-up', responsible company, thanks to those 21 radio mics, the chaos that resulted and the company's strenuous efforts to ensure that such chaos wasn't repeated. At the time, only three general frequencies were legally available for theatres to use; *Cats* was already using 10 radio mics, making use of frequencies allocated to television broadcasters, but the low power of the transmitters and shielding of the theatre building meant that the chances of interference were minimal and the subject wasn't discussed in polite company.

For *Starlight*, Autograph started using the new diversity-based systems with directional aerials, which worked well but were still, technically, operating illegally. There was a mild panic when a Royal Gala of the show was organised prior to its opening, but careful liaison and frequency planning between Autograph and the television and radio companies ("who all went wide-eyed when we said 'we're using 21 radios!'" Bruce recalls) meant that problems were avoided.

Until the first night a few days later when suddenly, in the interval, "something very big started transmitting right in the middle of our principal frequency band." The second act of the show was chaotic, with major interference on just about every microphone channel. "I never actually heard the worst of it," Andrew Bruce recalls. "I was outside like a shot, circling the theatre trying to find out what was causing it. I eventually spotted what looked like an ice-cream van . . . with an enormous mast sticking out of the top!" This BBC relay unit had just established a link back to Broadcasting House for an audience reaction broadcast at the end of the show . . .

"After the show, everyone was shell-shocked. Trevor Nunn just looked at me and sighed 'ah well'. But the next day the

newspapers were full of reports that the new Lloyd Webber extravaganza had been ruined by the BBC. As you can imagine, BBC Engineering wasn't happy being cast as villain!"

Bruce ended up appearing on LBC and BBC Radio to relate what had happened and explain the root cause of the problem. In conjunction with the ABTT, these arguments were then presented to an independent committee that had already been set up by the DTI to examine radio spectrum usage. The committee rejected all of the theatre industry's suggestions, refusing to acknowledge that there was even a need for RF spectrum in the theatre. It wasn't until the Society of West End Theatres started lobbying influential theatre people, and Andrew Lloyd Webber in turn began complaining to a neighbour - trade and industry minister Paul Channon - that things started happening.

The result, after endless reports, committees and meetings, established a clear set of frequencies of which theatres could become licensed secondary users, and Autograph helped found the Association of Service Providers which subsequently became the licence-issuing body for those frequencies on behalf of the government. The high quality sound on recent, complex shows owes much to this work, with Autograph themselves pushing up to 54 channels for the recent *Hey Mr Producer!* concert.

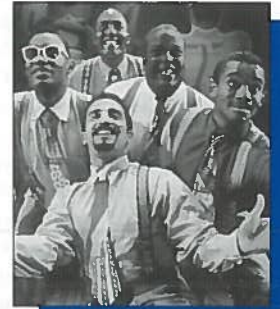
The other important change, post-*Cats*, was that producers realised that there was a team of people in Britain who were just as capable of designing high-quality sound systems, and that using them would save on the cost of trans-Atlantic airline tickets. Andrew Bruce and other members of Autograph have since designed the sound for countless productions, though the one they are most closely associated with is perhaps *Les Miserables*. Autograph's involvement with this show actually predates the now well-known Cameron Mackintosh/RSC production. "Just after we had opened *Evita*, I got a phone call from Alain Boublil, who said he was writing this new musical and wanted to know about using radio mics. He was at CTS studios recording a concept album; I drove there to meet him, then ended up taking him to Heathrow Airport in the Friday night rush hour!" In spite of Boublil's promise to call, Bruce never heard a word.

Until nine months later, when Autograph received a call from a radio mic supplier asking if they would be prepared to drop everything and go to Paris for a client who was having terrible difficulties with their radio mics. The 'client' was the original, arena production of *Les Miserables*. Bruce and his team set off by car, and arrived to find five mixing desks, five different engineers . . . and a cast and director who had become so frustrated with the sound problems that at one point they charged the sound desk en masse, "climbing over the seats, shouting and swearing in French . . ."

In the end, the problems were resolved and Autograph have worked on every production of the show since, though, realising that producers wouldn't always be prepared to pay for an airfare from the UK to the US either, the Broadway production and American tours are looked after by an American associate, and for some of the more recent productions Terry Jardine has acted as sound designer in Bruce's stead. Bruce has also served as sound designer to the same authors' subsequent shows, *Miss Saigon* and *Martin Guerre*.

Which, with a bit of a forward leap, brings us up to the Autograph of today, where

... THE SHOWS



Five Guys Named Moe



Saturday Night Fever



Rent



Madam Butterfly



Hey Mr Producer!



Bruce heads a dynamic team with a huge collective range of experience. There doesn't seem to be any clear recruitment policy: the company doesn't directly employ that many people, preferring to use a talented team of freelancers for the majority of the work and for running shows. But every now and then someone gets sucked into the organisation, and very few then leave. Everyone has their own particular areas of speciality. In sound design, Bruce and Jardine (recently appointed a director of the company) design theatrical-style musicals, Bobby Aitken specialises in the more contemporary shows, though Aitken has also recently received considerable acclaim for his work on arena operas. Matt McKenzie and Nick Gilpin have produced high quality soundtracks for a variety of plays and smaller scale shows, with McKenzie also creating his own mixer control and sound effects replay software and Gilpin running Autograph's all-digital sound-effects studio; Terry Saunders has specialised in arena shows from *Tosca* at Earls Court through to the more recent *Magic Flute*. Each has their own approach to design and equipment, though if there are any hallmarks to an 'Autograph' design they perhaps include a scientific approach to system design, including consideration of the performance space, and set-up, often through the Meyer SIM system.



The designers are backed up by production sound engineers such as Chris Full, Andy Brown and Nick Lidster - responsible for the integrated touring systems now featured on shows such as *Les Miserables*, *Oliver!* and *The Phantom of the Opera* - and service and support engineers such as Tony Robinson, Scott Arnold and Phil Leaver. Then there's a whole administrative team, many of whom also have a sound background - financial controller Duncan Bell was production engineer for shows such as *Miss Saigon*, *Carmen Jones* and *Cats* before moving behind a desk.

It is the cross-fertilisation of knowledge and support that gives Autograph its strength. "For example, if we ever need any thing that is not an off-the-shelf product, we have experienced in-house personnel who can design and manufacture any 'specials' we need," comments Terry Jardine, recalling in particular a musical box created for the musical *She Loves Me*.

The company have also set a very high standard for the equipment they use and the way that equipment is maintained and installed. Bruce recalls realising quite early on "that there's almost as much equipment in a modern show as would be in a small regional TV station, and if it is conceived and installed properly it will be easier to diagnose and fix things: when they, inevitably, do go wrong". In particular, their systems revolve around patch bays, allowing sound crews to work around faulty equipment whilst causing as little disruption as possible to the audience. And their approach goes beyond just the technical aspects. "We try to think ahead," Bruce explains. "For example, measuring the pit and planning the orchestra because we now know how much space the various musicians need." He describes the job as "equal measures of psychology as well as art and science," citing the example of the "rock and roll star who still has a mic on a stand because of the comfort it offers".

Much of this attitude stems from the fact that Bruce is married to actress and singer Siobhan McCarthy, soon to lead the cast of the new Abba musical *Mama Mia*. He is therefore able to hear and appreciate the performer's view on modern sound systems as well as the sound designer's! As a result, he is always keen to get to know the cast as early as possible, to the extent of flying out to Chicago just to be there for the first hour of rehearsals of a new production: "If your first appearance is any time after that critical introductory session, then you're just some kind of technical person and you have a lot of catching up to do with the cast." Autograph also take a great deal of care selecting their sound crews, especially the radio mic runners - "the first line of contact with the cast."

During their 25th year, Autograph have been looking to the future as well as to the past. The technology continues to develop, and the company continues to be at the forefront, constantly experimenting. Bruce's main area of concern at the moment is reducing the size of the mixing desks and the number of revenue-earning seats they occupy, and the company have already been experimenting with smaller, digitally-controlled systems, such as beta-testing the *Soundcraft Broadway* on *Martin Guerre* in London. Here the advantage of the combined designer-supplier experiment is clear: the design was based around a Cadac system with the Broadway running alongside it until everyone was happy with it. This meant supplying two desks, one installed fully in the auditorium and the other with its racks under the stage, two sets of cabling (including fibre optic cabling), with detailed plans for switching between the two desks quickly. In the end, the Broadway was too immature and the Cadac stayed for the run of the show, but that won't always be the case.

Autograph is also pondering its own future: whether to stay at its current size, to expand, to enter new markets. Though the company is already dabbling in new areas, including consultancy on sound systems for new theatres, it seems likely to concentrate on what it knows best, avoiding the over-expansion that killed off the original version of Theatre Projects. Bruce looks around his company's headquarters, which they moved to in 1984 from a much-loved series of Victorian stables in Camden when those were eventually claimed by property developers, and proclaims it to be "an ideal size - right now I couldn't conceive wanting to be bigger than this." That size is now comfortably supported by musicals from both Britain and at the moment from the US, with Autograph operating quite happily as both a service and hire operation. The company learnt the American language from Abe Jacob, and passed it back to a generation of American-based designers - Jonathan Deans, Mark Menard, Steve Kennedy and Tony Meola - so now there is a global sound language. But Bruce is never one to close off opportunities, and after a pause adds that he "knows we may have to expand as new markets open up for us. Twenty-five years is certainly a watershed," comments Bruce. "And this year has also been one of our busiest ever. I want it to continue; I feel we still have a lot to give to the theatre, and I'd like to have something tangible to give to my children."

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Designers on Colour




 Totalisant 60 années de métier à eux deux, Christian Brean et Jacques Rouveyrolis, ces deux grands complices, ont brouillé à travers le monde pour apporter leur touché de la lumière à la Française. Ils ont ainsi éclairé des Opéras, des Ballets, des scènes de Music-Hall, des Evènements, du Sport-Spectacle, des pièces de Théâtre. Le monde de la Télévision comme celui de la Vidéo ne leur sont pas étrangers non plus. Au-delà des grandes productions pour lesquelles ils sont si souvent appelés, ils aiment apporter leur expérience à des spectacles peut être moins prestigieux mais tout aussi intéressants.



 Gianni Mantovanini nato a Milano, dal 1963 al "Teatro alla Scala". Nel 1975 firmo per la prima volta le luci di uno spettacolo messo in scena nella allora "Piccola Scala", dove dal '75 all'80 ho svolto il ruolo di Lighting Designer. Nel 1981 passo a collaborare alle produzioni del "Teatro alla Scala", affiancando il lighting designer e mio maestro Vanio Vanni, assumendone il ruolo nel 1991.



 Max Keller hat sich in Deutschland stark für den Beruf des Lichtgestalters eingesetzt. Mit seiner Bildersprache, die sich vor allem in e i n e r Kombination

von Lichtquellen mit unterschiedlichen Farbtemperaturen vermittelt, prägt er die Aussagekraft des dramaturgischen Lichts. Er entwickelte seine Lichtgestaltungen für das Schauspiel an den Münchner Kammerspielen, aber auch für Opern an anderen Bühnen, vor allem in Europa. Als Autor des einzigen deutschsprachigen Fachbuches über Lichtgestaltung im Theater trug er viel dafür bei, dass die Arbeit mit Licht stärker als künstlerisches Gestaltungsmittel akzeptiert wurde.



Widely regarded as the dean of lighting designers for both the West End and Broadway, Richard Pilbrow also heads Theatre Projects Consultants. His second book "Stage Lighting Design - The Art, The Craft, The Life" was named LDI Product of the Year. "When I began lighting only about fifty shades of Cinemoid were available. I often used them two and three to a frame seeking new possibilities. Then I discovered Rosco and first brought this wonderful range to Britain. Now the possibilities are almost limitless. Colour brings life, texture and vibrancy to the stage. I love it."



Hans-Åke Sjöquist has worked as a lighting designer in his native Sweden for almost 30 years. From 1978-79 he studied in the USA at the Yale



University School of Drama. He worked at the Royal Opera House in

Stockholm for six years as Resident Lighting Designer from 1980 to 1986, lighting over 20 major productions during this period.

For the past 13 years he has run his own lighting consultant company, Candela Design Limited, designing numerous drama, musical and opera productions in Scandinavia and throughout Europe. Mr Sjöquist also designs architectural lighting for indoor and outdoor environments and has just lit two major permanent exhibitions at "The Museum of Natural History" in Stockholm, introducing the largest fibre optics installations ever made in Scandinavia.

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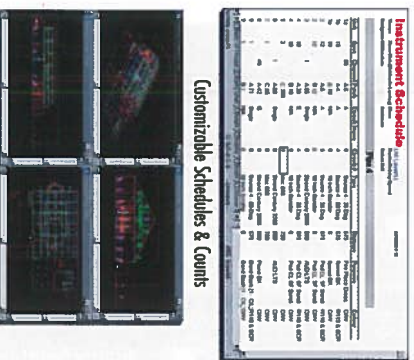
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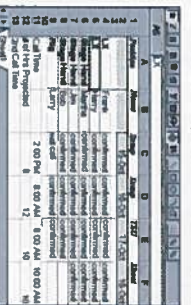
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John Watt

Second Take...

John Watt's view from beside the camera

It's January 2nd as I write, still hanging on to that self-satisfied glow that comes from notes on the bottom of Christmas cards saying, "still enjoying your column that tells it the way it is". My conceit is not for that compliment, nice though it is, but that I've fooled my readers into thinking that they read the whole story, when, in fact, I have disguised companies and individuals who, unlike most lighting designers, can't take a joke. When the phone finally stops ringing, signifying my retirement, there will be a short gap before my editor decides my comments are no longer valid, during which time the frank exposés of the tabloids combined will fade into insignificance. I could name the executive who walked in to our control room on the last show of the series before Christmas and by way of seasonal greeting said to the assembled team "I produce shows in 17 countries and none of them produces such crappy pictures as these." This was before he had seen the results! No, I'm not offering a prize.

NO DOUBT you spent Christmas day indulging in many things, but not television - even though we are heading towards 200 quality channels, or at least that's what it said in my Christmas cracker. I hope on Christmas morning you didn't seek education, information or entertainment, as it used to say over the door at Broadcasting House. Not from the Beeb anyway. BBC One broadcast a mix of cartoons and Teletubbies from 6am till 10am, whilst BBC Two broadcast two very old films. On the 'other side', GMTV appeared to be up and running live as usual: how they manage to sparkle every day, let alone Christmas day, I can't imagine, but they do and the girls are intelligent, pretty and don't have rings in strange places.

SAD I KNOW, but I steeled myself for a look at the Big Breakfast in the interests of impartiality. Normally I avoid hitting button four before nine in the morning, because it takes time I haven't got having to rehang the door on the cat flap where dear old tiddles has headed for the hills at about 60mph. One minute of that visual cacophony can sour our milk and I swear the plaque presented to me by the Society of TV Lighting Directors turns itself to the wall. I assume they have a deal with B&Q to take all their unsellable paint, which is then applied in a random manner by a colour-blind vandal. No, that can't be right, because 'random' would be more tasteful.

ANYWAY, FAIR dos, as they're reputed to say up north; they were there, live by the look of it and doing their thing. Their 'thing', of course, is to insult their viewers by serving up a brand of television unmatched by others, though some come close, with no production values.

Since this is a lighting column, suffice to say that lighting as I know it just doesn't exist. To borrow Eric and Ernie's line, all the light is there, but not necessarily in the right places. Channel Five had a tape machine running somewhere in Stephen Street. I turned off feeling the will to live was slipping away. At 3pm we always miss the Queen's speech without fail, but having been less than kind about a previous attempt at lighting the lady, I thought a quick look was in order and I must say she had been given the thoughtful treatment she deserves; no credits, of course, so unless you know of a lighting designer suffering from a Corgi bite we'll never know.

BOXING DAY MORNING I tried again. Still one man and a dog driving the VT machines but, and it's a big but, there was Bette Davis directed by William Wyler in 'The Letter'. This was in glorious black and white of course, and acted as a timely reminder for me what a powerful element sensitive and skilful lighting can be. The depth of shadow, the range of tones and the painstakingly dressed backgrounds - does this have to be a thing of the past?

BUT IT'S 1999, so what's on the horizon. I've won a prize which I'm going to collect. You may recall my sad attempts to see ETC's Source Four Zoom at PLASA last year which failed - in part due to the shrinking nature of yours truly and not being able to break in to the 'in crowd' occupying the stand. Believe in coincidences if you will, but my name came out of a nationwide draw to receive a personal demonstration of said luminaire by none other than Fred Foster himself, the boss. Watch this space.

WHEN I USED to work with bands - proper ones with a brass and woodwind section, not electronic cricket bats - I was always in awe of the subbing system where the boys were able to send along a sub' for the day when they had a previous booking. I never understood how it was acceptable to the MD or how they had the skill to read the dots and come up with the goods as though they'd played with the band for months. Little did I think that this same system would ever operate in lighting, but it does with varying degrees of success. But we don't have any dots; there just isn't a system for 'writing' lighting in spite of computer systems, which sometimes help but can't transpose from the Greenwood to the Apothecaries Hall at Scunthorpe.

IN THE last few weeks I've subbed for three lighting designers and it makes for a revealing way of life on both sides. Most important, if you need someone to sub' for you, is to make sure they are not out to swipe the job - after all, the director has heard all your jokes (twice at least) and has given up all hope of you making episode 128 look any better than the last 127, so a change might not seem a bad idea. On the other hand, it's no good using someone so bad that he

will make even you look good as you'll certainly get the blame - if anyone notices, that is. I recently subbed on a job for Brian Turner, with him handing over a well-documented show complete with all those little wrinkles that make all the difference. I think the join between us was invisible, although I suspect I did something he had never got round to and read the script! It was a cookery programme and on the front page where the crew are listed, starting with the producer at the top, I noticed I was near the bottom below the washer up; be nice to those you pass on the way up, etc.

A FEW DAYS later I subbed for Dave Evans on a kid's rock and roll show. He rigged it, thank God, and I spent a lot of time wondering what I was doing there. Thirdly came the oddball of the year, a show which travels, sometimes to various studios, sometimes to other locations. A lighting design was established at the beginning of the run, but it is now farmed out to whoever lives near enough to not charge for a hotel! You get issued with the original plot, but in another studio with a different grid and rig it's of limited help. Also the thing has evolved over the weeks so the production manager gives you notes! The only certainty is that you end up with a result that isn't what the first LD wanted, is not what the producer wanted and is not what he got last week. Most certainly it's not what I would have done given a blank sheet.

I'VE BEEN at TV Centre again, tenacious of me because they're doing their damndest to keep me out. Now it has to be said that Paul, who looks after visiting productions, tries very hard to smooth all our lives and mine in particular, in case he gets mentioned, but BBC reception are especially trained and, it seems, have become critics too. I arrive, having evaded the pigeons in Wood Lane, and announce in my best jolly happy manner "I'm John Watt, freelance, working on the XYZ show in Studio 3". The receptionist consults many regulation clipboards and tells me I'm not listed and that the XYZ show isn't in today. She will need validation, authority and a blood sample, before she can allow me to enter. Eventually an office provides her with the number of the production company I'm working for. To my increasing unease she speaks to a lady who has the power of life and death over me and who, until now, I seem to be having a reasonable relationship with (of the business type, more's the pity). "I have a Mr Watt here. He says he's a lighting director, but he doesn't seem to know what he's doing." Nothing new there.

"I have a Mr Watt here. He says he's a lighting director, but he doesn't seem to know what he's doing." Nothing new there."

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(What's the story) Visual Glory

When you open a new venue in what is undoubtedly the home of some of the UK's top clubs, you've got to add something extra. Ross Brown visits Evolution in Leeds and finds he's lacking a revolving head

I've never been a person to hold unalterable opinions. If opinions are unalterable then there seems little point in holding them, which has something of a Wildean ring about it, don't you think? That's not to say that one should blindly change one's mind on important issues simply to agree with present company - rather that one should always be prepared to alter an opinion when the evidence points to a different conclusion.

Regular readers (which, I am sure, includes you all) may remember a piece in *Lighting & Sound International* (March '98) concerning the latest jewel in the First Leisure crown, Club Barcelona which, for all the conglomerate's insistence to the contrary, was to be found on a retail park on the edge of the M62 in that most salubrious part of West Yorkshire - Batley. Commenting on the interior and the technology employed in the venue, I concluded: nice venue, shame about the location. Who, I argued, would wish to spend their evenings dancing away in what was little more than a glorified shopping mall? The answer, according to local club-goers, is 'hardly anyone', and the words 'bowling alley' are already being whispered in certain quarters.

Now, far be it from me to immediately label a venue a failure simply because it's located on a retail park but, hell, sometimes the cap just fits.



NIGHTCLUB

All the roads are winding . . .

So, driving up to one of the 1,001 retail parks within the Leeds city limits these days didn't exactly fill me with excitement. Mainly a front for the latest multiplex to be spawned by the Warner Bros empire, the Cardigan Fields leisure park - the name possibly a flashback to the site's previous incarnation as a warehouse for Burton's - can be found on Kirkstall Road, one of the busiest roads in and out of Leeds and slap, bang among the City's student population. So far, so good.

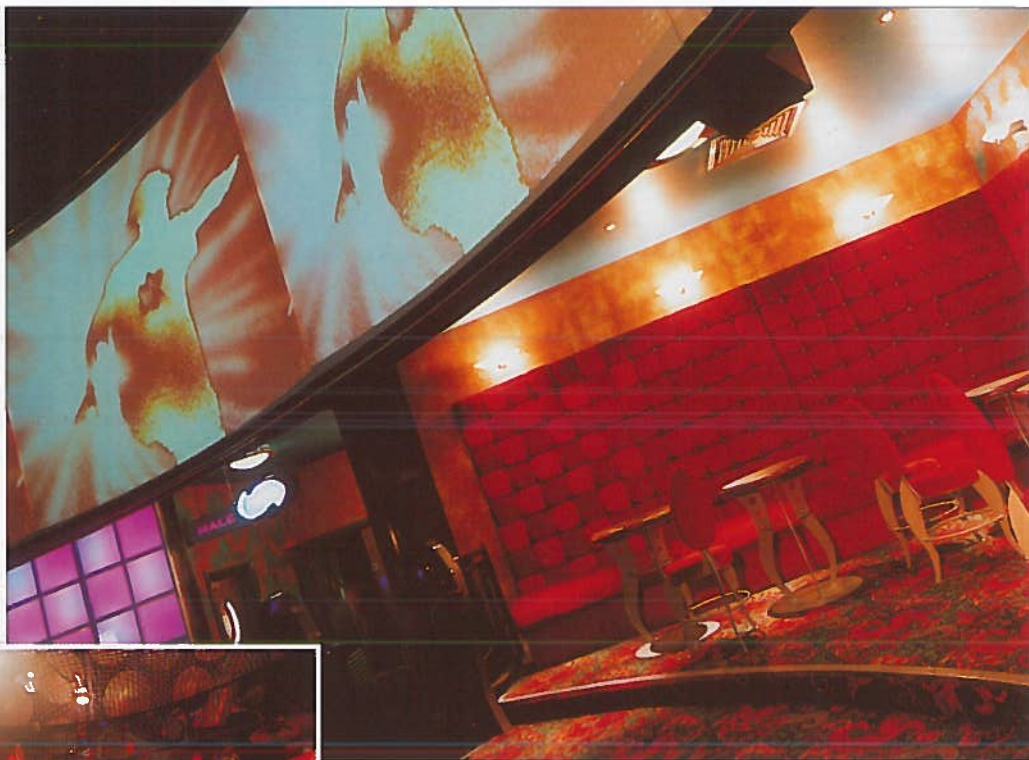
Among the usual array of fast food establishments and pubs (including a Tom Cobleigh named 'Aire of the dog' which tickled me, although only mildly), was my destination of this cold and wet morning - Allied Domecq's Evolution. And something special was on the agenda.

Leeds isn't the first Evolution in Allied Domecq's latest chain - that honour belongs to Cardiff, but for a variety of reasons number two is being perceived as the flagship over and above its Welsh forerunner. First, there's the location. Leeds is the City of the moment (Brown waits a minute for that one to sink in with all the Southerners): without doubt it has some of the country's best bars and clubs - not to mention theatres; in Majestyk it has the UK's number one club and because of the popularity of its two universities it has an eager and abundant audience. Ripe pickings for the right venue.

It is likely that First Leisure built Club Barcelona for the same reasons. Unfortunately, Club Barcelona is located in Batley - seven and a half miles from Leeds City Centre - and it's not the kind of place one tends to pass very often (unless you're shopping at Ikea). Cardigan Fields is a mile and a half from City Square and anybody entering Leeds from the well-heeled suburbs of Yeadon, Guiseley and Ilkley has to pass straight past its doors either on their way into the City or on their way home. Add these 'monied' punters to the gargantuan student population sitting on the doorstep and it's likely that most operators could make a success of such a venue.

But there is a second, much more expensive reason why Evolution number two was a more exciting prospect than number one: the Wonderwall. Resist the temptation to sing the ditty by Mr Gallagher - this Wonderwall is about vision - 360° of it.

Located in Evolution's second room (snappily named Evolution Two) the Wonderwall is a six-figure investment by Allied Domecq to steal a lead over the local competition. 16 Sony VPL-S6000 LCD projectors cast their images onto a screen each to envelop the room in a myriad combination of video, animation, lighting effects and, to be honest, whatever the operator can throw into the system.



controlled by a single hand-held unit, or would be, had the company that manufactured the unit not had a solder expenditure measured in pennies (soldering irons were to be brandished soon after I left).

Images can be stretched across eight screens at a time, courtesy of some nifty software, or different projections can be cast on alternate screens. One 360° image is a possibility, but as senior VJ Andrew Payne rightly points out: "We thought about 360°, but the human eye can only really handle 180° at any one time." The little matter of a (mooted) extra £50,000 for the software and hardware solutions to perform this minor visual miracle may have played its part in this decision as well.

With an 'effect' (a term that doesn't really do the Wonderwall its due justice) like this, you don't really need lights - but, naturally enough, Evolution One has a fair set of these as well. From the most to the least, the room has 32 SGM Colourlab 250s, eight Clay Paky Miniscan HPEs, eight Apollo Vortexes and four Clay Paky Stage Zoom 1200s (the first such installation in the UK). Throw in eight Par 36 pinspots for lighting the centrally-located DJ/VJ booth, a Pulsar 9x20A dimming Datapak and two JEM ZR22 smoke machines and you've got enough light to cover a personal appearance by Jean-Michel Jarre.

But I don't know how . . .

I'm sure there's something I've missed, and that's a part of the problem. In its race to create a visual attraction worthy of Mr Jarre, Evolution appears to have forgotten some basic rules. And it comes down to the sound. True, the audio equipment is nothing unusual (although seeing a Cloud mixer in the set-up was a pleasant surprise - but I'd recommend shortening the faders Mr Cloud), it's at the top end of what you'd expect from a club in this league - but the layout is appalling.

Being a generous lad, happy to spread around my good fortune, I'd invited a friend of mine, a local DJ from back home to join me for a look around Evolution. Working the hours he does, it's rare that he gets a chance to visit the local clubs and I though the break would do him some good after Christmas, bless his little cotton socks. Both he and I expressed the same sentiments about the lay-out in the car on the way home: "Great equipment but it'd be a dog to use."

In a booth measuring around 10ft (3m) square, is all the lighting control equipment listed above and the following essential selection of audio technology: two Technics SL-1210s, one each of a Denon DN-2500F twin CD player (I will continue to extoll the virtues of this fine machine until my printed praise is rewarded), the aforementioned Cloud CXM 8-channel modular mixer (yes, I know that's bribery), Denon DRM cassette deck (but I don't care), a Sony MiniDisc recorder, and two IK FG8 DJ monitors and amp. The word 'cramped' comes to mind. And it doesn't help that the trays for the Denon DN-2500F are placed more than an arm's stretch from the head unit. Sorry to sound rude to the nice people at CTS who performed the install, and I don't know whether any of you have ever worked as DJs but, as tempting as the set-up is, I wouldn't like to work in such cramped conditions - especially slap-bang in the middle of the dancefloor. And I've worked in some really crap venues too. Really crap.

"The name for this concept (isn't there always one) is, according to the room's VJ Andy Payne, 'organic evolution' and the analogy has been stretched as far as it will go."

The sheer quantity of equipment at the operator's fingertips ensures that no two nights watching the Wonderwall need ever be the same. Input into the system comes from eight satellite receivers (as well as terrestrial aerial), two Sony Digital Video VCRs, two Panasonic HS 1000 VCRs, two Panasonic WV-CS4000 pan/tilt cameras (one in both Evolution rooms), a multi-screen computer image generator and a Kaleidolight graphics computer (with touch-screen operation).

Naturally enough, this amount of equipment requires some serious control units and this little lot runs through two Elca 16 video matrix units, a

The 'business' end of the sound is provided via an Allen & Heath DR60 digital processor and a Cloud compressor/limiter into a total of five amps (two each of Cloud's VTX 1500 amps and JBL's MPX 1200 amps and a single Cloud VTX 750) and out through a combination of six IK 1x12 JBL cabinets and four each of IK Horn cabinets, IK 1x12 speaker cabinets and IK 2x18 bass cabinets. The speakers are located at the four corners of the dancefloor encased in enclosures that can only be described as brown rocks with mesh on the front.

One corner of the remainder of the room has a seating area with small red pillows around the walls (there is no other way to describe them) with a small bar at either end of the space. If Evolution Two and the Wonderwall was the raison d'être for my visit to this part of Leeds, then this would be an extremely short article - as it is, Evolution Two is the smaller of the two rooms and Evolution One has a story, and a concept all of its own.

The lights are blinding...

Unlike the underground dance played in Evolution Two, Evolution One takes its music policy from a more mainstream agenda and the differences in design amplify this. Whereas the design in Evolution Two is much more low-key (who needs flash with a 360° video screen, I guess), Evolution One is designed by Roger Dean on acid - in reality

lighting rig dominates the cavity above the dancefloor, a masterpiece in MDF that would amaze even Handy Andy, adorned with a myriad of intelligent and conventional (dumb?) lighting.

Including the lighting around the balcony, under, on and around the rig, there's a grand total of 113 different lights: comprising eight SGM Galileo IVs, four Clay Paky Stage Zoom 1200s, 16 SGM Victory2 250s, 16 SGM Colourlab 250s, 45 Pulsar Par 56s, 12 Apollo Equinoxes, eight Pulsar Jumbo strobes, four Dichroic uplighters (for the dance podiums) and assorted other neons and fluorescent lighting around the space. In the background there's a Pulsar 18x5A switching Datapak, a strobe interface and another ShowCAD control computer with DMX and MIDI cards and an Evolution MIDI keyboard. In short, Evolution One is a bright place - if you want it to be.

It's a lot of light for one room, however large it is, and Andrew Payne admits that his job isn't necessarily an easy one because of it: "It is often a case of using only one part of the lighting at a time, to ensure that the room isn't too bright - but I can hardly complain at having the variety of lighting effects I have available," he says.

The new Clay Paky Stage Zooms are popular with Payne ("I love the movement") but he offers a word of warning for users. "There's only two steel



Newcastle upon Tyne's Blueprint. Cast your mind back to all those Yes album covers of the seventies, add a dash of human anatomy and the concept becomes a bit clearer. The name for this concept (isn't there always one) is, according to the room's VJ Andy Payne, 'organic evolution' and the analogy has been stretched as far as it will go. Impressionist 'cells' decorate the walls, the support columns are decorated to depict the spine (and lit by a combination of neon elements) and all over sinew, nerve cells and various other internal 'bits' can be seen - if you squint hard enough and use the required amount of imagination.

Seeing the room, as I did, empty (barring myself, my DJ mate and the VJ) the proportions are impressive. The main dancefloor and seating area are overlooked by a mezzanine level with bar, further seating and a food area. An impressive

gobos fitted, the rest are glass and I have a suspicion this may be a problem with the design," he says. This isn't just a hunch, one of the gobos actually dropped out one night onto the dancefloor - though, luckily, no one was hurt. "Clay Paky were great," he's quick to add. "They were down here straight away when we told them. I've always found them extremely helpful, wherever I've worked."

Above the DJ booth is what can only be described as a huge plastic satellite dish-like structure, a medium for the projection of light that Payne is quick to show-off. As well as directing video onto the 'dish', Evolution One's little bit of wizardry comes courtesy of a modern version of that old classic the liquid wheel. Take a four-colour split dichroic wheel, a bundle of fibre optics which are jumbled around at the point of exit and

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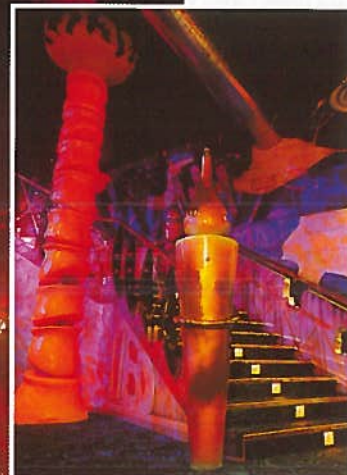
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They could do far, far worse than spend their hard-earned dosh or student loan at Evolution. As much as I am loathe to admit it, maybe this is one large corporate über club that's got (nearly) everything right.

you have the kind of hallucinogenic experience that used to require a visit to Timothy Leary's house. Added to this, there are yet more video projectors, this time only three Sony VPL S600 LCDs and a graphics/image generating computer.

Again, like it's smaller brother down the hall, Evolution One has a fairly standard set-up on the audio side: the ever-faithful, ever-so good and increasingly ubiquitous Denon DN-2500F takes centre stage - but again, the layout calls into question the DJ'ing past of the installers. Added to this are a pair of 1210s, natch, and a Denon DRM cassette deck, all running into a Cloud CXM 8-channel modular mixer.


The signal is fed through an Allen & Heath DR66 digital processor and a Cloud limiter, into three JBL MPX 1200 amps, two Cloud VTX 1500 amps and four Cloud VTX 750 amps, and out through six IK 2x18 bins, six IK 1x12 mid cabs, six IK 2" horn boxes, two IK 1x12 speakers (for the balcony dancefloor), six IK FG8 speakers (background sound), eight BG5 speakers for reception and two IK FG8 DJ monitors.

And after all . . .

It's easy to see where £5.5m of Allied Domecq's money has gone in Evolution, not only in the behemoth that is the Wonderwall, but in the veritable cornucopia of lights that

illuminate the two rooms, the extravagant décor (although I am slightly concerned that a hand-dryer in each toilet may be started by a combination of wall-banging - a popular pursuit amongst management I was told - or passing one's hand in front of the various detectors placed around the building) and the plushness of the seating.

Early indications are promising: the Monday night student event attracted 600 straight after Christmas (before the vast majority will have returned from mummy's bosom to the reality of lectures) and in the face of severe competition from the 'City Centre' venues. Evolution is beginning to cultivate a dedicated audience for its swing, soul and R'n'B nights, as well as for its Thursday night 80s party - Choose Life, presumably picking up punters who sorely miss the Town and Country Club's 'Top Banana' event which unfathomably ended some time ago.

Unlike Club Barcelona, Evolution has location on its side. It doesn't need to rely on taxis and Cola-drinking drivers for an audience; thousands will be staggering past its doors every Saturday night after availing themselves of the hospitality of Leeds' finest. They could do far, far worse than spend their hard-earned dosh or student loan at Evolution. As much as I am loathe to admit it, maybe this is one large corporate über club that's got (nearly) everything right. 



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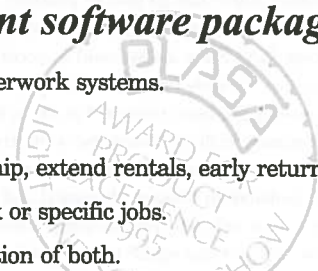


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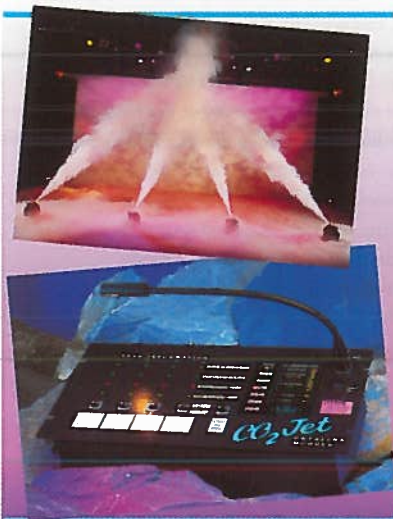
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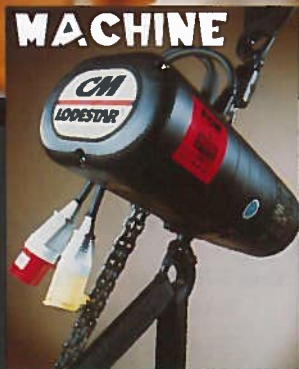
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Judging from the corporate moves already announced within a spit of the New Year, 1999 is likely to continue in much the same vein as last year, with the en-tech industry re-shaping itself to face the rigours of an uncertain future.

However, the curious thing is that the modus of these latest moves seem to provide a reverse thrust to last year's corporate dynamic which had more to do with banding together for comfort and

safety, rather than cutting adrift in the teeth of a gale. Clearly two opposing logics are at work here.

WHILE THE ungluing had started last year with Vari-Lite's decision to divest itself of Irideon, with the avowed aim of concentrating on its core business, the announcement that Brilliant Stages had also been sold, this time to Tomcat (see page 6), was quite a surprise. While this may simply be a matter of returning some value to the shareholders in the light of a dismal share performance in Vari-Lite's first year on the NASDAQ, one can't imagine either that Brilliant was exactly a drain on corporate resources. It also fitted nicely with the stated one-stop-shop concept of

VL Production Services. But then, despite the distractions and huge costs of the patent litigation over the last few years, this can hardly have been a fire sale either. I leave you to figure it out.

THERE IS NO DOUBT that Brilliant Stages will make a great bedfellow for Tomcat and the logic of that cementing goes without saying. Fortunately, Charlie and Ann Kail are philosophical about the move and seem to be taking it all in their stride, because this would have been a hard deal to make if Charlie had been opposed to it.

THE OTHER NEWS, involving Celco's de-merger from Helvar-Electrosonic (see page 6), is slightly easier to understand. Celco never was much of a fit either in terms of the individuals who retained their independent spirit throughout, or product-wise. Though I remember the days when the old Electrosonic used to make custom lighting desks for the likes of King Crimson and others, they had already moved light years away from the rock and roll and concert market prior to buying Celco eight years ago. In this case, Keith Dale, who was never comfortable in the corporate environment, was given the task himself of finding a buyer, which clearly raised the possibility of a management buy-out. Fundamentally, that seems to be what's happening here with Lightstorm in the role of white knight.

IN ANY EVENT, it turns the clock back in terms of the individuals involved, with Celco's Colin Whittaker and Lightstorm's Rod Bartholomeusz and Mike Fisher all being ex-Cerebrum Lighting, which was Celco's exclusive distributor for many years. Again, the fit is obvious and it must have felt like a family reunion at the first get-together at Storm's offices.

WHAT ALL of this does serve to emphasise, as I have said many times before and in particular reference to last year's PRG expansion, is that ours is still a people business. Nevertheless, it is therefore as well for everyone to realise that corporates can sell their acquisitions just as quickly as they acquired them in the first place, and once independence is lost you can never be sure who you may find in bed with you the following morning: the only brake being the disposition of those most affected. Mind you, similar pressures apply under the scrutiny of the notoriously fickle stock-market, as Vari-Lite's Rusty Brutsché must be acutely aware.

L+S'S FOOTNOTE in the back of the ultimate issue last year, and especially the Roll of Honour that listed all those we lost during that year due to that lottery of human fragility,

sponsored by Reaper & Grim Inc., was a sharp reminder of how times move on.

WHILE THERE have always been unexpected tragedies, this was the first time that I could remember the number reaching such a total that it warranted a list. Apart from the matter of one's own mortality, this also got me thinking about the business that we are in and its people as a freeze-frame in the Life and Times of Entertainment Technology. The original pioneers from theatre and film like Fred Bentham and the late Freddie Young are, or were already, counting the encores in terms of the three-score-and-ten. However, what struck me most forcibly was that the rock and roll generation, which started to turn it all on its face in the sixties and invented touring and disco, and thus created the industry as it is today, are now all circa 50 years old!

I AM SURE this was never supposed to happen - we were all expected to have 'proper jobs' by now - but there it is, for better or worse most of us are still at it. Of course, what happened was that gradually it was found that what we were doing had, in itself, acquired both the status and the attendant responsibilities of 'a proper job'. It crept up on us, the proper job business, but in the end it sucked us all in.

SO, NOW that those of the r-n-r generation are truly Jurassic and facing eventual extinction we can expect that sad list to grow year on year. Now that's a cheerful thought to start the last 12 months of this millennium with.

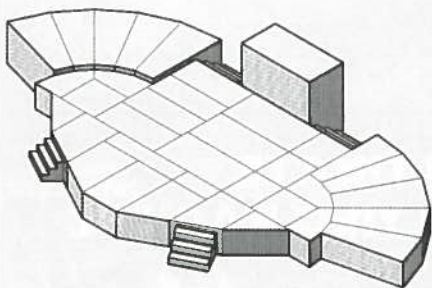
THE OTHER LIST, that of those who were sidelined last year, continued to grow ever bigger also, but many of those will no doubt re-invent themselves and come back to stimulate us once again. I certainly hope so, because some of the names were among the most inventive people in our industry. These may be changing times, but talent and ability are still a prerequisite. We must not get so corporate that there is no place for radical thinking, creative individuals anymore.

JUST WHEN I was thinking that The Bellagio was the coyote's cajones, I read in the press of the spectacular opening of the Royal Towers of Atlantis on Paradise Island in the Bahamas which took place in December. Owned by Sol Kerzner, famed for his Sun City in South Africa, the cost of the launch party was put at £5million of which no less than £2m was apparently spent on the lighting.

JUST BEFORE Christmas I was asked by a contemporary of ours for a Christmas wish list, but what with LDI and one thing and another I never got around to it. Now I realise mine would have been very short: 'Please Santa, just send me a couple of gigs like that one'!

"The curious thing is that the modus of these latest moves seem to provide a reverse thrust to last year's corporate dynamic which had more to do with banding together for comfort and safety, rather than cutting adrift in the teeth of a gale."

Alistage



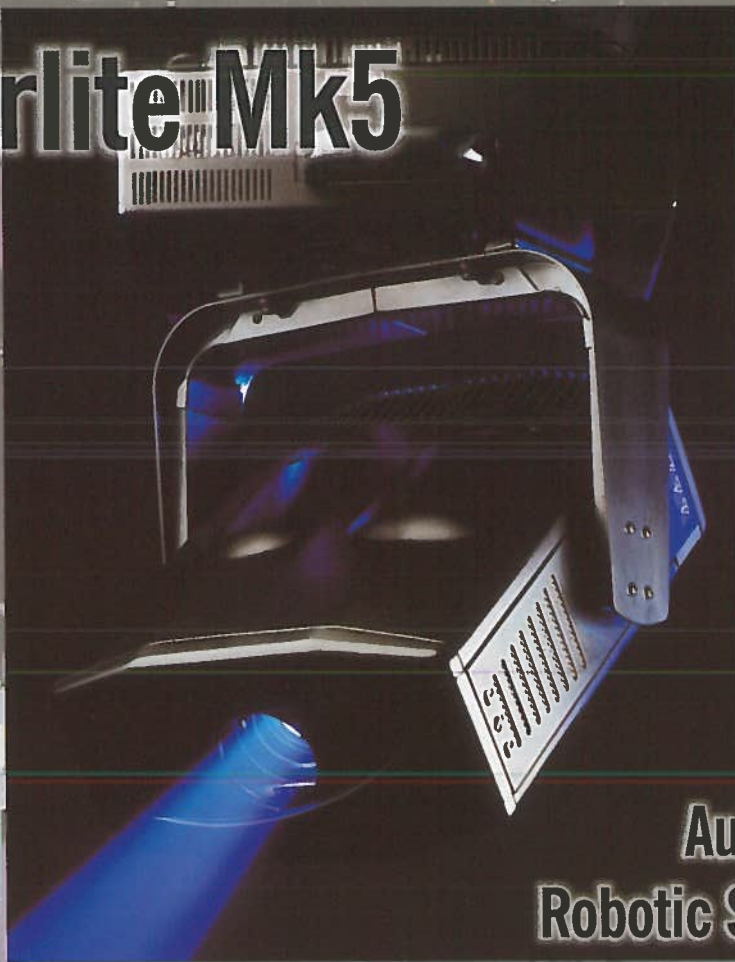
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World's Apart



M People's video director - Blue Leach

It's just two years since M People last appeared in these pages. In that time they've not only changed their management, but also changed lighting designer twice - from Woodroffe to Bennett and now Frank Shields. And as for PA, well you wish they'd make their bloody minds up: dBb 402, Turbo' Flashlight, Clair Brothers S4s and now V-dosc. Thankfully, after a lengthy period of change, the one thing that has kept constant is their music. Admittedly, the amount they've written and recorded in the interim has been fairly limited, but then Heather Small has been busy learning a new trade - motherhood. Still, you only have to look at The Verve's gestation period between recordings to find an excuse for M People. What's interesting is that the little they have produced is on a par with that album full of catchy dance tunes that made them the success they are. Simply more of the same and as good - if not better - unlike a certain band of similar stature who hail from Newcastle. Rapid success is obviously not an easy act to follow.

Lighting, Set & Video

Despite the convoluted route to Frank Shields' installation as LD, his position has some logic behind it. His place with the band is not so much disillusionment with those LDs who've gone before, but more a progression. For Shields this is his third outing with the band. In a tale that will bring 3cheer to many a moving light programmer with aspirations to advance to LD, Shields has been on the road just six years, and by dint of his hard work and application has now been given the big cherry. How did he do? Well, pretty damn good actually. Shields has operated for lots of bands over his six years - Oasis being one of them, which is why their LD Mikey Howard stands alongside him for this one. "It's nice to return the favour," said Shields, "and after working together so much, the communication between us works really well."

Howard operates Vari*Lites, Clay Paky Stage Scans and a small collection of Pars and Mini Moles from an Avolites Diamond III, while Shields concentrates on a rig filled with LSD Icons and Washlights run from his Icon Controller. It's a classic LSD arena rig: big box grid full of lamps, almost 100 in the Icon system and three dozen or so VL5s (all painted gold, thank you Mick Jagger) making it look not unlike a TV studio ceiling. Graham Wright is the set designer who's given Shields something to work with. A simple tiered full-width stage riser has lit panels across the downstage edge, but is otherwise plain grey fronted. Built largely by Perry/Whittacker, it's a combination of custom parts plus stock stage deck from SSE. The drapes, all from Acre Jean, are what decide the look: lush gold velour tabs to open, a pair of diaphanous drape tubes to flank the riser upstage, and several combinations across the back that each warrant special mention. Both back drapes are used for cyc work, Shields using a pair of the new City Color floods.

The most striking drape, in its own right, was a combination of Sharks Tooth which, as carpenter Paddy Fitzpatrick explained: "Has just been tacked to a Bolton behind it. The surface has then just been sponged with gold paint." The result is sumptuous - it looks like inch pile velvet yet has half the weight. The other is a straight-forward gauze, equally striking because it's used to mask the LED screen behind it. "I'm not sure about it," said



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"Part of the reason people come to a live show is to hear and feel that energy. If you just give them the sound they can hear on their own hi-fi at home then they're not getting that special experience"

production manager Chris Reynolds (who has every reason to comment as he also operates the Arkaos video effects machine) but offer two reasons why it's great. By Shields' judicious use of gobo work across the video image, or by framing around it, the screen is subsumed into the set. Forget building a screen into set pieces or hiding it; with this technique it was often difficult to perceive whether what we were seeing was back projected film, video screen, or lighting effect. This illusion was assisted by the other virtue of the gauze, the Moiré interference patterns it produced. By careful lighting, this could be exaggerated or diminished - either way it helped blur the edges between the competing technologies of lighting and video.

The video package is supplied by PSL, the LED screen being the ProQuip Gearhouse-developed system. "It's a great system," explained Chris Mounsor of PSL. "The panels (with a screen area 20 feet by 12) are fed image signal via fibre optic, daisy-chained across, as is the power."

The screen looked fine though when the gauze was in front, the individual LED tiles were clearly discernible, but I suspect this is caused by the visual interference of two lined mediums overlapping. A three-camera PPU from PSL (set designer Wright operating the FOH rostrum camera) Blue Leach produces a varied palette of live image, VT direct-accessed from laser disc, and the aforementioned Arkaos system. Although Jesse Djeep of Arkaos programmed the digital effects, training up Reynolds to operate it was apparently a simple affair. "Yes, he did the programming at rehearsals," explained Reynolds, "and then it just needed a little time for me to be taught how to use it. The only thing you really have to remember is it's MIDI control, so there's a slight delay between key-strokes and something happening. It does glitch occasionally, but it's fun, easy to operate, and it works." More importantly, as Mounsor pointed out, "by showing people how to operate it, and the fact that that's easy to do, they've taken the mystery out of DVE work."

Sound

This was only sound engineer Ray Furze's sixth show with the V-dosc and by his own admission: "I'm still not really happy with it." But this is apparently more a critique of his own lack of experience with this relatively new beast (to him at least) rather than any perceived short-coming of the system. What he was grappling with was something fundamental to this music genre: "With a dance act like this, it's essential to find that tight punchy bass." Furze is nothing if not committed to his task - one of the reasons why he has remained with the band throughout while LDs, managers, and PAs have all rung the changes. He explained the emphasis on the bass sound: "Part of

the reason people come to a live show is to hear and feel that energy. If you just give them the sound they can hear on their own hi-fi at home then they're not getting that special experience." The V-dosc system is supplied by Electrotech/Audiolease, though the technical crew comes from Westfalen Sound. Readers may recall one of the more eclectic reviews of German crooner Udo Jurgens in this journal four years ago: well, Sharif, his sound engineer was systems man for this tour. A competent technician, Sharif had set the single in-line hangs of speakers at the essentially precise angle this PA demands to achieve its potential. But he conceded some doubts: "We actually need 15 cabinets per side, not 12, to get the more concentrated coupling to reach the upper rear seats." This he was able to neatly demonstrate schematically on his laptop display. It's been said before, but this system has prompted the use of tools that make precision easy. As Sharif pulled out his laser-based electronic tape measure with telescopic sight and inclinometer attachments, I had a bemused Chris Hill of Wigwam peering over my shoulder.

We both agreed afterwards just how simple such tools make it to plot exact room dimensions and target angles. Main system apart, there was a clutch of four Arcs hung each side just to feed the crowd sat 90 degrees off axis of the main hang. Otherwise, there were just three blocks of four Westfalen subs, centre and each side, with four more Arcs laid horizontally atop the centre subs for near fill on the front rows. The subs, or rather the lack of them, may be the key to Furze finding the bass sound he's looking for. I walked the room at both the top and bottom of the show and found the following: there was no lack of bass energy for the first 50 or so metres from stage, but it sounded strained rather than solid. Thereafter, it dropped off quite abruptly. It reminded me of when I first heard this system on Supertramp last year and the subs weren't properly time-aligned with the main system. The low end was mush. For this show, in the upper reaches of the bleachers, the high end coverage was patchy, though this was undoubtedly more a result of the short-comings Sharif alluded to earlier. High performance systems are critical and unforgiving. I've heard Ray Furze mix every PA under the sun for the last 20 years, and I'd rate him one of the best live engineers in the business. But even experienced fighter pilots don't just jump in the cockpit of the latest Eurofighter and take off - something V-dosc rental houses might care to ponder.

Kubrick's surreal masterpiece *Dr Strangelove, or Massive Attack at the Sheffield Arena? It was a tough choice. Massive won in the end, not because I was keen to see the band that had humiliated Sarah Ferguson. Who gives a toss really? Besides, I've had the movie on video for years and watch it regularly. But having witnessed the problems with M People's system the previous night, I was anxious to hear another PA playing similar music in the same venue. As it transpired, Massive's music is another world to M People's, so it's unfair to make comparisons. But as it transpired it was the lighting that really caught my attention.*

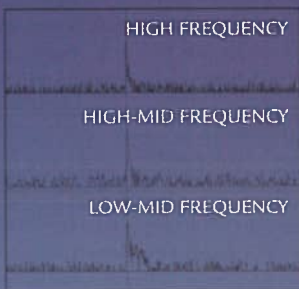
Lighting

Kubrick's Cold War parody was noted at the time (1966) for being shot in black and white. I doubt LD Tom Nulty will be similarly revered, but his monochromatic show is worthy. Now, confessing that Nulty is a mate may make it seem like I'm blowing smoke up his fundament, but consider this: could you sustain a 100-minute show throughout a nine month tour, never using more than one colour and open white during any one number, and keep a fresh and varied look to every tune? He did have some help - Neg Earth supplied a rig of real exotica. They also went that extra mile, fulfilling the wish of a designer who'd recently read a philosopher's maxim - 'Symmetry is for God' - and taken that concept on board wholeheartedly.

Nulty's rig is a dark forest in a mysterious wood: three trusses enclose the sides and rear, with tortuous tree branches of curved scaffold hanging down from them, their extremities tipped by lamps. Similar winding branches of tube spring up from the stage. It looks like a lighting crew's nightmare. There are 117



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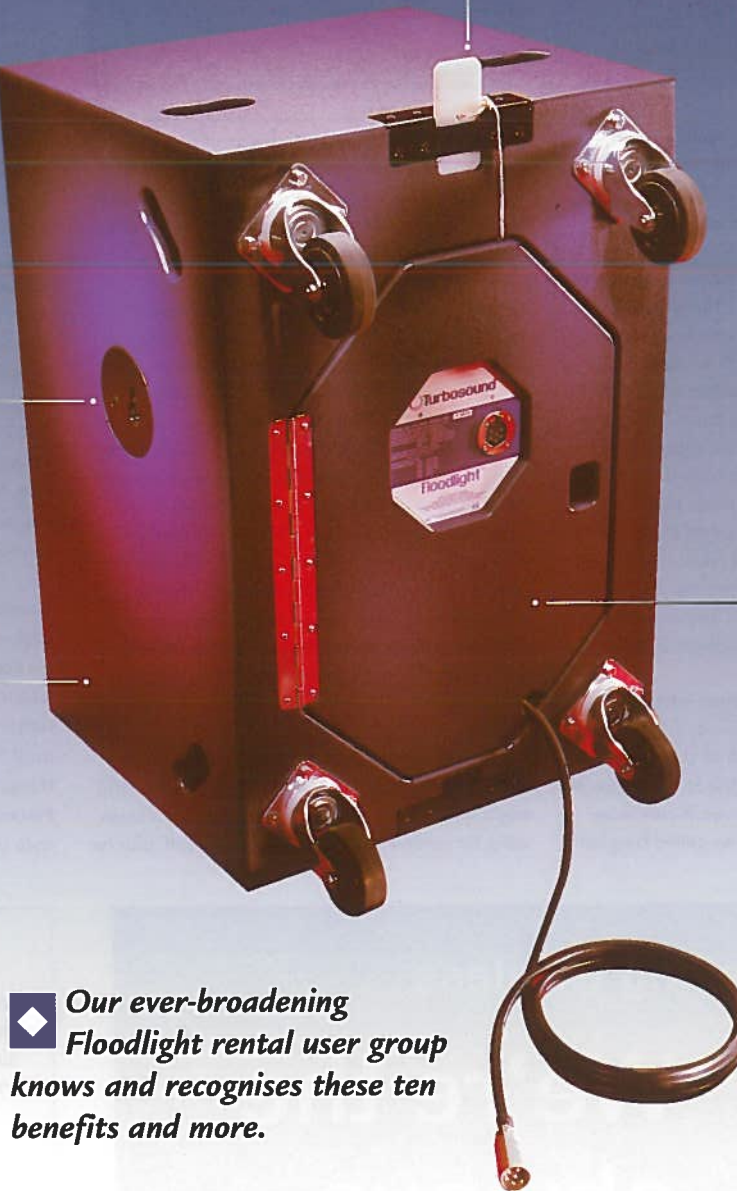
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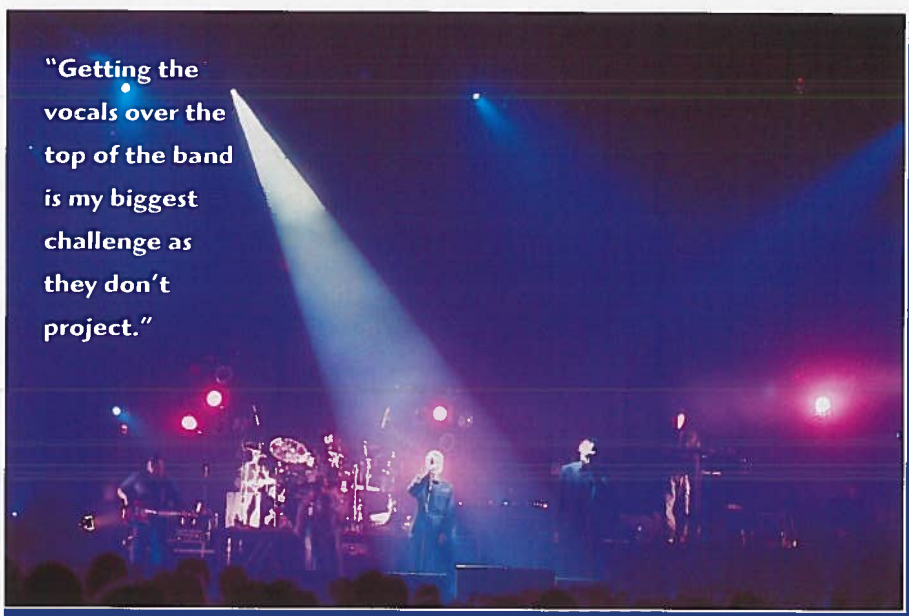
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"Getting the vocals over the top of the band is my biggest challenge as they don't project."



single-hung lamps, plus four six-lamp genie frames, yet it takes just three hours to rig. His most variable unit is the Starlite Mk5 which, after 102 shows, Nulty declared: "Absolutely perfect - they've never let me down," though for a tour that's traversed the globe and visited a real variety of venues he did have a gripe. "The widest beam angle only goes to 24 degrees - on small stages you've got problems." He wasn't ecstatic about the gobos either, but that was more a factor of his show than a shortcoming in the lamp: "They just look a bit too TV." The rest of his lights are a mix of Lowell Omnis, Altman Nook Lites (Linear QI floods), Dataflash, and P64 Raylites, plus four Death Stars and four 1kW scoops on the floor. At Nulty's request, Neg Earth also fabricated a re-designed barn door for the Omnis and a Louvred gel-frame affair for the Raylites. These devices give that finishing touch to an atmospheric show.

Most of what Nulty does is in open white, using a variety of sources and lamp intensity to texture the look. The only gel is 181 in 50% of the rear genies, and when he uses colour from the Starlites they're cold yellows and industrial mauves. Never more than one colour and shades of un-gelled tungsten,

the overwhelming sensation is one of bleak ugliness. It's a light show you can admire for its vision, but you'd never warm to it. It doesn't have the humour of Kubrik's dark comedy, but it does have the powerful framing.

On a technical note, Nulty used a Wholehog 2 with Wing for control, being obliged to switch to an Echelon, the new 'Hog operating system from Jands, in Brazil. "The desk info swaps easily between the two," he said. "Though you do have to tinker with a few bits and pieces. The hardest thing to get used to was that the Echelon doesn't have a touch-sensitive screen and I kept hammering away at it out of habit." In South Africa, he substituted Cyberlights for the Starlites: "All the same parameters on the same handles, except the colours are reversed." Finally, Tom, here's something to philosophise upon: Dark is faster than Light. That's why you can't see it.

Sound

Mark Littlewood didn't have any trouble finding the punchy bottom end for Massive, but then this was a system (d&b 402, from Wigwam) he's been using for several years, so he knows it well, plus he

had plenty of it. With 35 a side flown, plus four stacks a side on the floor and 12 subs, it would have done for M People, and this was only a half-house Sheffield Arenal Power in the low end, and headroom in the system was not an issue. It appears the biggest thing Littlewood has to deal with is a rush-hour of performers. I counted at least nine performers over the evening, but there could have been more. In fact, Littlewood singled out this factor as his area of special attention, though for a different reason. "Getting the vocals over the top of the band is my biggest challenge as they don't project."

In response, Littlewood has experimented with every mainstream microphone and a few exotic ones: "I've ended up with the Crown 310. It's the best mic' for rejection, just phenomenal, and the sensitivity is great." He did qualify this by describing how he'd mixed for the band since 1994, coaching them to sing within an inch of the capsule: "If there's nothing there, then there's nothing coming out." He is also assisted in this area by use of the increasingly ubiquitous Sabine Feedback Exterminator.

There's lots of effects work going on, particularly reverb and delay: a TC2290 for general vocal use, Yamaha D1500 for some dated delay sound on reggae vocalist Horace, three SPXs (990 and 1000) used variously for toms and backing vocals, and PCM80 for the two core band vocalists. "Some of the keyboard stuff is pre-treated," he said, "but mainly I put in all the effects. The band are on in-ears (monitor engineer is Graham Lees) so stage levels are OK."

Kneeling on a drum stool at his Yamaha PM4000, Littlewood busies himself with the textural work. I particularly enjoyed the pronounced panning which, in the context of this band, made sense rather than being just a gimmick. "It virtually mixes itself," he said of the show. "The thing is you hear things from this system that you don't in others. Particularly the bottom end. With this style of music that's critical." Indubitably.

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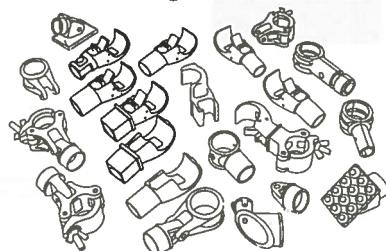


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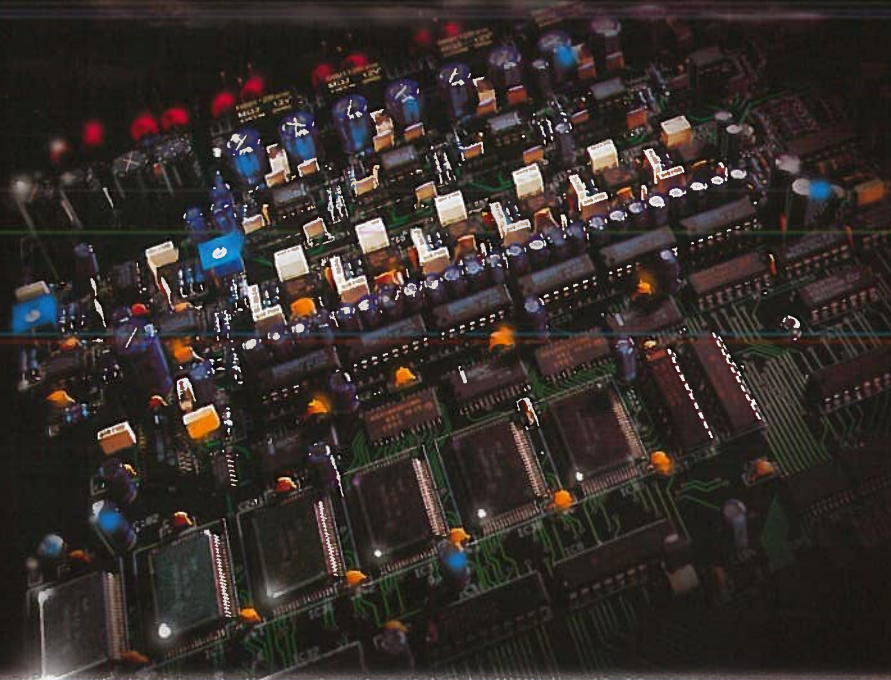
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Hotel Nevada



The \$1.4 billion resort, Bellagio is the newest hotel being built on the Las Vegas Strip. Rob Halliday stands back to admire the view

\$ 2.3 Billion. That's what it costs to build a new hotel in Las Vegas these days - especially if it's a hotel described by its owner Steve Wynn as being "the best that has ever been built."

Called Bellagio, the new hotel is the third that Wynn has built on the Las Vegas Strip. His first, Mirage, started the creation of the 'new' Las Vegas, its presence announced to the passing world by the volcano outside its front door, erupting regularly after sunset, instead of the usual array of flashing neon. The second, Treasure Island, added extra family appeal with its Caribbean theming and twice-hourly battle between a pirate ship and a British frigate.

Bellagio is something different. Put bluntly, its 3,000 rooms are aimed at the top end of the Vegas market. But Wynn isn't aiming for faux-class. Bellagio is Italian for 'a place for elegant relaxation', and the hotel is created in the image of relaxed Italian luxury. The final touch is the \$400million that Wynn has spent on paintings - Impressionist, post-Impressionist and modern masterpieces - for the hotel's Gallery of Fine Art. In certain areas, some say, the collection outshines that of the much-acclaimed new Getty Museum in Los Angeles.

The new hotel stands on the site of the former Dunes Hotel and Casino, which Wynn acquired in 1993 and then blew up as part of the opening spectacle for Treasure Island: the 'theming' was that a cannon shot from one of the two ships travelled down the Strip and landed on the old hotel, which then imploded right on cue. Inspiration for the new hotel came from a trip the Wynns took to

Lake Como in Italy where they saw a village tucked away on the shore of the lake. That became the theme for Bellagio.

The result is that, between the hustle and bustle of the Las Vegas Strip and the main building of the new hotel, sits an 11-acre lake. Behind that sits an Italian-style village, designed by the Jerde Partnership and literally hanging over the edge of the lake. A long, sweeping bridge curls up one side of the lake, taking guests into the hotel.

The hotel building itself follows the increasingly-familiar Vegas style: three prongs of rooms radiating from a central lift-and-services tower. But the remarkable thing about the building is that, where every other hotel in Las Vegas shouts at you in some way, flashing lights and yelling its presence, Bellagio just sits there, a model of restrained elegance. Nothing flashes. Nothing chases - not even, seemingly, any aircraft warning lights.

The immediate result is that, because of the contrast with its surroundings, the building is the most noticeable on the whole Strip. The people responsible for this lighting triumph were also responsible for the lighting of Mirage's volcano and Treasure Island's pirate battle, and hail from London rather than Las Vegas: DHA Design Services, with the team consisting of David Hersey, Jonathan Howard, Des O'Donovan, Adam Grater and Amanda Garrett. DHA were responsible for all of the exterior lighting on the hotel building and the village around the lake, as well as for the swimming pool area of the hotel and its spectacular conservatory. And it was DHA who decided that the hotel needed stillness and calm in its lighting - and then had the challenge of converting Steve Wynn to their cause.

Fortunately, though Wynn is famous for having very fixed ideas about what he wants to do, he is also "quite amenable to you coming up with a different idea if you can convince him that what you are doing is sensible," notes DHA's Jonathan Howard. "He's also got a lot of trust in David Hersey because David has done Mirage and Treasure Island . . . and we also know that if he doesn't like something he's bound to tell us and then we can change it!"



DHA had their first meeting about the hotel in January 1996, around two-and-a-half years before the building's October 1998 opening. Even then they were rushing to catch up since design work on the hotel itself had been completed and the

holes for the piling had already been dug. The first thing the team therefore had to do was to design and specify the lighting elements to

be attached to the building itself, to allow them to specify power requirements and positions to the building service engineers who were already ordering the cladding and services. "They hadn't really considered that we'd put lights on the building, and certainly not to the extent that we've done, because Mirage and Treasure Island had no lights on the buildings," explains Howard.

But the DHA team had immediately seen a problem with the hotel's design that they needed to overcome: the vertical face of the hotel is divided into three bands defined by deep cornices. However, if the building ended up being floodlit, the cornices would cause shadows. They therefore decided to run lines of neon (supplied by Federal Sign) along the cornices to define the levels, but also to fill in and disguise the shadows. They also decided to add uplighters (from BK Lighting) to the window arches in the top level of the building, as well as to light the belltower on



the top of the central service tower, making it a prominent beacon that attracts the eye. "This all meant we could go back to the building engineers and say 'we need 3kW of power at level 36' or whatever" explains Jonathan Howard, adding that their calculations were immediately thrown by

Wynn. "We originally designed all of this only for the East facade, the side that faces the strip, because the other two sides aren't really seen from anywhere and we thought we could save money. But Steve decided that he wanted it on all of the faces of the building, which multiplied everything by a factor of three!"

The building lighting also caused other headaches. Vegas buildings are constructed quickly, car-park style: a series of columns with concrete floors laid on them and the building then clad. But because Vegas does not suffer huge climatic variations, the cladding is effectively dry walling covered in expanded polystyrene foam - quick and effective, provided that the cladding is not penetrated. "Fixing and feeding power to the lighting meant having four penetrations at the top of each arch and four at the bottom, and when you multiply that by the number of arches in the building, the architects were terrified about being able to keep the structure waterproof."

The battle was won because DHA were able to convince Wynn that the lighting would be effective through the use of mock-ups. "This is something that they understand because Steve likes to see what is happening before it gets done: there are full-scale mock-ups of the rooms and sections of the casino built. We built a compressed section of the top of the building to show them what we were proposing, and that worked out very well."

A second mock-up persuaded Wynn to go for David Hersey's suggestion of a backlit shadow 'halo' effect on the hotel's fine-script logo, mounted on the belltower, rather than the twinkly-type sign used on the other hotels.

With the lighting on the building itself specified, DHA then moved on to designing the rest of the lighting, including the floodlighting for the building and the lighting and lighting fixtures for the rest of the hotel's exterior. The hotel floodlighting proved extremely challenging, though an initial design 'concept' was arrived at quite early on when David Hersey and Adam Grater decided that the building would prove an interesting surface to play different colours onto. This would also allow the hotel to provide different backings to the watershed that was being built into the lake: designed by Wet Design, this has over a thousand high-pressure water jets (including the company's MiniShooters and SuperShooters

together with a new moving nozzle called the Oarsman, developed specifically for Bellagio) hidden in the lake. These dancing fountains, the largest of which can shoot water 240ft (73m) into the air, are choreographed to music in a number of shows that are performed regularly through the evening.



DHA also decided to take a different approach to floodlighting the hotel from the standard Vegas practice, where massed ranks of low-wattage lights are hidden at the base of a building blasting straight up it - with much of the light actually missing the building altogether and throwing an

eerie glow onto the clouds above. "We decided to use fewer, higher-powered floods and direct them at the building, and we decided to go with the 2kW Thom Metaline fixture," explains Howard. "That also meant that we'd only need 48 fixtures on each face of the building: I think they were quite surprised when we came in and said we only needed that many!"

The design then seemed to fall into place quite naturally: with the sheer wall of the building naturally divided into three sections DHA planned to use three banks of lights, with wide floods 50ft (15m) from the building lighting the lower third, medium floods 100ft (30m) from the building lighting the middle section then narrow floods 150ft (45m) away lighting the top section. Space for this seemed to be available in the 'invisible' 150ft (45m) between the back of the lakeside village and the front of the hotel: this is hidden from the view of spectators 700ft (213m) away on the front of the lake and even includes a service road for the village. "We did the calculations with the help of Thom's computer and worked out that we'd got it even enough . . . then discovered a problem."

This was that the 'gap' also included the villa suites for the hotel's high-roller guests, constraining the positions available for lights. The other two sides of the building presented even more obstacles: one side houses the swimming pool area, with no clear lighting positions, and the other side is obstructed by the outside of the theatre that houses Cirque du Soleil's 'O' (that show's watery theme matching the water-led feel of the rest of the Bellagio complex - see L+S! December 98). "This meant that on the front face we had to put the wide floods on the roof of the villas, then put the mediums and narrows together on the other side of the service road," explains Des O'Donovan. "On

the other faces, the lights are tucked away in walls, in what look like re-inforcement columns, in little hidey-holes and places that we had to find since no composite drawings of the buildings and the surroundings existed. We basically had to screw up all of the computer modelling, put it in the bin and say 'we need one here, one there' so they are all over the place."

All of the floodlights on the rear faces of the building are fitted with large colour frames containing long-life gels in a warm orange 'Mayan Sun' colour arrived at after experiments with more neutral colours were rejected by Steve Wynn. The

Elsewhere in the hotel's environments, DHA's work is as calm, understated and restful as the lighting of the hotel building. The lighting of the lakeside village is much less frenetic than you'd expect from a Vegas hotel: the look really is of a calm, natural lakeside village naturally lit rather than the 'theme park' feel of Treasure Island (though strangely a side-effect of its size is to diminish the lakes in front of both Mirage and Treasure Island, which now feel tiny in comparison). When the fountain show is not running, the lake itself is, boldly, in almost total darkness save for the reflected light and a few deep blue ripple effects projected from underwater onto protruding rockfaces. More deep



48 floods lighting the front of the building are fitted with scrollers instead of frames to allow the hotel to change colour. The scrollers are Wybron's waterproof Aquarams, adapted to fit the Metaline floods. Though not close to the water, the scrollers' waterproof nature and the over-pressure created by their fans means that they are dust-resistant, important in the gritty, windy Vegas environment. The scrollers are also connected to Wybron's Watchdog system which reports scroller status and any faults back to the control room, allowing the maintenance team to swap out any faulty scrollers before they affect a show.



The scrolls contain a wide range of colours, including several frames of Congo Blue used during the watershows (with the scrollers moving through the frames continuously to avoid damage to one particular frame), as well as some 'whackier' colours, such as a Kelly Green for St Patrick's day, a pink for Valentine's Day and so on.

The scrollers are programmed from an ETC Obsession system installed by Production Arts, with the data then downloaded into an LPC that listens to timecode from Wet Design's PC-based logic controller. The program includes built in fault-checking: before the show a DMX-controlled switch is set to close, with the logic controller checking that it has actually closed (indicating that DMX is being transmitted and received correctly) before proceeding with the show.

blue light under the arches of the roadway bridge merely serves to highlight the bridge's presence without giving away the fact that it has a solid backing. At the entrance area, custom chandeliers from Alger International add to the 'classy' feeling. One detail used here and repeated in many other parts of the hotel is the white neon strip hidden in the capping of the handrails that surround the lake and also the pool area: it is neat, clean and attractive without being fussy or over-complicated.

The same detail is featured in the swimming pool area. Bizarrely, this is beautifully lit at night when it is closed to the public! Jonathan Howard describes the brief here as making it "tantalising . . . but unobtainable," with the design having to work from many angles since it is surrounded by walkways and restaurants. Howard's summary of the area as "lots of decorative night-time lighting," understates DHA's work: although almost



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monochromatic, with the pools glowing, trees highlighted and the handrails picked out by their neon (using fixtures from Hydrel, BK Lighting, Widelite, Bronzelite and Hadco) it is a beautiful, cool, restful place to behold.



Despite the security guard hovering over you to make sure you don't try to get down for a closer look! Like all of the lighting, the pool area has been designed for ease of maintenance as well as for aesthetic beauty. All of the lighting uses either white sodium or the new CDM colour stable metal halide lamp. Even the streetlamps, sourced from Neri of Italy to match the design theme of the hotel, use CDM lamps, fitted with a filter to bring the colour back to the feel of tungsten. "People say why don't you just put A-class lamps in there," Howard notes, "but they'd last hundreds of hours rather than a year or two. There are 250 streetlamps, plus 100 wall-mounted equivalents: you'd have guys out on stepladders every night!"

Howard does speak very highly of the maintenance teams at Wynn's hotels, though, noting that the teams at Mirage and Treasure Island "take real pride in keeping them exactly how they opened," though DHA do make occasional visits to check on things and make sure that the vegetation hasn't been allowed to run riot over all of the lights. The visits to Bellagio will be more

regular for the next year, since the DHA team have been asked to provide the lighting for the spectacular floral displays in the Conservatory, which are changed in a two-day period every six weeks.

DHA designed the basic lighting system for this area - "a big, theatrical overhead rig with a lighting bar in every conceivable position, ETC profiles and Pars, and a row of Irideons around the cornice wall so

you can do some colour changes," - and will now be making use of it to create a new lighting design for each new display.

Jonathan Howard speaks for the whole team when declaring himself very pleased with their work on Bellagio, despite the hard work involved (including one person on site constantly for the last six months, with Howard and O'Donovan alternating on three weeks on, three weeks off shifts). "It's very different from most Las Vegas casinos, in part because the Jerde Partnership have given everything the right amount of space so you can actually stand back and see it. That's expensive to do in Las Vegas, but it allowed us to do some very good lighting."

And will again: Steve Wynn is obviously pleased with the results, since he has already started talking to DHA about work on future projects in Las Vegas and elsewhere . . .



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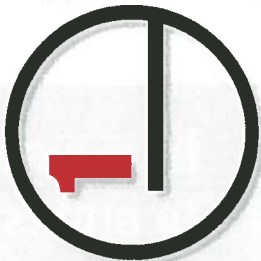
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Taming the Shrew

*Andy Ciddor finds
Shakespeare getting
to grips with the
weather in Perth*

The production of *The Taming of the Shrew* performing in the Perth Botanical Gardens this summer is part of a remarkable resurgence in Australia of popular, commercially successful productions of Shakespeare.

Just over a decade ago producer Glen Elston found he had a hit on his hands with a children's production of *Wind in the Willows* set amongst the lakes and dells of Melbourne's charming, Victorian-style Botanical Gardens. Wishing to take advantage of the atmosphere of the gardens for an adult production, he went out on a limb with his business partners to get them to back a production of Shakespeare's ever-popular *A Midsummer-Night's Dream*. This magical production of *Dream* was to run to healthy houses for the next four summers before being replaced successively by *The Twelfth Night*, *Romeo and Juliet*, *The Taming of the Shrew* and this summer by a rock and roll interpretation of *Much Ado About Nothing*. *Dream* travelled to Sydney for the 1992 Sydney Festival and eventually West to Perth in 1996 where it was so well received that Elston's company EHI Productions staged their *Romeo and Juliet* in Perth last summer and *The Taming of the Shrew* this season, when once again they are simultaneously running Shakespeare in the parks of three of Australia's major cities.

The Perth Botanical Gardens are located on the edge of King's Park, a unique, 400 hectare (1,000 acre) natural-bush reserve set on a hilltop just 1.5km from the GPO overlooking Perth city and the Swan River. Owing to its location and magnificent views of Perth, King's Park is a focus of sightseeing and recreational activities for the 1.25 million residents of Perth and the hundreds of thousands of tourists who visit the sunniest capital city in the world. It is especially popular in the evenings when visitors come to watch the city panorama as it changes from day to night, or to picnic as the heat of the day begins to abate, a phenomenon exploited by the front-of-house staff who often sell tickets to picnickers and sightseers who weren't aware that a production was happening in the park.

Elston's production of *Shrew* was interpreted and reproduced for its Perth season by director Greg Carroll, an Australian theatre veteran with experience as an actor, set designer, lighting designer and production manager. Carroll was determined to take advantage of the large open spaces of the Botanical Gardens to create a Shakespeare in the style of an Elizabethan production. "I wanted big voices, big vistas and big movements, very much as it would have been performed in open spaces in Shakespeare's time."

This *Shrew*, however, is not an attempt at reproducing an 'authentic Elizabethan' performance, rather it is trying to reproduce the feeling of an exciting, relevant and accessible production which will attract the general populace in addition to the usual theatregoers. To this end, Elston rewrote the prologue, replacing Shakespeare's original with something more accessible and more fun, and which in addition to a pun-laden corruption of 'That's Amore', includes instructions for the audience on the location of public toilets and the environmental sensitivities of enjoying King's Park without damaging the locale. Elston has also tampered with the play in a couple of places by taking two long speeches and interweaving them to create a more contemporary-sounding dialogue and, in keeping with long-standing tradition, a few local and contemporary references have been slipped in.

EHI Productions are commercial entrepreneurs with a very keen eye on the bottom line, a priority evident in virtually all aspects of the production. All of the production staff, including the producer and the director are multi-skilled and all of those skills were exploited in the mounting of this production. The set concept of a platform with three entrances comes from Elston's original Melbourne production, but its placement over the duck pond and the ramping of the entrances come from the director Greg Carroll, who was anxious to take every possible advantage of the natural amphitheatre around the pond. The actual decoration of the set was a collaboration between director Carroll, the production manager James Savage-Markey and the spot operator Amanda Savage-Markey. Amanda, who happens also to be a costume maker and designer was naturally involved in the fittings and adjustments to the costumes which had been constructed for the original Melbourne season.

The set design itself is an example of the pragmatism which permeates this production. In addition to the usual constraints of being appropriate and practical and providing an aesthetic framework for the production, this set also has to endure the rigours of a Perth summer, with long sunny days and temperatures reaching 44°C (111°F) in the shade, together with strong sea-breezes every afternoon. Add to that the fact that the set is located in one of the most popular tourist spots in the city, requiring that it be both aesthetically acceptable to visitors and robust enough to be played on by every child and adolescent who lays eyes on it, and you have an extraordinarily demanding brief. Whilst the set design has elements of Carnival and a distinct Venetian flavour, the costumes vary wildly in style and period and include quite a few contemporary elements; the props and furniture are of an indeterminate style, the wedding feast includes a Kentucky Fried Chicken 20 pack (minus the striped bucket) ➤



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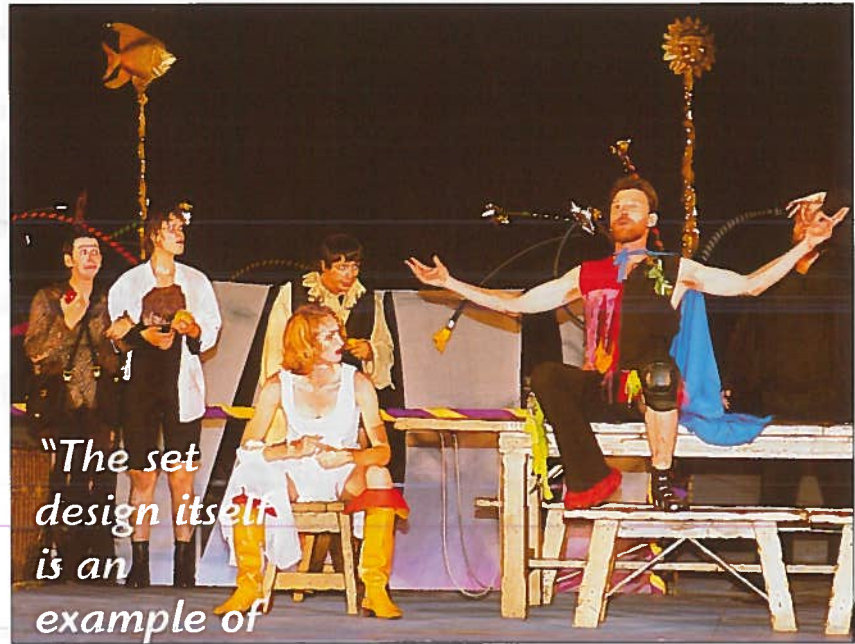


and Petruccio rides a late twentieth-century motor scooter, all of which sets a context for what Elston describes as a "modern production". It certainly isn't a traditional one.

The production process for this Taming of The Shrew was quite traditional with two weeks of rehearsals on the stage as both the design elements and the staging of the performance were built up day-by-day until the producer and director were sufficiently confident to admit preview audiences during the second week. Of course, in true entrepreneurial style, EHJ Productions charged full price for preview tickets. The lighting design, as conceived by Glen Elston, who also directed and designed the set for the original season of the production, called for two front-of-house winch-up towers which were to be set and struck for each performance. During the rehearsal and development process two appropriately located trees were identified as more permanent lighting towers and, with permission of the King's Park authorities, were turned in to a different sort of lighting tree. As this occurred in the Botanical Gardens, it's important to note that the OP tree was a *Corymbia Calophylla Myrtaceae*, whilst the Prompt tree was an *Agonis Flexuosa* or Peppermint Wonil *Acacia*. The lighting design approach was the traditional basic warm and cool washes, broken down into broad acting areas and entrances, with all specials and most of the breakaway action in the park covered by a single, 2kW incandescent, Robert Juliat followspot. An additional 34 Par 64s were used to create the magical atmospheric effects through such means as reflections off the pond and coloured shafts and washes through the vegetation surrounding the acting area. In order to add to the ambience of the site and build an expectation in audiences even before they reach the natural amphitheatre, Elston placed around 20 Par 64s in trees and under bushes along the approaches from the car parks to evoke a vista which complements the production experience.

The setting of King's Park certainly makes for some unusual production problems. The traditional residents of the duck pond over which the set is built generally return home around sunset, which usually coincides with the half-hour call, and set about preparing for the evening's production. Their role is to quack loudly at the least appropriate moment in order to corpse the actors and send the audience into gales of laughter. It's a sad comment on our sitcom-saturated society that unrehearsed ducks are getting bigger laughs than Shakespeare's comedy.

Although rain isn't a major threat to this outdoor production, as Perth has virtually zero rainfall in January and February, the automated sprinklers which are necessary for the park's survival do present some difficulties as, due to high daytime temperatures, all watering takes place at night to minimise evaporative losses. This has necessitated production manager James Savage-Markey negotiating a complete reprogramming of the sprinkler controllers for the botanical gardens and all of its approaches. Early in the technical rehearsal process there was a slight misunderstanding about exactly which zones had to be reprogrammed, leading to an aborted



"The set design itself is an example of the pragmatism which permeates this production"

rehearsal as the crew and the night security patrol in the park stood helplessly by, unable to get access to the sprinkler control system, whilst the stage area was being relentlessly watered.

Security is a perennial problem with productions staged in open-access public spaces and Shrew has certainly had its share, having suffered from two significant thefts. The shipping container in which the majority of the production equipment was transported from Melbourne was placed in a car park next to a disused refreshment kiosk to serve as a storage shed for the equipment during the fit-up and as a lock-up store during the run of the show. Sometime after the first night of plotting, despite the King's Park security patrols, the locks were cut from the container and the majority of the sound system was stolen. This included an Inkel mixing desk, a CD player, two of the four Bose 802 speakers and the leading man's favourite Dean Martin CD. In an example of the can-do attitude of the crew on this production, James Savage-Markey scrounged an ancient eight-channel Yamaha powered mixer and brought in his personal portable CD so that the rehearsal process could continue that night. These stand-ins appeared to have been considered acceptable for the entire season, as they were still running the show some weeks later.

During the four-day break in performances over Christmas Day and Boxing Day, six Par 64 cans which were part of the vista lighting were taken. This theft, though, was clearly the work of

amateurs. The cans were mounted on turtles (low stands) and chained down to the roof of a toilet block, and after cutting the chains the thieves carefully removed the turtles before taking the cans: but as any lighting person will tell you, a good turtle is much more valuable than a can that's spent a season or two out in the weather. The other indication of the lack of expert knowledge was that in common with most Par 64 cans in Australia, these were fitted with 120 volt, 2,000 hour lamps and were powered via series twofer-cables which the thieves neglected to take.

Whilst most venues have some restrictions on the extent of modifications which can be made to the stage or auditorium, staging a production in a Botanical Gardens which is open to the general public the other 21 hours of the day is a delicate balancing act. Whilst they were rather adamant about the location of the three-phase electrical supply (behind an artificial waterfall!), the King's Park Board have been very helpful with the rest of the electrics set-up. Rather surprisingly, the crew were allowed to use a turf-cutting machine to lift the grass and lay down around 300m of trenches for buried cable runs: from the FOH lighting trees and the control position to the stage and from the stage to the 'dimmer room' behind the waterfall. Cable runs to some of the non-dim approach lighting were also buried in garden beds to avoid having to be re-run for each performance.

The lean, multi-skilled, four-member production crew on Shrew liken this production to touring without going anywhere as the majority of the show is packed away in secure storage after each performance. In the mornings, James Savage-Markey wears his production manager's hat which he exchanges for his electrics hat at three each afternoon. James and his partner Amanda form what he describes as a "self-contained production frenzy," which is responsible for lighting, sound and communications, while stage manager Sue Wilkes and ASM Kit Warburton team up to prepare the set and props for each performance. Both Wilkes and Warburton have experience as

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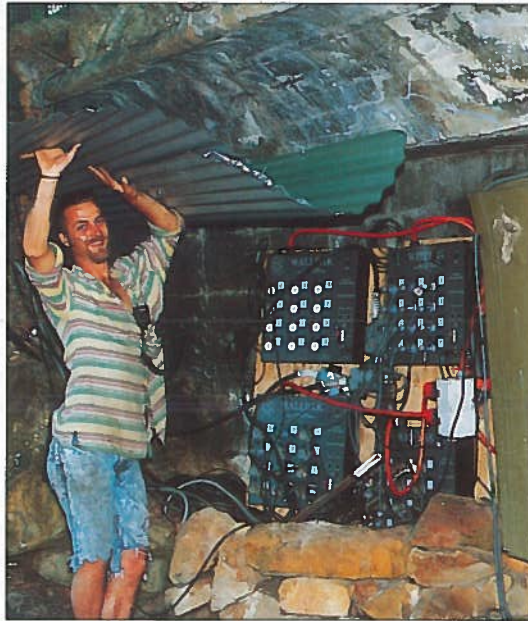
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stage managers, ASMs, production managers and props crew to which Warburton adds stints as a truck driver and set builder.

The performance ritual begins at around 3.00pm each day with the stage team opening up the disused refreshments kiosk which serves as the set and props FOH refreshments store by day and dressing room for the 15-strong cast by night. Warburton and Wilkes then go about setting the loose items of furniture and the large tin trunks and wicker skips, which feature on the sparsely-dressed acting area. Each of the large items is carried in a builder's wheelbarrow, the ideal low environmental-impact vehicle for negotiating the hundred or so metres of sloping grass between the store and the performing area. The props table is actually a tarpaulin laid out on the ground in the bushy area behind the stage and looks for all the world like a big picnic spread when all of the prop and practical food is set for a performance. This area also serves as a naturally-green room and quick change area for the performers.

Once the show is set at around 5.30pm, Warburton goes about preparing her two wedding celebrations and other props and Wilkes takes up her stage manager role which includes calling the electric cues and operating the sound cues from the front-of-house control position. At the end of the performance the stage team re-forms to strike and store the set dressings and props in preparation for the next day's run. The vagaries of the weather are what keeps stage manager Wilkes on her toes: "If it's windy, I have to get the actors to really push their voices out into the house," she points out, "but if the evening is a little cool I have to ensure that the acrobatic elements are kept under control as condensation starts to make the stage deck slippery."

The Savage-Markey electric team start their day by putting out the 50 or so Par 64s which they will later circuit and focus. Next comes the LSC Axiom 24/48 control desk and the sound system which are towed into position on their wheeled desk behind a slow-moving 'ute' which also brings the followspot and the rest of the production desk equipment. James then goes behind the stage to

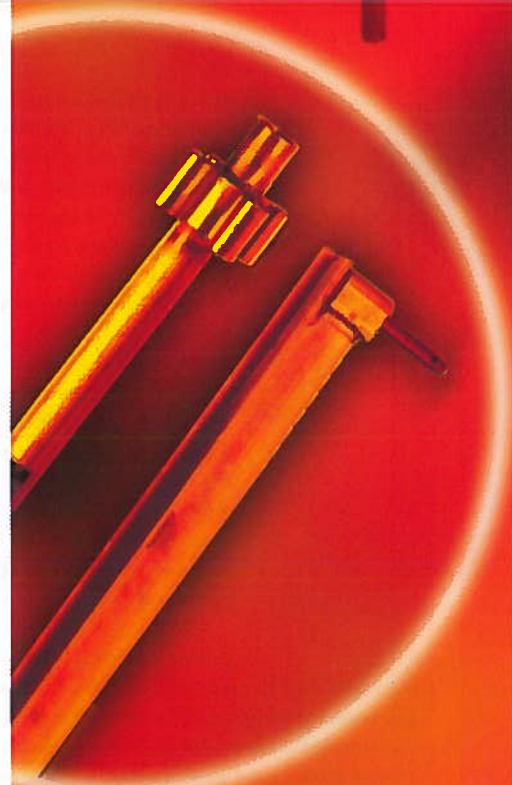
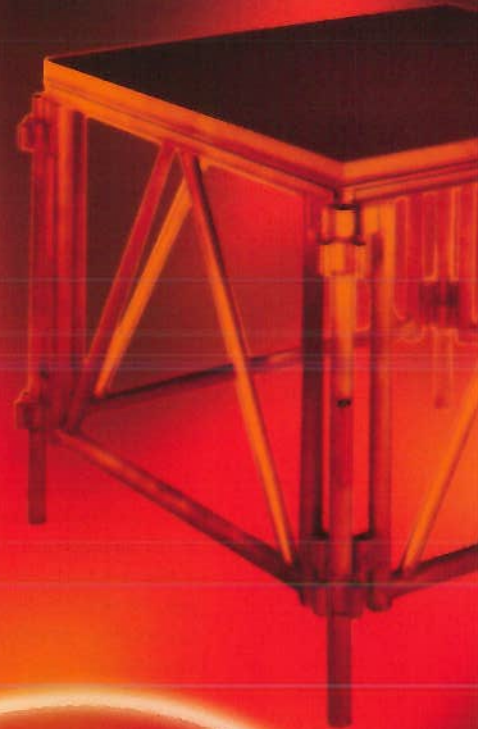


Production manager James Savage-Markey in the dimmer room

where the artificial waterfall will have finished for the day so that he can unbolt the corrugated iron cover from the 'dimmer room' and fire up the four, 12-way LSC Wallpacks. The next few hours are taken up with circuiting the systems and testing the sound rig until it's dark enough to do a lamp check and focus the luminaires. This is the high pressure part of the electric's day as the performance starts at 7.30pm and there's not much time between the onset of twilight and the start of the performance. For electricians the actual performance is pretty straightforward and provides a respite before the majority of the rig once again has to be struck and secured. The buried lighting and sound looms certainly play a big part in making the electric operation feasible for a two-person crew.

The company repeat this ritual for around seven weeks of Perth's summer before moving on to the really busy time of the production year: the Perth International Festival of the Arts, which kicks off a couple of days after the Shrew season ends. Director Greg Carroll best captures the flavour of this style of production with the tag 'Dingo Theatre'; referring to the rangy Australian native dog, which survives and prospers even in the harsh conditions of the Outback.

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Ian Herbert, Asleep in the Stalls...

What with the Royal Exchange back in action and the Stephen Joseph and New Victoria going, well, fairly strong, a healthy chunk of England's theatre north of Watford Gap is now in the round. When you think of Leeds and Sheffield's thrusts, indeed, you'll be hard put to find much proscenium-based activity on the grand scale (touring houses excepted) until you get to Scotland.

"Our finest exponents of physical theatre, *Complicité* and *Cheek By Jowl*, usually choose to work on a deep thrust rather than full in-the-round, but the effect of their approach has had huge repercussions"

IF THE arena people had their way, of course, it's all we'd see. They're convinced of the supremacy of staging in the round and will bend your ear about it at any opportunity - it took days to uncrumple mine after visiting Manchester.

THERE IS A SPECIAL atmosphere that in-the-round generates, but how much of this is due to the actors and how much to the technology? The biggest plus, surely, is the kind of truth that an actor can supply when working with the whole body. Two-dimensional theatres like the traditional pros' arch can, at their worst, offer two-dimensional acting. In-the-round seeks this out pretty quickly, and any discomfort in an actor communicates itself directly to the audience.

THE GROWTH of physically-based actor training in recent years, with the Parisians Lecoq and Gaulier gaining more influence as teachers than any RADA voice or posture coach, means we now have a good pool of actors who can not

only make two-dimensional theatre breathe more freely in three dimensions, but also feel very much at home in the automatic three dimensions of in-the-round. Our finest exponents of physical theatre, *Complicité* and *Cheek By Jowl*, usually choose to work on a deep thrust rather than full in-the-round, but the effect of their approach has had huge repercussions: the Young Vic's in-the-round Christmas shows of the last few years draw the audience into willing conspiracy, with actors sitting in the aisles and musicians in full view.

NOW CHAPS like Sam Walters and Graham Murray will tell you that you can do anything in this format, and the list of their productions over the years seems to bear this out: I've enjoyed imaginative new writing, formal Edwardian drama and First Folio Shakespeare in places like the Orange Tree and its pub room predecessor. In the current Orange Tree show, for instance, Hennequin and Veber's frou-frou frolic *Court in the Act* (in a version which originated at the Royal Exchange), the chosen style is what you might call standard French farce, with all the double-entendres given full value and tons of grimacing, nudge-nudge acting. It's all highly artificial, and because in-the-round staging deals with truth you can't for a moment get away from the clear statement that it's all very untrue. Sam Walters has acknowledged this by sitting the DSM in one corner with the book and a splendid battery of good old BBC sound effects - door slams, clock chimes and the like. But you do have to be very fond of the actors to put up with all the schtick - let's be kind and call it heightened reality - that they are offering. After all, this is an area where less is definitely more.

SOMETHING SIMILAR HAPPENS in *Hindle Wakes*, the production which closed and now opens the Royal Exchange. Sue Johnston, a fine actress well used to nuance from her TV career, spends far too much time doing heavy reactions when, as it were, the camera is not on her. It distracts from the main shot.

SO WHAT ARE the implications for the technical side? Paule Constable and Johanna Town's contributions to the Young Vic and other surround shows has been very creative and an obvious asset. David Amos, who has done the current show perfectly competently, is clearly working his way up the experience ladder with the Orange Tree.

HOWEVER, in Scarborough as I write, the new Ayckbourn kids' show has Mick Hughes on board. In Manchester Vince Herbert and his guest LDs take things seriously, too, and are well aware that light becomes a key element when there's so little else to give the audience visual and stylistic cues. He's now got ETC Source Four Zooms to do it with, and all. As it happens, Lez Brotherston's *Hindle Wakes* designs involve a lot more set decoration than usual, and he has cleverly used the Exchange's balconies to hang a whole industrial estate of cotton mills. Tim Meacock at the Orange Tree made inventive use of the edges of the house in *Lips Together, Teeth Apart* but sticks to the furniture (with Sam Walters throwing in some comic furniture movers) for his effects in the three-set *Court in the Act*, missing a great opportunity to swatch some plush around the balcony.

IS THE EXCHANGE cheating by installing all that super new flying equipment? I think it gives them an extra edge that Richmond, and even Scarborough, are going to envy. I doubt whether you'll be able to put the new Royal Exchange winches on the Stephen Joseph's trampoline of a grid, and the Orange Tree just hasn't the height for any serious flying. The big drawback of most in-the-round work is that you can end up spending an awful lot of time admiring the stagecloth. Subtle lighting will keep your attention on the actors, but there's always the temptation to stick a lot of colourful pools around for them to tread in, which again creates more interest in their feet than their faces.

NOT EVERY arena production pays enough heed to the benefits of good sound, either. Manchester has gone to town on a classy sound studio and stage outlets to match, and we can look forward to it being well tested over a varied repertory in the coming months. I notice they're not risking a musical, however, a form which can present special problems in the round. *Jeeves* worked at Scarborough, with the band out of the way up on a platform and a very elaborate speaker system to distribute their sound. For Orange Tree musicals, the placing of the musicians is never quite comfortable either for them or for the audience. When the Royal Exchange does get round to a musical, we can probably look forward to seeing the band slung directly above the stage on the new winches - if the Union will allow it.

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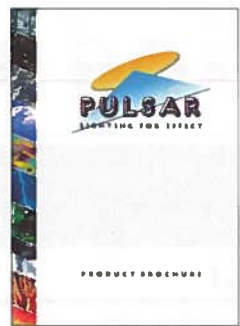
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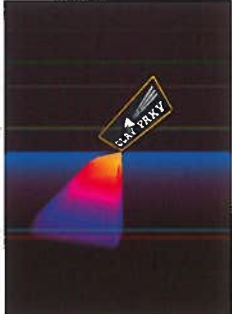
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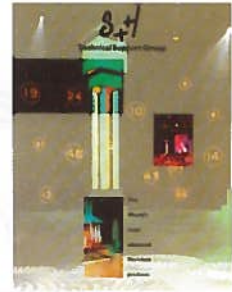
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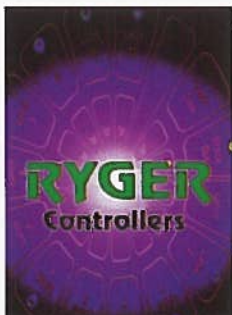
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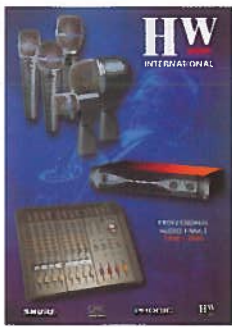


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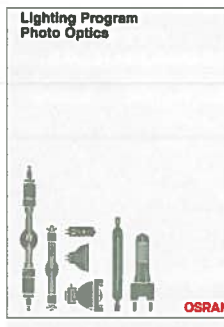
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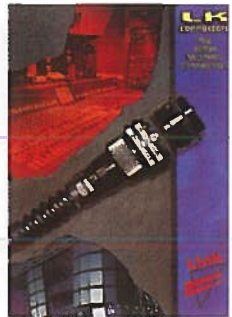
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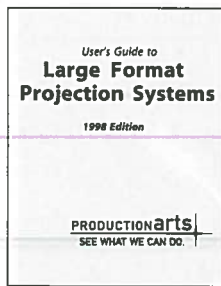
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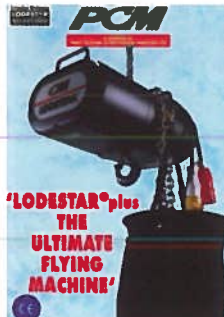
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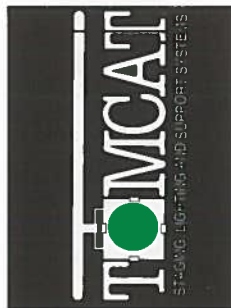
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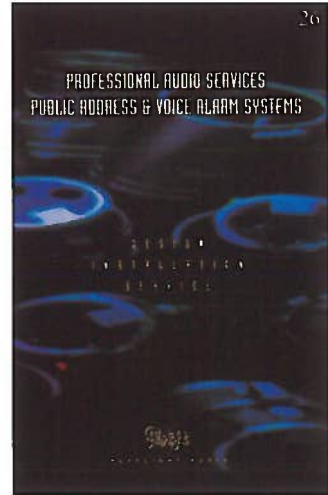
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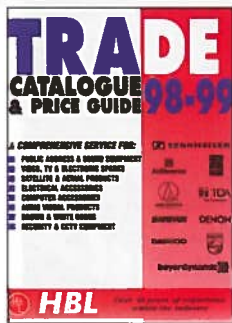


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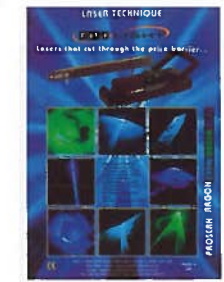
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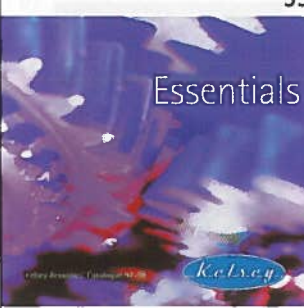
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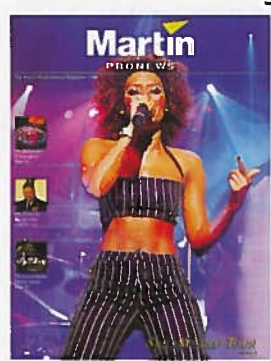
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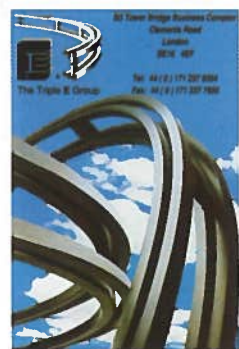
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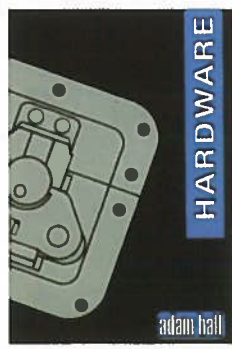
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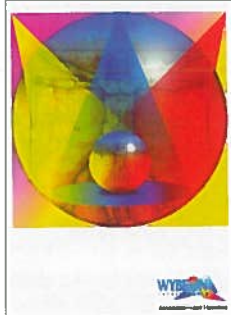
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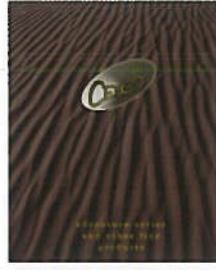
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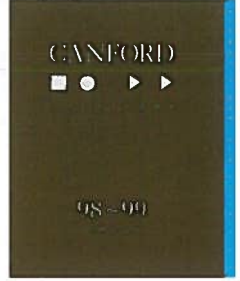
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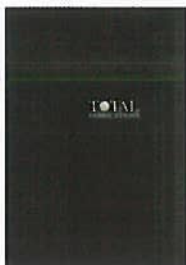
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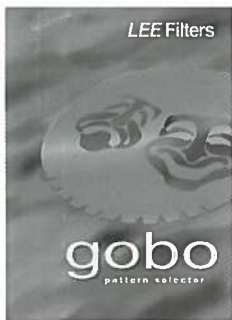


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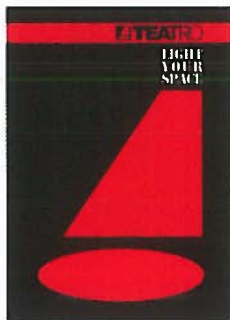
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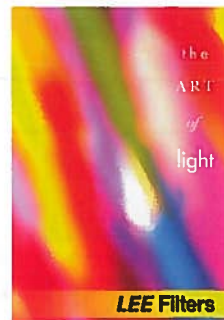


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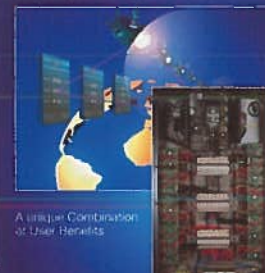
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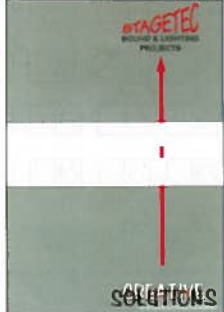
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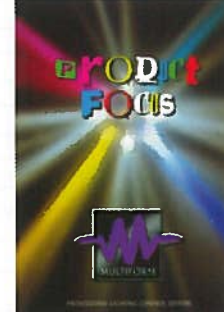


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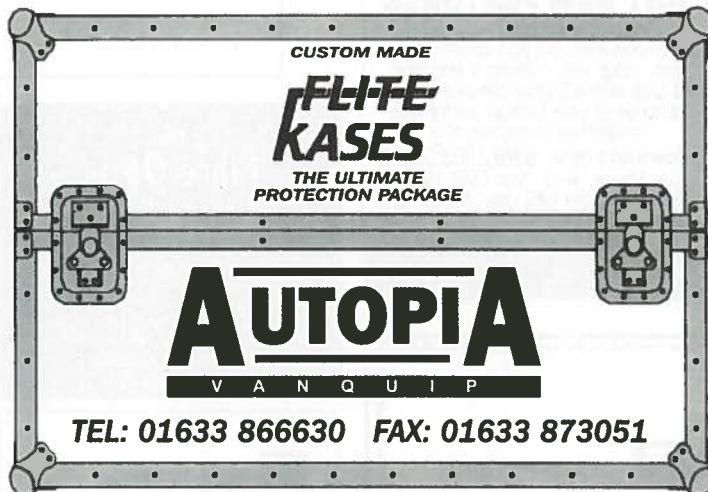
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In Profile...

L&SI Talks to the Industry Trend-setters

It's always a pleasure to uncover a bit of history in someone's background, and set designer Graham Wright has more history in his career than most. He began in the music business as a back line roadie: "My first tour was with Osibisa in 1972, looking after all the percussion," and by the time he'd reached his mid twenties he'd progressed to drum tech' for Black Sabbath. "I moved to Evesham in the Midlands and rented a farm to be nearer the band. I ended up letting out a room to Terry Lee - this was in the days before Light & Sound Design. He was into lighting even back then, so I brought him back an Altman Par can from an American tour. Between him and this bloke I knew who made aluminium garage doors (a certain Graham Thomas) the spun aluminium Par can was born." Well that's one to dine out on in the future, but how did Wright go from that to designing sets for the likes of Boyzone in the late nineties?

Looking back at his roots there are two pointers which, when combined, might indicate Wright would have a predisposition

for such a creative milieu. Born in December 1950 in Stockton-on-Tees, Wright was the fourth child and only son; his father, at the time a shipbuilder on the Tees, later went on to become a specialist engineer with Darchem of Darlington. Wright recalls his dad working on such exotica as parts for Concord and Nuclear Reactors. But the engineering oil in his veins turned to another direction. "I always enjoyed mechanical and engineering drawing when I was at school, but my big interest was painting. I'd

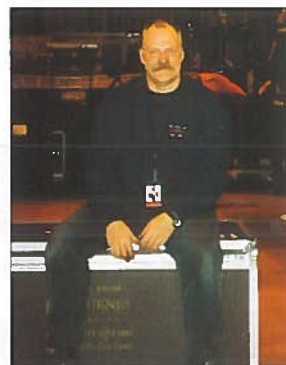
always had an ability, even from an early age, so when I left school I had the choice, technical or art. I chose a Fine Art course at Cleveland College of Art." Three years later, qualified and aged just 18, Wright caught the prevailing bug and set off for Holland, staying in Amsterdam for six months and then off touring Europe. "It was just that era, and I wanted to travel."

Which is arguably the third influence that really set him on his path. "When I got back I moved down to London, around 1970. I had a couple of friends who worked for bands and I knew a couple of musicians. What attracted me was the touring. The chance to see the world and get paid to do it." By his own admission he stumbled onto the Osibisa tour: "It was that time when the crew did everything, including driving the gear around. I did the percussion for them and ended up being a drum tech' for most of the seventies."

The Par can story aside, by the time that decade was over, certain things had become plain to Wright: "Productions had started to get bigger and bigger, and there was an increasing use of stage sets. Even back then I got involved. I had a strong interest in set design, so gradually I moved from drum tech' to stage carpenter."

But it was to be a number of years before that creative urge was finally taken to fulfilment. As the seventies ended, 'Sabbath nose-dived; their career stalled on a combination of self-indulgence and musical obsolescence. "I ended up living in Los Angeles, because of the band, and for a while I stopped touring and went back to painting." Wright is modest of his artistic achievements, but in fact he made a full-time living as a painter for two years, exhibiting at several galleries around LA. We have to conclude it wasn't just a bunch of vapid Californian air heads that bought his work, for it was a feat to be repeated when he returned to the UK in '82 with an exhibition of his work at York and

several other galleries around the UK. "I started set designing a little later, when I went back on tour with Dio in the mid eighties." A group he had access to by virtue of the association with Sabbath. "And then in '88 I did a tour of Russia and the USA for the Scorpions, going on to design several stage sets for them."



It was in these days that he set out his stall as a designer: "I usually start off sketching a few ideas. My influences come from a lot of different sources and, of course, I'll familiarise myself with the music. I will always work for a total-look concept - one that complements rather than overpowers. Sometimes that creative process can be quite strange, normally you're stuck to a 60 by 40 surface at most, and these days not only do you have to consider the lighting designer's input, but also the length of tour and budget."

Something that hasn't prevented his work from appearing with acts as varied as Fish, Alice Cooper, Skid Row, and most recently M People (see feature this month). Wright is now back living on Teeside. Married to Marlieke he has two sons, Daniel and Bryan, who consume most of his energies: "But I still really hunger for that big Stadium design. I really love the creative process, that challenge of ideas. Maybe one day I'll slow down and build myself a nice little studio at home and concentrate more on painting. But that's a few years away yet." ■

Lighting & Sound INTERVIEW

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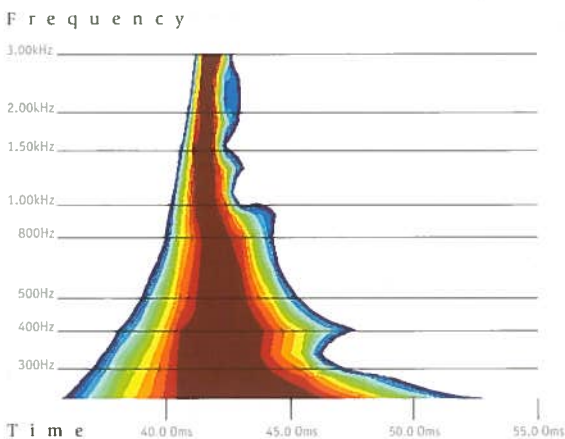
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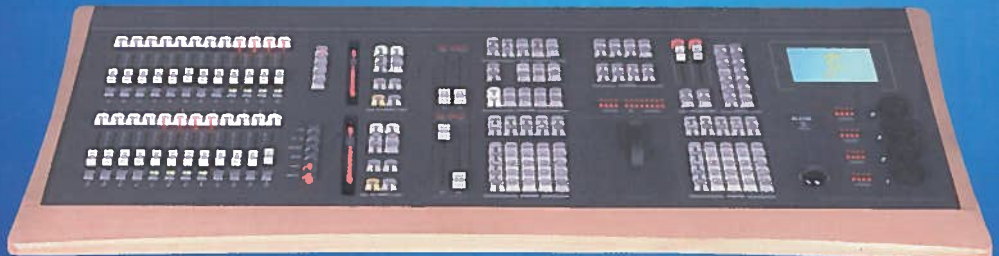
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